INTERNATIONAL JOURNAL OF HEALTH PROFESSIONS
Volume 4, Issue 1, 2017, Pages 66–78, ISSN 2296-990X, DOI: 10.1515/ijhp-2017-0007

DE GRUYTER OPEN

Supporting evidence-based practice: Changes in service provision and practitioners' attitudes following EBP Service Centre consultation – a qualitative study

Evidenzbasierte Praxis unterstützen: Veränderungen der Arbeitsweise und der Einstellungen von Ergotherapeuten/-innen durch die Nutzung eines EBP Service Centers - eine qualitative Studie

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Received 29 September 2016, accepted 15 March 2017, available online 27 April 2017

Abstract

Evidence-based practice (EBP) aims at optimal fulfilment of clients´ needs, but also plays an essential role in establishing an effective and efficient health care system. It is no longer a question whether EBP is essential and valued, but rather how to sustainably implement it into clinical practice. A new implementation strategy of an EBP workshop in combination with a CAT (critically appraised topic) service was established and investigated.
The aim of this study was to explore post EBP Service Centre consultation effects regarding occupational therapists´ changes in service provision, professional viewpoints and attitudes and job satisfaction. The second aim was receiving feedback on the EBP Service Centre for its further development.
For the evaluation of the EBP Service Centre the qualitative approach of content analysis by Gläser and Laudel was chosen. Two focus group discussions with 13 participants were conducted.
The combination of an EBP workshop and a CAT service, as provided by the EBP Service Centre, seems to be an effective tool to facilitate EBP implementation. The service was used intensively. Participants reported changes in service provision, e.g. increased client-centredness and occupation-based practice and changed professional attitudes like increased reflection and critical questioning.
A division of resources and strengths between research staff and practitioners seems to be reasonable. Hence research staff takes over literature search and appraisal and produces CATs, whereas practitioners focus on asking clinical questions and integrating the knowledge from the CAT into their clinical decisions.

Abstract

Das Ziel evidenzbasierter Praxis (EBP) ist es, Klienten/-innen bestmöglich zu versorgen. Zusätzlich hat EBP eine zentrale Rolle in der Etablierung eines effektiven und effizienten Gesundheitswesens. Es ist nicht mehr länger die Frage, ob EBP wichtig und relevant ist, sondern wie EBP nachhaltig in die Praxis implementiert werden kann. Eine neue Implementierungsstrategie, die einen EBP Workshop mit einem CAT (critically appraised topic) Service kombiniert, wurde durchgeführt und evaluiert.
Ziel der Studie war es, Effekte durch die Inanspruchnahme des EBP Service Centers zu erheben. Ergotherapeuten/-innen wurden zu Veränderungen hinsichtlich Arbeitsweise, professioneller Sichtweisen und Einstellungen sowie Arbeitszufriedenheit befragt. Zusätzlich wurde Feedback für die weitere Entwicklung des EBP Service Centers eingeholt. Für die Evaluierung des EBP Service Centers wurde die Methode der qualitativen Inhaltsanalyse nach Gläser und Laudel gewählt. Zwei Fokusgruppen mit insgesamt 13 Teilnehmern/-innen wurden durchgeführt.
Die Kombination eines EBP Workshops mit einem CAT Service scheint ein effektives Tool zur Unterstützung der Implementierung von EBP zu sein. Der CAT Service wurde intensiv in Anspruch genommen. Die Teilnehmer/-innen berichteten Veränderungen in der Arbeitsweise, wie vermehrtes klienten/-innenzentriertes und betätigungsbasiertes Arbeiten sowie Veränderungen in den Einstellungen, wie vermehrte Reflexion und kritisches Hinterfragen.
Ein gezielter Einsatz der Ressourcen und Stärken von Forschungsmitarbeitern/-innen und Praktikern/-innen scheint sinnvoll. Forschungsmitarbeiter/-innen übernehmen die Literatursuche sowie die Bewertung der Literatur und verfassen CATs, während Praktiker/-innen klinische Fragen stellen und das Wissen aus den CATs für ihre Entscheidungen nutzen.

Keywords

Evidence-based practice(EBP) – implementation strategy – service provision changes – client-centred practice – theory-practice-transfer

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Evidenzbasierte Praxis (EBP) – Implementierungsstrategien – Veränderungen der Arbeitsweise – klienten/-innenzentrierte Praxis – Theorie-Praxis-Transfer

INTRODUCTION

Evidence-based practice (EBP) started at the medical school of McMaster University in Canada in the 1970s. Since then, it has spread to all health professions and is now acknowledged worldwide. There are different definitions for EBP, but all acknowledge the integration of the best research evidence with clinical expertise, the patients' unique values and the circumstances for clinical decisions to best serve the clients (Hoffmann, Bennett, & Del Mar, 2013; Law & MacDermid, 2014a). Law, Pollock, and Stewart (2004, p.14) defined EBP as *'a combination of information from what we know from research, what we have learned from clinical wisdom, and what we learned from information from the client and families to make the best use of knowledge'*.

