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Abstract

Over the past decade, there has been an increased emphasis on evidence-based practice (EBP) and the use of outcome measurement in clinical practice, however, the implementation of evidence into practice remains challenging and irregular. During fieldwork, students often experience a disconnect between the emphasis on EBP in the classroom and lack of use in the clinic. Recognizing the need to develop high-quality, evidence-based and data-driven models of practice for student training, we partnered with local fieldwork educators to develop an innovative program that guides students and simultaneously trains fieldwork educators (FWE) in the use of a systematic data driven decision making (DDDM) process to infuse evidence into practice. Using a pre-post quasi-experimental design, we evaluated the impact of this program on students' perceived knowledge and skills in use of EBP and DDDM. A focus group with participating fieldwork educators captured their knowledge and attitudes in the use of EBP and DDDM in their clinical sites. Eleven FWEs and twenty four students participated. Results revealed significant change in students' knowledge and skill in use of EBP and DDDM. FWEs reported the program clarified the role of occupational therapy, enhanced communication, and validated the value of occupational therapy in their clinical site. This program serves as a model for training students to implement evidence and data driven approaches in clinical practice, thus bridging the gap between classroom and clinic.

Keywords

Fieldwork, evidence based practice, occupational therapy education, data driven decision making

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ABSTRACT

Over the past decade, there has been an increased emphasis on evidence-based practice (EBP) and the use of outcome measurement in clinical practice, however, the implementation of evidence into practice remains challenging and irregular. During fieldwork, students often experience a disconnect between the emphasis on EBP in the classroom and lack of use in the clinic. Recognizing the need to develop high-quality, evidence-based and data-driven models of practice for student training, we partnered with local fieldwork educators to develop an innovative program that guides students and simultaneously trains fieldwork educators (FWE) in the use of a systematic data driven decision making (DDDM) process to infuse evidence into practice. Using a pre-post quasi-experimental design, we evaluated the impact of this program on students' perceived knowledge and skills in use of EBP and DDDM. A focus group with participating fieldwork educators captured their knowledge and attitudes in the use of EBP and DDDM in their clinical sites. Eleven FWEs and twenty four students participated. Results revealed significant change in students' knowledge and skill in use of EBP and DDDM. FWEs reported the program clarified the role of occupational therapy, enhanced communication, and validated the value of occupational therapy in their clinical site. This program serves as a model for training students to implement evidence and data driven approaches in clinical practice, thus bridging the gap between classroom and clinic.

BACKGROUND

Despite the increased emphasis on evidence-based practice (EBP) (AOTA, 2007; King, Wright, & Russell, 2011; MacDermid, Law, & Michlovitz, 2014; Schaaf, 2015; Thomas &

Law, 2013) the implementation of evidence into clinical practice remains challenging and sporadic (Burke & Gitlin, 2012; Kitson et al., 2008; Upton, Stephens, Williams, & Scurlock-Evans, 2015). This lack of implementation of new research knowledge is a recognized issue across health care (Canadian Institutes of Health Research, 2016). Solutions to this issue often require whole systems change at the research, practitioner, and institution level (Burke & Gitlin, 2012).

To advance the use of research evidence in occupational therapy practice, the American Occupational Therapy Association (AOTA) has recommended strengthening the linkages between education, research, and practice (AOTA, 2007). This valuing of evidence based practice is also reflected in the accreditation standards for occupational therapy education (Accreditation Council for Occupational Therapy Education, 2012). Current literature recommends strategies to help bridge the gap between research and its translation into routine care (Burke & Gitlin, 2012; Clark, Park, & Burke, 2013; Jette et al., 2003; King et al., 2011; Schaaf, 2015; Upton et al., 2015; Welch & Dawson, 2006). For example, Clark et al. (2013) describe frameworks for addressing this challenge at three levels: the research design level (Glasgow, 2003), the practitioner level (Gabbay & Le May, 2011), and the institutional level (Kitson et al., 2008) by designing and conducting studies that can be easily translated into practice. Schaaf (2015) recommends that a systematic, data-driven, outcome-based approach to practice will bridge the research to practice gap by creating evidence through practice. Additional strategies for infusing evidence-based thinking into practice include: 1) building partnerships between clinicians, administrators, and academic programs (Burke & Gitlin, 2012); 2) formal instruction combined with clinical experience (Thomas, Saroyan, & Snider, 2012); and 3) building conceptual thinking and mapping through systematic reasoning (Kitson et al., 2008).

Despite the fact that entry level occupational therapy education programs emphasize the use of evidence-based practice (EBP) in their curricula and fieldwork placements to help students become evidence based practitioners (DeAngelis, DeMarco, & Toth-Cohen, 2013), the use of research knowledge to support practice is not consistently utilized (Thomas & Law, 2013).

Likewise, while noted researchers and experts call for measurement of outcomes as part of routine EBP (MacDermid et al., 2014; Schaaf, 2015; Thomas & Law, 2013), outcome measurement has not been consistently integrated into occupational therapy practice. Hence there is a need for strategies to help occupational therapy practitioners make the shift to EBP, including the use of outcome measurement, as a standard of occupational therapy practice (Law & Baum, 2005; Schaaf, 2015) and the opportunity for students to observe these best-practice strategies in practice during their clinical training.

To address the need for exemplary practice models where students can observe the use of evidence and outcome measurement in practice, our university occupational therapy program operationalized the strategies mentioned above into an innovative program designed to foster EBP in clinical practice. We used a data driven decision

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making approach (DDDM) which is described in more detail below, to guide the implementation of evidence and the use of outcome measurement into practice. We partnered with fieldwork sites to train students to be evidence-based, data-driven practitioners while simultaneously training practitioners. The program, termed PrEMO (Promoting Environments that Measure Outcomes) creates a partnership between fieldwork Level II sites and our university occupational therapy program to promote environments that measure occupational therapy outcomes. PrEMO is described in detail elsewhere (Schaaf et al., 2017). The focus of this paper is to describe the DDDM Process (Schaaf, 2015; Schaaf & Mailloux, 2015) used to train students and fieldwork educators (FWEs) in the use and implementation of EBP. In addition, we measure the impact of this program on students' knowledge, skills and attitudes and FWEs' knowledge and attitudes regarding the use of evidence-based, data driven practice.

METHODS

This study was approved by the authors' university ethics board. A mixed methods quasi-experimental design was used to evaluate the impact of the program. The specific aims were to evaluate the impact of the program on 1) students' knowledge, skills and attitudes of EBP, and 2) the FWEs' knowledge and attitudes about EBP. We hypothesized that 1) students who participated in the program would demonstrate a significant improvement in their knowledge, attitudes, and skills in using EBP and DDDM in their clinical training, and 2) the FWEs would demonstrate improved knowledge and attitudes about EBP and using data in their clinical practice.

Participants

Eleven FWEs and twenty four second year occupational therapy students at eight sites completing their Level II Occupational Therapy Fieldwork Education who were assigned to one of the PrEMO sites participated in the study. One or two students were at each site during each 12 week rotation (October-December 2015; January-March 2016; April-June, 2016). The demographic characteristics of the students are detailed in Table 1.