The process of EBP consists of five steps: (1) posing a clinical question, (2) searching evidence, (3) appraising the literature, (4) making a decision by integrating the evidence with clinical expertise, clients' values and circumstances, and (5) assessing the effectiveness of the intervention or the assessment (Straus, Glasziou, Richardson, & Haynes, 2011; Thomas, McCluskey, & McCluskey, 2014).

First and foremost, EBP wants to best serve the clients' needs but also plays an essential role in establishing an effective and efficient health care system and in developing and strengthening the professionalism of the health professions. Many surveys showed a general positive attitude of the health professions concerning EBP (Döpp, Steultjens, & Radel, 2012; Bennett et al., 2003; McCluskey, 2004; Page, Raithel, Luomajoki, Schämann, & Kool, 2010). However, these surveys also report the barriers for implementing EBP into practice. The most cited barriers are: lack of time, lack of access to research literature, organisational barriers, lack of skills such as searching for literature and critically appraising scientific articles (see also Law & MacDermid, 2014c). Upton, Stephens, Williams and Scurlock-Evans (2014) concluded in their review that the therapists' positive attitudes towards EBP 'do not translate into practice' (p. 24). Therefore, it is no longer a question if EBP is essential and valued, but rather how to sustainably implement it into clinical practice.

Thomas' and Law's (2013) scoping review identified individual and organisational factors that support the use of research in practice. Attitudes, nature of work, knowledge, skills and level of experience are examples of individual factors. System-level support, leaders and employers, resources as well as university support and partnership are examples of supportive factors at the organisational level. Other authors focus on different stakeholders, such as educators, clinicians, researchers, managers, administrators and policymakers as well as professional associations and organisations, and their potential role in increasing EBP (Lin, Murphy, & Robinson, 2010).

EBP implementation strategies

Based on the knowledge about facilitators of EBP, various implementation strategies have been developed and evaluated. EBP has become an integrative element in health care education. EBP workshops aim to inform therapists about the scope and the steps of EBP and train the skills in searching and appraising the literature. Other activities are EBP journal clubs where practitioners search and discuss relevant literature and their impact on practice (Scott, Del Mar, Hoffmann, & Bennett, 2013; Straus et al., 2011). Brangan, Quinn, & Spirtos (2015) investigated the impact of an EBP course on the therapists' attitude and perceived level of confidence concerning EBP. McCluskey and Lovarini (2005) showed that EBP education and outreach support improved the knowledge but did not change the participants' practice regarding the frequency of searching and appraising literature. Novak and McIntyre (2010) found that a workshop with workplace support improved EBP implementation. The workplace support included supervision, incentives, resource allocation and working groups. Other studies focused on the system-level: Caldwell, Whitehead, Fleming and Moes (2008) developed an organisational model of practice, and Bennett et al. (2016) explored the influence of an organisational initiative to support EBP. All mentioned strategies lead to some improvement in the implementation of EBP, but no strategy on its own can be considered sufficient or consummate.

An Austrian survey asking occupational therapists about their attitudes, skills and barriers concerning EBP showed a similar picture of surveys in other countries. There is a positive attitude towards EBP; however, evidence from research is rarely used in clinical practice (Ritschl et al., 2015). The results displayed the typical barriers concerning lack of time and lack of access to research literature. Only 55% of the therapists reported to have the skills to develop a clinical question, 53% stated to be able to search for literature in databases and 54% to be able to critically appraise a paper.

EBP Service Centre

To promote and evaluate the implementation of EBP, we designed a new format to support EBP in practice and established an EBP Service Centre at the University of Applied Sciences FH Campus Wien. Occupational therapy practitioners working in or in the surroundings of Vienna were invited to participate in this pilot project. The therapists attended a 9-hour EBP workshop delivered on two afternoons within one month. The participants learned about the definitions and stages of EBP and

received basic EBP training in skills, for example, asking a clinical question, searching literature, and appraising the literature. Additionally, the format of a critically appraised topic (CAT) was introduced. After completing the workshop, the therapists were invited to send their clinical questions to the EBP Service Centre, and research staff trained in EBP produced German CATs for these questions. Whenever a clinical question was unclear or not specific enough, the practitioner was contacted to clarify the request. Databases and journals subscribed to by the university provided rich resources for searching and accessing literature. McCluskey's CAT template (2003) was used and the CATs were sent to the person who had posed the question via email. Additionally, the CATs were accessible for all participants via Dropbox.

This format was designed to overcome the barriers concerning the practitioners' lack of time and access to literature, as well as lack of skills in searching, reading and appraising scientific English articles. The main objective of the workshop was to inform about EBP and the whole process behind a CAT. Step 4 in the EBP process, the integration of research knowledge into all other relevant information, remained the therapists' responsibility.

The first aim of the study was to explore occupational therapists' changes in service provision, in professional viewpoints and attitudes, and in job satisfaction through EBP Service Centre consultation. The second aim was to receive feedback on the EBP Service Centre for its further development.

METHOD

For EBP Service Centre evaluation, the qualitative approach of content analysis by Gläser and Laudel (2010) was chosen. Focus group interviews with the practitioners who participated in the pilot project were conducted to receive detailed and in-depth information. Participants were recruited via the Vienna Hospital Association and the Austrian Association of Occupational Therapists, Ergotherapie Austria. As the workshop was offered in Vienna, occupational therapists working in or in the surroundings of Vienna were invited to participate. Some of the therapists from the Vienna Hospital Association opted to participate, whereas others were nominated by their head of department.

The two focus group interviews, one with eight, the other with five therapists, took place in March 2014 and lasted approximately one and a half hours each. The interviews were moderated and co-moderated by the first and second author. Two students worked as research assistants who observed the focus group interviews, took field notes and transcribed the audiotaped records. Transcripts were checked and corrected by one of the authors prior to the data analysis.

Following Gläser and Laudel (2010), four categories and some subcategories based on theoretical preliminary considerations were defined. Questions for the focus group interview guideline were derived from these categories.

The data analysis, done in the three main steps 'extraction, preparation and interpretation', was conducted independently by the first and second author. Several times during the analysis process, the authors met to discuss the additionally defined tentative subcategories. Once agreed upon, the tentative subcategories were independently used in the ongoing data analysis process by both authors. According to Gläser and Laudel, once a (sub)category is tentatively defined, it should not be discarded too quickly. Therefore, refining, extending and verifying each (sub)category took place during various phases of data analysis until a final category system had been developed. A detailed flow chart on the development and verification of the final (sub)categories is shown in the appendix.

Reflexive research diaries were used to increase the quality of the data analysis process. Ethical approval was received from Vienna's ethical review committee (EK 13-249-VK_NZ). All participants provided informed consent in writing.

RESULTS

Participants and utilisation of the CAT service

13 therapists participated in the project. The therapists represented a great variety in terms of years of working experience, fields of practice and work settings (Tab.1).

During the five-month pilot phase, the EBP Service Centre received 56 questions and produced 42 CATs. Due to limited resources of the CAT service team, 14 questions could not be dealt with during the project time. Two of the participants did not send any question but the other 11 participants sent between 1 to 10 questions. Reasons for not posing a question were difficult working situations at the departments. Participant (J) reported a very high workload as they were short of a full-time occupational therapist at the department, and participant (I) explained that she had to deal with general issues about service provision during the time of the pilot project, and therefore, did not use the CAT service.

Content analysis of focus group interviews

Data analysis resulted in the following four major categories:

1. Changed way of working
2. Changed professional viewpoints and attitudes
3. Impact on job satisfaction
4. EBP Service Centre as support for EBP implementation

Table 1: Demographic characteristics of participants (n=13)

age	
Min/Max	23/53
M±SD	37,62±9,6
Year finishing OT education	1982-2012
Years practice as occupational therapist	
Min/Max	2/32
M±SD	11±9,0
	n (%)
Gender	
female	12 (92,3)
male	1 (7,7)
Hours worked per week	
1-20h	2 (15,4)
21-40h	11 (84,6)
Working condition	
Self-employed	3 (23,1)
employed	9 (69,2)
Self-employed and employed	1 (7,7)
Field of practice in occupational therapy	
Orthopaedics/rheumatology/hand-therapy/ traumatology	3 (23,3)
Neurology	1 (7,7)
Mental health	1 (7,7)
Paediatrics, incl. child and adolescent mental health	5 (38,5)
Geriatrics, incl. geriatric mental health	3 (23,1)
Work setting	
Hospital	9 (69,2)
Private practice	3 (23,1)
Nursing home	1 (7,7)
Finished Master´s degree/PhD	
yes	0 (0)
no	13 (100)
Enrolled in a Master´s programme	
yes	2 (15,4)
no	11 (84,6)

Whilst categories 1-3 show findings focusing on work-related changes within the participants' working environment, category 4 focuses on the participants' feedback on the EBP Service Centre. Each major category comprises several subcategories, which will be presented below.

1. CHANGED WAY OF WORKING

Category 1 comprises aspects indicating the influence of EBP Service Centre usage on the respective participant's concrete professional performance. The findings in this category are presented in five subcategories.

1.1 Indications of increased efficacy of OT intervention

In contrast to preliminary theoretical considerations, which indicated an improved efficacy of the occupational therapy intervention, the findings in this study didn't effectively show improved efficacy. Nevertheless, several participants explained changes in their working habits, which could lead to increased efficacy.

> *'There was always something, which brought me to another track and this changed something for me, (…) I can support them [clients] better.' (F:425)*

Many aspects mentioned by the participants show that the occupational therapists are doing things in a different way, or an improved quality.

> *'It makes me calmer and more pleased – to take my time, to look more closely, with other criteria probably – similar to a scientific study.' (D:1137)*

1.2 Justifying intervention methods and facilitating a more transparent decision making process

As expressed by a participant, scientific evidence had the impact that 'I try to use methods, where I know, that evidence exists' (G:273). And clear decisions were made in terms of 'I definitively don't use some methods any more… this has changed a lot!' (G:275) or about particular assessments.