Table 1

Demographics of Students

Student Characteristic	n	%
Age range		
18-24	16	69.6
25-34	7	30.4
Fieldwork Level II		
First	9	39.2
Second	14	60.8
Month of start date		
January	8	34.8
April	8	34.8
June	1	4.3
September	6	26.1

Previous experience with population at the fieldwork site		
Yes	15	65.2
No	8	34.8
Previous experience with practice area at the fieldwork site		
Yes	9	39.1
No	14	60.9
Exposure/Experience to systematic approach to measure outcomes		
No experience	1	4.3
Related Readings	14	60.8
Class lectures/presentations/ discussions	20	87
Class assignments	12	52.2
Graduate assistantship	4	17.4
Previous work experience	2	8.7
Hours FWE is on site		
8-10 hours	9	39.1
26-30 hours	3	13
31-40 hours	7	30.4
More than 40 hours	4	17.4

Note. n = 23; one student did not complete the survey

Procedures

The study took place from July 1, 2015 through June 30, 2016. The first three months were the planning period and during this time the 12 week schedule was developed for each fieldwork site and training materials for the students and FWE were finalized. The Academic Fieldwork Coordinator (AFWC) worked closely with the team to assure all systems were in place prior to the initiation of student placement. The first cohort of 6 students at 4 sites and their FWEs began the final week of September, 2015.

Each site used DDDM (Schaaf, 2015) to promote the translation of EBP into practice. DDDM offers a framework to systematically guide the implementation of evidence into practice. It focuses on the collection and use of data to guide clinical decisions and measure outcomes. As shown in Figure 1, DDDM begins by identifying each client and their unique participation challenges and strengths as the basis for contextualizing the occupational therapy process directly on the client's occupational participation. Through this process the therapist gains an understanding of the client's unique needs within the context of their life. Next, an appropriate theoretical perspective to guide the occupational therapy process is identified. Assessments are completed and these assessment data are used to generate hypotheses about the factors impacting the client's occupational participation. Specific goals are created and outcome measures are identified. Next, the occupational therapy intervention is designed combining best evidence available with the client's unique needs and the therapist's expertise to "set the stage for intervention." This setting the stage includes identifying the dosage, duration, setting and approach for intervention. The intervention is conducted and

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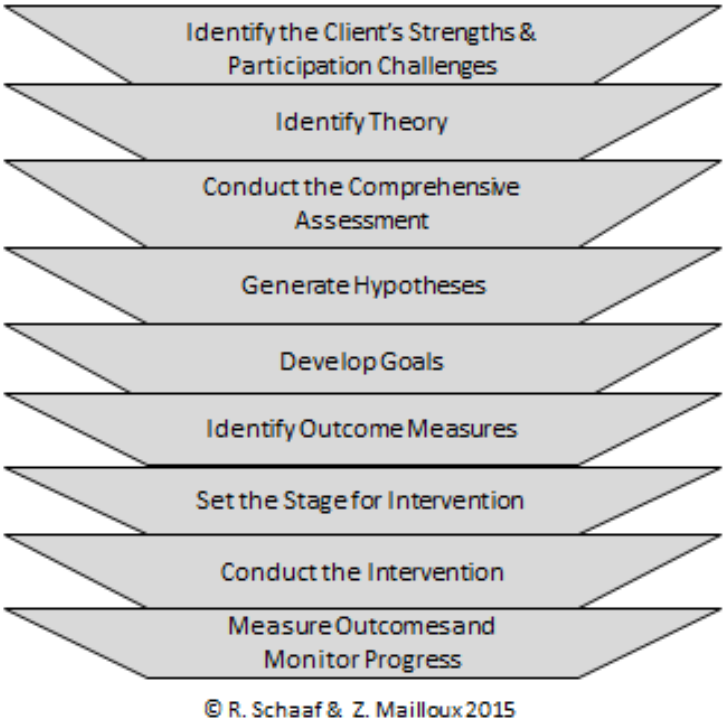
outcomes are measured and monitored regularly. Each site is assigned a faculty champion, a member of the occupational therapy department whose area of clinical expertise matches the fieldwork site's focus to facilitate the integration of DDDM into the fieldwork site. For example, a faculty member with expertise in neurorehabilitation may be the faculty champion for a rehabilitation site. Another university faculty with expertise in the DDDM process served as DDDM facilitator and collaborated with the faculty champion, FWE and students at each site.