> *'I asked for a specific assessment and it [the CAT] has a very concrete impact on the decision on which assessment I will purchase.' (M:275)*

Often stated was the impact that scientific evidence 'gives additional ideas of what you could use – in which direction I should try out more' (J:516), and that it made the decision-making process easier and clearer. Additionally, some participants also experienced improved confidence in challenging situations.
Examples of decisions were reported in terms of interventions, usage of assessments and individual decisions concerning extended vocational training

> *'[in the CAT] I received assessment tools; including the one I already used – that validated my work. I said "Fine, it's still up to date – I can continue to use it."' (K:328)*

1.3 Implementing newly acquired knowledge and skills

One change of working routines was that participants reported the implementation of newly developed scientific skills like '... one is considerably less inhibited to search the literature.' (C:1216)

> *'Now, if I have a question, or when I think "is what I'm doing good?" I'm calmer, I search the literature and I look if there is OT specific evidence or not.' (D:979)*

These skills might not directly cause changes in terms of increased efficacy of interventions. Nevertheless, for some participants, using these skills actually became part of their working life and this, obviously, is a change in their way of working.
Even if participants didn't explicitly change their way of working, they experienced increased knowledge through the CATs because 'it showed me partly, how I could do it differently' (D:181). However, some participants mentioned that, at present, the usual EBP barriers are reasons for not applying this new knowledge.

1.4 Increased client-centredness and occupation-based practice

Several participants emphasised that they developed a considerably better client-centred attitude.

> *'What really changed my work is that I am more courageous to work with the adolescents in a client-centred way.' (F:395)*

This participant explained that the way of supporting clients in their decision-making process had changed considerably. Furthermore, this change made clients find other decision-making processes – they were able to realize their decisions better and expressed increased satisfaction.
Additionally, some participants expressed an increased occupation-based approach through EBP Service Centre consultation.

> *'**Now,** for example, I go swimming with the child. I didn't do that before!' (G:271)*

1.5 Increased interprofessional dialogue

Some participants reported that 'talking with colleagues about evidence – I'm doing this more now, since the EBP Service Centre' (C:548). This interprofessional dialogue among professionals from the healthcare and social as well as the educational system was mentioned by employed colleagues and freelancers.

2 CHANGED PROFESSIONAL VIEWPOINTS AND ATTITUDES

Category 2 comprises aspects concerning changed personal and professional viewpoints among participants. Four subcategories were created to present the findings in detail. Compared to other categories, the findings related to this category were the richest in terms of quality, variety and quantity, by far. It seems that EBP Service Centre usage had a great impact on the participants' viewpoint.

2.1 Strengthened credibility and professionalization of occupational therapy

All participants reported the opinion that EBP strengthens the credibility and professionalization of their profession. They think 'that EBP is politically important for our profession and the financing of therapy.' (L:988). Furthermore, they value EBP for their own professional self-image, for maintaining jobs and as an argumentation aid. The positive impact on professionalization was also found in the increased will to 'present ourselves even better' (G:860).

2.2 Increased scientific interests and changed attitude towards EBP

Participant B encapsulated the central topic of this subcategory by quoting 'it aroused such an **eagerness**, to re-examine' (B:831). Several others expressed the increased interest with wordings like 'I'm curious about EBP, which originated from using the EBP Service Centre' (E:1498).
Several participants stated that 'it motivated me to conduct research projects on my own' (M:214). The participants' newly emerged willingness to participate in research projects became evident.

> *'One suddenly feels like doing research – if you see that so many OT topics have not been researched yet – I have so many clients and would really like to do something.' (K:601)*

2.3 Increased reflection and critical questioning

Within category 2, the strongest evidence for the impact of EBP Service Centre usage on the participants was the aspect of increased reflexivity. The changes of reflexivity were particularly strong with regard to self-reflection and were expressed by all participants.

> *'I'm questioning my own doing more now.'* (A:318)

Furthermore, changed reflexivity was also mentioned in the context of reflecting on and questioning, for example, the quality of other professionals' work, the scientific and specialist literature and further education.

> *'In the past I would have thought during further education, "wow, I'll try this out immediately" and now my first step is the question: is there any evidence? (…) I wouldn't have done this in the past.' (G:330)*

2.4 Weakening the professional confidence

This subcategory could be seen as a counterpart to the subcategories 2.1 and 3.1.
Despite a lot of positive changes, some participants also experienced insecurity when using the EBP Service Centre. The main reasons for that were the lack of evidence and the fear of overvalued scientific evidence while degrading individual professional expertise and intuition.

> *'… on the other hand, most alarmingly, because you have the feeling that you are working incredibly unprofessionally; partly completely in the dark.' (E:193)*

> *'It's difficult to question intuition. But where is intuition in all those studies, in all this scientific work – I think you can't grasp everything with scientific work.' (M:285)*

3 IMPACT ON JOB SATISFACTION

In contrast to preliminary theoretical findings, EBP Service Centre usage did not only have a positive impact on the participants' job satisfaction. In this study, it ranged from increase to fluctuation to no change whatsoever, as shown in the following subcategories.

3.1 Increased job satisfaction

Participants attributed their increased job satisfaction to widely different aspects.
For example, the view of strengthened credibility and professionalization of OT, which is described in subcategory 2.1, led directly to greater job satisfaction, particularly the knowledge about existing current evidence 'made me proud of our profession again. We OTs are really a qualified profession!' (M:705)
The implementation of new skills acquired through EBP Service Centre usage was explicitly expressed as a factor for increase in job satisfaction.

> *'There [in the CAT] was the motivational interviewing – it was proposed there. And I read it – and then – I was satisfied, because it changed something in my case.'* (F:442)

Particularly important was the validation of one's own professional performance through EBP Service Centre usage. Interestingly, two major experiences were discussed. On the one hand, there was the validation of one's own professional work through existing scientific evidence because 'for my questions, it validated my work' (K:342) and the 'feeling that somebody else is interested in my work – is doing research, is cool' (M:936).
On the other hand, some participants expressed increased job satisfaction because the missing scientific evidence made them more confident in their own expert knowledge.

> *'When it became clear that there is no evidence so far – it enhanced the satisfaction – or encouraged us to confide in our own expertise.' (A:1072)*

The fact that EBP integrates scientific evidence with clinical expertise was new for several participants. This view encouraged and reassured them in their doing.

> *'On the other hand, I appreciated that it was written [in the CAT], that we need to use our own experience (…) because there is no evidence so far … **reading this** was **crucial** for our team – not only "there is no evidence".' (A:239)*

3.2 Consistent or fluctuating job satisfaction

Some participants expressed intensive emotions associated with EBP Service Centre usage. These emotions ranged from 'absolutely unsatisfied' to 'everything is fine again' and from disillusionment to uncertainty.

> *'Wow – it's great, we [OTs] are really special – and there are studies proving it – and on the other hand – there are only very few studies – this discouraged me again – because I thought, there is not very much proof about our great work.' (M:715)*

Only one participant expressed decreased job satisfaction. This seemed to be influenced not by the EBP Service Centre but by the current work situation.
For few participants, the 'individual job satisfaction didn't change as a consequence of the EBP Service Centre'(J:774). This was mainly argued by the fact that 'other [factors] are far too important and far too good as to be affected' (L:736).

4 USE OF EBP SERVICE CENTRE AS SUPPORT FOR EBP IMPLEMENTATION

This category comprises findings to the study aim of receiving feedback on the EBP Service Centre. A major finding was the positive view on the entire EBP Service Centre; in the words of one participant, 'It's a really good package!' (F:142).
In general, all participants who used the CAT service were satisfied with the support. Even if the current evidence for several specific requests was missing, participants highly appreciated the work of the service centre.

'It's great to type in the question, lean back, and after three weeks you have the answer. That's like a question to the universe and the universe replies – that's great, also with the knowledge that ***it is really done well****.' (M:224)*

Furthermore, the majority of participants stated that the EBP workshop was a vital part of the offer. Attending the workshop 'was helpful to use the CAT service afterwards; specifically, **being able to formulate** a PICO question and using the appraisal in a better way' (C:1219).

4.1 Feedback concerning EBP workshop

In the focus group, the participants were asked to discuss the aspects of training that were helpful and the aspects that were not helpful, as well as suggestions for further development of the EBP workshop. Feedback concerning helpful aspects can be condensed to learning outcome and methodical-didactical aspects.
All participants expressed the value of 'learning how to formulate a good research question' as a need for proper use of the CAT service.

'For me, the workshop was very helpful to understand the topic of EBP and ***to develop and formulate*** *questions.' (A:1235)*

Likewise, they agreed upon the fact that the workshop supported them in their ability to deal with criticism. For some participants, gaining detailed knowledge about access to databases was another helpful aspect.
In total, some participants expressed that 'EBP didn't mean much to me. Only through the workshop did I get a feel for this' (E:726), whereas approximately one third of the participants indicated that for them, the workshop was a very good revision.
Concerning methodical-didactical aspects, most participants stated the comprehensive content and the quality of explanations as helpful. Furthermore, the script was explicitly mentioned as helpful. Also, the structure of two half-day workshops few weeks apart was experienced as conducive to the whole learning process.
In contrast to the helpful aspects, responses on not helpful aspects were mainly given from individual participants and were considerably less comprehensive. The feedback in this respect focused on the tempo, the technical jargon and the size of the learning group.
Central among the suggestions for further development of the EBP workshop was the request 'to practice together using a concrete example; this would have been helpful …' (F:1324). Additionally, some participants argued for a third workshop or refreshers on different levels.

4.2 Feedback concerning CAT service

Like the feedback for the EBP workshop, the CAT service was also discussed with participants in terms of helpful or not helpful aspects and suggestions for further development of the CAT service.
In general, the CAT service was experienced as 'awesome' (B:127), which was evident in the statements of several participants, who sent in one or more clinical questions.

'I was happy that there was this CAT service. Because, I'm up to my ears with my kids at home, my English is poor – I have never been motivated to search the Internet for hours, to translate everything – I was absolutely overwhelmed. I'm very happy – and would be very happy, if a CAT service existed permanently.' (G:93)

Specifically, the helpful aspects mentioned by the majority of participants were related to the formulation of clinical questions and to the quality of the CATs.
Most of the participants emphasised the high quality of the CATs. For some participants, the German language of the CATs was particularly helpful. It allowed them to concentrate on specific content and the practical usability, instead of struggling with words.