Figure 1. Data Driven Decision Making for the OT Process



Activities using the DDDM process were completed weekly by the students and these were monitored by the occupational therapy department faculty via in person or virtual meetings. This process is described in more detail in a separate paper (Schaaf et al., 2017).

Measures

- *Pre and Post Questionnaire*: A questionnaire (adapted from Jette et al., 2003) was designed to measure students' perceived knowledge, skills, and attitudes about EBP and the DDDM process. An expert in survey development reviewed the revised survey and provided suggestions to improve its clarity and rigor. The questionnaire consisted of 8 demographic questions and 24 close ended questions using a 5 –point Likert scale (1= strongly agree to 5 = strongly disagree). Four questions addressed perceived knowledge, seven addressed attitudes about using DDDM and measuring outcomes, and ten addressed perceived skill. The questionnaire was administered anonymously via electronic link, at the beginning and end of each student's 12 week

fieldwork. Students were assigned codes to allow anonymous pairing of pre/post surveys for comparison.

- *DDDM Scoring Rubric*: A specially designed scoring rubric was developed to objectively rate the student's skill in using DDDM. Students chose a client from their clinical practice and detailed each step of the DDDM process on a DDDM Documentation Template. The DDDM scoring rubric consisted of 9 criteria that were each rated on a scale of 0 to 2 (2= achieved criteria; includes all necessary information in a clear, comprehensive manner, 1= contains 50% or more of the necessary information, 0= information presented does not meet criteria or contains less than 49% of information). The highest score possible was 18 representing a score of 2 on each of the 9 criteria. An independent evaluator used the DDDM scoring rubric to rate each student's DDDM Documentation Templates at week 2 (pre) and week 12 (post) during their fieldwork Level II experience.

- *Focus group*: At the end of the project, FWEs participated in a focus group that was designed to obtain information about how participation in this program impacted their knowledge and attitudes in using DDDM and EBP in their site as well as the perceived impact of the program on client outcomes, the fieldwork site itself, and their occupational therapy practice. To accommodate geographic location and scheduling, three focus groups and one telephone interview were conducted. These were audiotaped, transcribed and analyzed. Data were categorized into themes and coded using constant comparative thematic analysis (DePoy & Gitlin, 2016). An independent evaluator and first two authors of this paper participated in the constant comparative thematic analysis.

Data Analysis and Expected Outcomes

Comparison of pre and post mean and standard deviation scores of the DDDM Questionnaire and the DDDM Scoring Rubric were completed using the Wilcoxon Signed Ranks Test. There were 4 questions that addressed knowledge, 7 questions that addressed attitudes, and 10 questions that addressed skills. The impact of the program on the FWEs' knowledge and attitudes was analyzed via constant comparative thematic analysis of focus group data. Two of the study investigators and one independent evaluator independently read the focus group transcriptions, recorded their initial impressions and identified preliminary themes (Hsieh & Shannon, 2005). Next, they met to categorize and code themes (Bradley, Curry, & Devers, 2007) and themes were discussed until consensus was reached.

RESULTS

Change in student knowledge and attitudes about using evidence and data in practice is shown in Table 2. Sixteen of the 24 items showed significant change from pre to post, at $p \leq .05$ on the Wilcoxon Signed Rank Test. All items in the skills and knowledge section showed significant change. No significant change was noted in attitude section.