'The CAT has been worth gold! And it was in German language … you could really focus on the specific content.' (K:900)

Dropbox as a location for all CATs was experienced as not helpful by some participants. Due to existing firewalls at workplaces, the participants had no direct access to the results.
Despite only very few hindering aspects mentioned by participants, there were several suggestions for further development of the CAT service. The need for intensive communication, at least in the early phase of the CAT service, became evident.

'When it comes to the clarification of the clinical question, the communication could be more intensive ***before you start*** *the literature search, to clarify if it's really exactly what you want to know.' (L:1122)*

Another suggestion was that observing an expert of the CAT service could be highly beneficial.

'Of course, there is the CAT service which is doing the work; but I wished I could be present during the literature search – to be guided through the process. This would have been my need.' (F:792)

Suggestions about the extent of the CATs varied between participants. Some recommended more, others less comprehensive presentation of results.

> *'What I would have liked additionally: that studies, which haven't been available cost-free [and therefore, not included in the CAT] – would have been referenced. ... and that it is referenced, which relevant studies are available in other languages than German or English – if this information were added to the CATs – I would appreciate it.' (A:1238)*

Other participants suggested that the EBP Service Centre offers 'a quick appraisal and tells me, if the quality of the study is ok – so I'll know if it's worth reading it in detail.. (L:1190). This option would be timesaving for practitioners and they could concentrate more on content and outcome of the studies.

DISCUSSION AND PRACTICAL IMPLICATIONS

The aim of this study was to explore the effects of a new EBP implementation strategy, an EBP Service Centre offering an EBP workshop and a CAT service. The following section will present a discussion of the sample, the acceptance, and the results of the focus group interviews. Practical implications are drawn from the participants' feedback for further development of the service.

The 13 participating therapists represented a great variety concerning years of experience, fields of practice and work setting. None of the therapists had finished a Master's Degree, but two were enrolled in a Master's programme. This is quite representative for Austrian occupational therapists, as most therapists work on the basis of their Bachelor (or previously, Diploma) education and some go on for further education. Only since the uptake of the Bologna Process in the education of health professionals in 2006, have more therapists pursued postgraduate education.

Most colleagues opted to participate, whereas some were nominated by their head of department. This fact shows that not all of them were initially intrinsically motivated to participate, but during the project, all participants were highly interested and acknowledged the service.

Acceptance of the CAT service

During the five-month pilot phase 42 CATs were created. 14 more questions were posed, but could not be handled during the project time, due to restricted resources of the CAT team. This can be interpreted as excellent acceptance of the service.

In an Australian EBP project, the occupational therapists were trained in EBP skills and learned how to produce CATs themselves. The 114 therapists produced 15 CATs in an eight-month period (McCluskey, 2004). A statistically significant increase of CAT production could be reached by another Australian study (Novak & McIntyre, 2010), in which 88 allied health professions were trained and received different kinds of workplace support. During the 18- month period, 24 CATs were produced. Given the 42 CATs in the current study with only 13 participants in a five-month period, the EBP Service Centre seems to fulfil the practitioners' needs. Results from a survey by Bennett et al. (2003) showed that more therapists are interested in reading brief summaries of evidence or clinical guidelines than in searching and appraising literature themselves. Also, Lin et al. (2010, p. 164) claimed that 'clinicians must have readily available, relevant, and concisely summarized evidence' to embrace EBP.

The participating therapists seemed to be very eager for knowledge, but one can expect that they would not have produced so many CATs on their own. Therefore, the CAT service might be seen as an efficient use of resources, as someone who is trained in searching and appraising will take much less time to produce a CAT than someone who does it once in a while. McCluskey (2004) concluded that using services of health librarians that assist with searching 'may be a better use of staff time and resources' (p.49) but acknowledged that critically appraising the literature is even more difficult to learn than searching the literature. Additionally, the production of CATs was based on the university's library resources, which offered broad access to databases and journals, which are not accessible to practitioners.

All participating therapists knew that the current EBP-Service Centre was a pilot project offering the CAT service for a limited period. This might have stimulated sending in questions immediately. This is in consensus with the study by McCluskey (2004) in which the 'presence of deadlines' emerged as one of the facilitating factors for becoming more evidence-based. Therefore, at present, we only know the acceptance of this short period service; the acceptance of an ongoing service has to be studied during a longer project.

11 therapists sent between 1 to 10 questions, whereas two colleagues only participated in the workshop but did not make use of the CAT service. Both showed a positive attitude towards EBP and the project but explained facing difficult situations at their workplace during the time of the project. Being reflective, asking clinical questions and being eager to develop quality is an approach that also needs time and energy. Therefore, not using a service like this should not immediately be interpreted as 'no interest in EBP' but may suggest considering the organisational and systemic levels as well.

Changes in service provision and professional attitudes

EBP aims to support the delivery of more effective and efficient service. In the short period of the pilot project, none of the therapists mentioned that they offered a more efficient therapy, but some presented examples of changes in therapy according to the information received through the CAT. This included offering new therapeutic approaches, not delivering a special method any more, or the decision to buy a specific assessment. In the project of McCluseky et al. (2004), which focused on training EBP skills and the production of CATs by therapists, no changes in practice were reported, whereas Novak and McIntyre (2010) documented changes in service provision after offering an EBP workshop with workplace support.

In the specific literature, the process of changing service according to new evidence is most often called 'implementation of evidence' or 'knowledge translation' and receives much attention because step 4 in EBP – 'making a decision and applying new knowledge' – is sometimes regarded as the most challenging step (McCluskey, 2014, see also Glasziou & Haynes, 2005). Theories that explain or predict behaviour change are used to support the implementation of evidence (McCluskey, 2014; Law & MacDermid, 2014b).

It is clear that not every new knowledge can be applied within a short period of time, as new approaches might need special training, special equipment or commitment of the whole department. In such cases, a change management process and a longer period of time has to be scheduled. The changes reported in the focus group interviews were in the therapists' scope of decision-making and therefore could immediately be transformed into practice. Maybe this positive uptake of new knowledge was encouraged by the strategy that the therapists asked their questions. They wanted to receive an answer and therefore 'pulled' information. This approach might complement strategies that provide new evidence, such as guidelines, without a current question.

Some therapists stressed that they started to work in a more client-centred way and increasingly occupation-based. This result was quite unexpected and disproved the myth that EBP is 'cookie-cutter' care or 'devoid of the need for individual clinical judgement' (Law & MacDermid, 2014a, p. 7). There are two explanations why this process might have started. On the one hand, some CATs favoured occupation-based therapy as being more effective than working at component level. On the other hand, it seems that learning to pose a clinical question, for example, the PICO question (Person – Intervention – Comparison – Outcome) might have stimulated a process to focus more on the goal of therapy and the client's aim, and therefore, might have triggered a client-centred approach.

The statements concerning personal and professional viewpoints and attitudes built the richest category in the analysis. All therapists acknowledged the importance and the necessity of research evidence to show the effects of occupational therapy, to strengthen their own professional self-perception, as well as to legitimate occupational therapy services. Such awareness of the importance of research led to another unexpected effect. Many therapists stated their willingness to participate in research and thereby to contribute to the building of evidence. Additionally, some participants stated to be interested in analysing their documentations and data or conducting small research studies, like case studies on their own. According to Tomlin and Douthery (2014), these activities of systematic gathering and analysis of therapy outcomes in practice contribute to the internal evidence, which complements the external evidence. Practitioners' experiences thereby contribute to the profession's body of knowledge and might stimulate research as well.

A positive attitude and mutual recognition of practitioners and researchers is vital. It is important that practitioners have a positive attitude towards information from research to be willing to integrate this knowledge into clinical decisions. Whenever a researcher tries to recruit practitioners to participate in a project and ask them to follow the study plan, a positive attitude and commitment are prerequisites. However, mutual recognition is also a mandate for researchers to focus research on topics, which are clinically relevant (Lin et al., 2010; Kielhofner, 2005; Sudsawad, 2005).

Participating in the EBP project and learning about EBP seemed to stimulate critical thinking and professional reasoning. Maybe this was due to a similar effect as the increase of client-centredness. Asking a clinical question is the first step in the EBP process but also seems to stimulate questioning one's own therapeutic behaviour and enhance the professional reasoning skills (Schell & Schell, 2008; Turpin & Higgs, 2013). This result is consistent with Tse, Lloyd, Penman, King and Bassett's (2004) assumptions that EBP 'will assist therapists to be more reflective, analytical, while remaining creative practitioners' (p. 270). Additionally, the EBP training appears to encourage the therapists to question other professionals about their evidence or to decide more critically regarding which continuing education workshop to subscribe to.

The participants gained better confidence in their skills of searching and appraising the literature, and a few used these skills. This is a similar result to the study of McCluskey and Lovarini (2005) whose participants improved their knowledge and skills; but only the group of proactive participants reported searching and appraising literature themselves. One participant explained that she started

to appraise an article, but soon got lost in the scientific language. Another therapist stated that these steps were very time consuming and asked for additional training or supervision. These results confirm the assumption that a CAT service, where searching and appraising the literature is 'outsourced', may bridge the gap between the practitioners' questions and their willingness to integrate research knowledge.

For some of the questions posed, a great deal of literature was included in the CAT, and therapists felt proud when their approach was confirmed by research or felt enriched when they received new ideas for treatment. In contrast to this situation, no evidence could be found for other questions. This situation was mentioned several times in the focus group interviews and led to many different feelings. Some therapists reported a feeling of relief because then they knew that there is no research knowledge out there, which they might have neglected so far in their clinical decisions. Other colleagues reacted differently; they felt quite ashamed of themselves and the profession as parts of their service is delivered without any evidence from research.

It is a known phenomenon that dealing with little or no evidence might reduce the confidence in EBP (Law & MacDermid, 2014c). Therefore, these different reactions might be an indicator that the situation of no or little evidence should be covered in the workshop in more detail. It would be sensible to emphasise that not having any evidence does not imply that a treatment is ineffective or should not be offered. The situation of no evidence has to be distinguished from the situation where there is evidence that a treatment or an approach is not effective or causes harm. Novak's traffic light grading system for the summary of evidence (Novak & McIntyre, 2010) offers excellent visualisation and might be helpful for explanations.