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Table 2

Student Perceived Change in Knowledge, Attitudes and Skills in DDDM

Question	Pre	Post	
	M (SD)	M (SD)	Change score
Skills			
I feel competent using DDDM in my day-to day practice.	3.71 (.806)	1.82 (.664)	1.89*
I feel competent in my ability to set proximal and distal outcome measures.	2.96 (.806)	1.86 (.774)	1.09*
I am able to incorporate clients strengths with the use of DDDM.	2.68 (.995)	1.68 (.568)	1.00*
I feel competent in my ability to measure/evaluate proximal and distal outcomes.	2.78 (.736)	1.82 (.664)	0.96*
I feel competent in my ability to create hypotheses based on assessment data.	2.50 (.590)	1.64 (.492)	0.86*
I feel competent in my ability to interpret assessment data.	2.54 (.721)	1.68 (.568)	0.86*
I feel competent in my ability to create relevant interventions.	2.48 (.511)	1.64 (.581)	0.84*
I am able to access the tools (such as evaluations or outcome measurement tools) I need to be able to use DDDM.	2.63 (.824)	1.82 (.588)	0.81*
I feel competent to interpret outcome instruments.	2.58 (.584)	1.82 (.588)	0.77*
I feel competent in my ability to identify a client's participation challenges that occur within the context of their life situation	2.04 (.550)	1.32 (.477)	0.72*
Change in Skills (grouped data)			
Knowledge			
I am familiar with a variety of assessment/evaluations relevant to this population.	2.42 (.654)	1.73 (.631)	0.69*
I am aware of how to use DDDM.	2.67 (.637)	1.55 (.510)	1.12*

I am confident in my understanding of terms/concepts related to DDDM.	2.57 (.788)	1.45 (.510)	1.11*
I am familiar with Data Driven Decision Making (DDDM) as a systematic approach to the occupational therapy process that includes Systematic assessment, analysis of assessment data, development of interventions that are based on assessment data and outcome.	1.92 (.504)	1.41 (.503)	0.51*
Attitudes			
I feel that using DDDM is useful in justifying my services.	1.73 (.550)	1.41 (.590)	0.32
I feel that guidelines for the use of DDDM are available.	2.50 (.780)	2.18 (.958)	0.32*
I feel that using DDDM is useful in guiding my clinical reasoning.	2.00 (.436)	1.77 (.869)	0.23
I feel that the adoption of DDDM places an unreasonable demand on occupational therapists.	3.35 (.714)	3.23 (1.020)	0.12
I feel that using DDDM is useful in effectively measuring and reporting outcomes.	1.77 (.612)	1.73 (.827)	0.05
I feel that DDDM improves the quality of patient/client care.	1.77 (.612)	1.77 (.752)	0.00
I feel that DDDM helps me make decisions about patients/client care.	1.77 (.429)	2.05 (.899)	-0.27
Academic preparation			
I learned of the foundation for evidence-based practice, including outcome measurement, as part of my academic preparation.	1.91 (.417)	1.45 (.596)	0.46*
I received training in a variety of relevant assessments/evaluations as part of my academic preparation.	2.33 (.565)	1.91 (.811)	0.42

Note. pre survey n = 24; post survey n = 23; one student did not complete both pre and post surveys.

(One additional question that measured facility use of DDDM was not included in this analysis because they did not represent student knowledge, skills, or attitudes)

*$p \leq .05$; Wilcoxon Signed Ranks Test

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To objectively evaluate change in students' skill in using DDDM, the median DDDM Rubric pre-test scores were subtracted from post-test scores to calculate the amount of improvement. Pre- and post-test performance scores were available for 23 students assessed in nine areas (Note: two students collaborated and completed one template thus all 24 students participated). Significant improvement on 8 out of the 9 assessed areas and the total score was observed with the signed rank test and results are shown in Table 3. The median total score improvement was 7 out of 18 maximally possible ($p < .0001$).