Feedback to the EBP Service Centre

The feedback to the offerings of the EBP Service Centre was very positive and highly appreciative of the quality of the service. Participants approved the length of the workshop and the format of delivery: two parts with about one month in between. This feedback is consistent with the feedback from participants of the EBP project by McCluskey (2004) in Australia. Due to huge travel distances, a two-day workshop was offered in a block, but participants and providers suggested afterwards that the workshop should be split to reduce cognitive overload. This experience led to the suggestion that when providing a workshop in rural regions, where the participants have to travel long distances, the pros and cons for providing the workshop either at a single time point or in two parts have to be considered carefully. Additionally, innovative didactic methods for e-learning and distance learning should be considered.

In general, the participants were satisfied with the content of the workshop. Depending on the pre-existing knowledge, some stated that largely it was a good revision of topics they had learned during their education, whereas for others the seminar was quite demanding because most of the content was new to them. Some participants asked for consolidation workshops to revise the content and practice the skills learned. When offering such consolidation days, different levels could be offered. They may either focus on a revision of the content or more on practising under supervision.

There was a consensus that learning about EBP and getting to know the CAT form in the workshop was essential for subsequent use of the CAT service. Without the workshop, most participants would not have been skilled to ask (answerable) clinical questions. Additionally, it was essential that therapists had the opportunity to clarify their question with the researcher who produced the CAT. The participants strongly recommended continued provision of personal communication between the researcher and the practitioner.

Practitioners highly appreciated the CATs as a concise appraisal and summary of the evidence. An essential factor was that the CATs were produced in German language, which made them much easier to read. Practitioners suggested that questions could be labelled with different priority status so that urgent questions are answered first. The place to provide the CATs was also mentioned in the feedback. During the project, the CATs were sent to the participant who had asked the question, via e-mail and they were also put into a dropbox. Due to security reasons, some participants had no access to the dropbox at their workplace, and therefore, only received the CATs they asked for. Having the possibility to view all CATs was appreciated, as the therapists made use of this opportunity. When providing such a service, the place to store files has to be reconsidered. It should be a secure but accessible place. Depending of the structure and resources of a future service, the CATs could be made accessible even for a broader community. Professional associations as well as other stakeholders could be considered for offering resources.

In summary, practitioners considered the EBP Service Centre providing an EBP workshop and the CAT service 'a really good package' (F) and expressed their desire for an ongoing service. This new implementation strategy for EBP seemed to overcome many barriers. Outsourcing the steps of searching and appraising seemed to stimulate critical thinking and questioning but also the willingness to integrate new knowledge in practice. Strategies that support practitioners whenever their questions arise might have another effect than strategies that inform without

a question asked, for example, providing information about guidelines. To support EBP, different approaches have to be considered. Strategies may focus on different stakeholders: clinicians, educators, researchers, managers and/or associations (Lin et al., 2010). Using skills and knowledge as well as librarian resources from academia to run the EBP Service Centre might be a new, effective and efficient strategy to implement EBP.

Limitations

As the project took place within a time period of five months, the results only offer short-term outcomes. At the moment, there is no evidence about the sustainability of the effects and results.

All participants were aware that the EBP workshop leader as well as the moderator and co-moderator of the focus group interview are lecturers at the university. As a lecturer, they have a working relationship with the majority of the participants, as most of them are fieldwork educators for university students. This relationship might have had an influence on the participants' openness during the interview.

The analysis approach of Gläser und Laudel was considered appropriate to answer the study questions. The main reason to choose this approach was that it allowed the definition of preliminary categories based on existing knowledge as well as the possibility to create new categories during the data analysis process. However, we are aware that other qualitative methods of analysis might have triggered different findings.

The project included occupational therapists only. As the topic is relevant to all health professionals, a future study might include other health professionals as well. It would be interesting to see if the acceptance and effects are similar to the experiences described in this paper.

CONCLUSION

The combination of an EBP workshop and a CAT service provided by the EBP Service Centre, seems to be an effective tool to facilitate EBP. The service was used intensively, and the practitioners reported changes in clinical practice and professional attitudes as a consequence of participating in the project. It seems to be a reasonable division of resources and strengths when research staff takes over steps 2 and 3 (literature search and appraisal) and produces CATs to summarise the evidence, whereas practitioners focus on asking clinical questions (step 1) and integrating the knowledge from the CAT into their clinical decisions (step 4).

DECLARATION OF INTEREST

The authors report that there is no conflict of interest.

ACKNOWLEDGEMENTS

The project was funded by the University of Applied Sciences FH Campus Wien and supported by the Vienna Hospital Association and the Austrian Association of Occupational Therapists, Ergotherapie Austria.

The authors would like to sincerely thank all the practitioners who participated in the project for sharing their experiences in the focus group interviews. Special thanks goes to Dr. Andrea Zimpernik for her support with the English language.

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APPENDIX: DEVELOPMENT OF CATEGORIES AND SUBCATEGORIES