Table 3

Change in Student Skill in DDDM

Question	Pre-test Median (Min, Max)	Post-test Median (Min, Max)	Improvement Median (Min, Max)	Signed Rank P-value
1. Identifies client characteristic, details the participation/occupational performance needs based on history, observation and client and caregiver needs	2 (2, 2)	2 (2, 2)	0 (0, 0)	NA
2. Identifies theoretical framework(s) utilized and the rationale for choosing this framework	2 (0, 2)	2 (1, 2)	0 (0, 2)	0.016
3. Identifies assessments used and summarizes findings	2 (0, 2)	2 (1, 2)	0 (0, 2)	0.0078
4. Identifies environmental supports and/or challenges	2 (1, 2)	2 (1, 2	0 (0, 1)	0.031
5. Articulates at least one hypothesis that will guide intervention, hypothesis identifies factors that impact participation challenge	0 (0, 2)	2 (1, 2)	2 (0, 2	0.0002
6. Intervention strategies are identified and described so that they are clear, comprehensive and can be replicated	0 (0, 2)	2 (0, 2)	2 (0, 2)	0.0002
7. Outcomes that relate to participation challenges are identified, strategies for measurement of outcomes are included	0 (0, 2)	2 (0, 2)	1 (-2, 2)	0.0031

8. Describes a scaled goal that relates to participation challenge	0 (0, 2)	2 (0, 2)	2 (0, 2)	0.0005
9. Data is displayed	0 (0, 2)	2 (0, 2)	2 (-2, 2)	<.0001
Total Score	7 (3, 18)	17 (12, 18)	7 (-4, 15)	<.0001

Note: n = 23; two students collaborated and completed one DDDM documentation template

Constant comparative thematic analysis of the FWE focus group captured five themes: *Clarity of the Occupational Therapy Process, Communication, Value of Occupational Therapy, Time, and Mentorship.* Each of these is described below.

Theme 1: Clarity of the Occupational Therapy Process

The FWEs articulated that the DDDM process helped them be more systematic, supported the integration of evidence in practice, facilitated outcome measurement and as a result, clarified the occupational therapy process for them. FWEs expressed that the DDDM process gave them or their students more confidence in the occupational therapy process and clarified their understanding of why they were doing the things they did. Others mentioned seeing a difference in the specificity of outcomes of measurement they used.

> "*It gives a nice structure and concept for how to flow from evaluation through outcomes.*"

> " *We [always] encourage students to look at evidence and use their resources to give them ideas or reinforce why they want to do a certain intervention…but I think DDDM gives them more direction in their [literature search] because they have a clearer picture of what they want to work on."*

> *"The DDDM process… graphing and…charts…made the whole process much more systematic and has [also] highlighted…the value of using theory to guide treatment…"*

> *"The [students] that use that process have a clearer understanding of how to link evidence into practice and how to translate that information from what we're finding in our evaluation, how to develop that hypothesis and what's underlying the issues into developing goals and a treatment plan, so I think they have a clearer understanding of that process…*"

Theme 2: Communication

Use of the DDDM process helped students and FWEs communicate with clients and with each other in clearer way about the occupational therapy process, client progress, and client outcomes.

> *"It honed our ability to clearly communicate our findings and our understanding of our client; …so that [clients] understand the underlying concern(s) and how it relates to [their] occupational performance."*

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> *"Some parts of going through the [learning] process you are like this doesn't make sense, Is this working? What's happening? But yet every student, by the end, when they do their [presentation] explain it to everyone in the department and it absolutely makes sense to them. They can see the work that they have done. They talk really confidently, and can explain it."*

Theme 3*:* Demonstrating Value of Occupational Therapy
This theme refers to the value of DDDM in validating occupational therapy and explicitly articulating the distinct value of occupational therapy.

> *"…I've seen OT being valued more amongst administration and staff [since we implemented DDDM]."*

> *"I feel like we have a new found respect in OT".*

> *"I think we have a strong presence…our value has been highlighted and has been made more clear because there always has been in our department very poor distinction between what OT and physical therapy does…DDDM has further highlighted the value that we provide that's very different than what PT does."*

Theme 4: Time
Participants commented that learning and implementing DDDM was time intensive. After participating in her first fieldwork with the DDDM training, one FWE reported *"I struggled finding the time to do it…"* Others felt that more time was needed to master the DDDM process.

> *"The initial time to set it up and to really work through the process [was challenging], but now it's kind of second nature, but it was the initial pieces that were, you know, the learning curve."*

> *"We would have to devote more time in our supervision sessions to discussing what they are doing with the DDDM, because it is not done in one session, it's over weeks, so time is a factor."*

Theme 5: Mentorship
Almost every FWE indicated that the faculty mentorship was helpful. In response to the question "what was most helpful in learning the DDDM process?", one FWE responded:

> *"Being able to problem-solve the little intricacies that were relevant to my practice with a mentor [and] looking at measures that might be helpful for us and some more individualized pieces."*

> Another mentioned working with [faculty] … "*to find the appropriate outcome measure…and what you are trying to measure exactly, and how to frame that*."

> *"I felt that [the mentorship] was really helpful. It brought all the graphs and charts and tables kind of into real life, most helpful!"*

DISCUSSION

This paper describes the implementation of a partnership between university faculty and clinical training sites designed to promote EBP so that occupational therapy students not only learn to use evidence and outcome measurement in the classroom, but also experience best practice models while completing their Level II fieldwork training. We used DDDM as the methodology for infusing EBP and outcome measurement into clinical settings. DDDM was integrated into the students' 12 week fieldwork schedule. A faculty champion and DDDM facilitator worked with the FWE, AFWC and students to facilitate its implementation. The data shows that students improved their knowledge and skills around DDDM and FWEs reported that DDDM clarified the occupational therapy process; this framework provided the language needed to communicate the outcomes of the occupational therapy process and improved the value and respect of occupational therapy services in their fieldwork sites. Although the FWEs commented that the amount of time needed to learn and integrate the DDDM process into practice was intensive, they felt it was worth the effort. They supported the use of the faculty champion and DDDM facilitator in helping to foster the implementation of DDDM into the site and the student program.

In terms of translating evidence into practice, the program described here provides an approach for facilitating EBP in occupational therapy and thus responds to the call for strategies to promote implementation of evidence into clinical practice. Utilization of DDDM helped to create a shift toward actual use of evidence in practice by providing the needed framework and language to guide clinicians and students in implementation of EBP. This interactive and collaborative process served to expand the "mindlines" or ways of thinking of the students and FWEs (Clark et al., 2013). Within this collaborative process, the faculty champion identified opportunities for critical appraisal of relevant evidence for the interventions and facilitated discussion about ways that the new evidence could be included in the intervention plans. Additionally, many students created a presentation of their DDDM experience and outcomes for their client at their Level II site. This was a described as an effective tool that clarified the occupational therapy process and demonstrated the value of occupational therapy in the fieldwork setting.

Although we found significant improvement in students' knowledge and skills in using DDDM to guide EBP, there was not a significant change in students' attitudes about the value of using evidence and data in occupational therapy practice. It is possible that because students are educated on the importance of these aspects of occupational therapy practice in their curriculum they already value these practices as an important aspect of occupational therapy. To track whether students continue to value EBP as they transition to clinicians, we plan to complete a follow-up study that will track their use, skill and attitudes about these concepts in practice. It will be important to track whether the opportunity to participate in this program has an impact on their future practice.

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The FWEs showed a true enthusiasm for the project. They valued the opportunity to advance their professional skills and enhance the occupational therapy services at their fieldwork site. They felt that participation in this program not only allowed them to augment their own skill in EBP but also provided the data needed to demonstrate the value and effectiveness of their occupational therapy services. This was an added benefit of participating in the program and a highly valued one.

The time commitment of the faculty and the FWEs is an important factor to consider for future planning. There is considerable time needed to get the program into place. The FWEs must complete on-line tutorials so that they have a basic understanding of DDDM prior to the student's arrival. In addition, the 12-week schedule must be crafted to assure that the concepts and activities related to DDDM are integrated into the student's leaning activities. Additionally, the students were required to complete the DDDM templates and the FWEs were required to review these and discuss them with the students regularly. Clearly, the site must be invested in the process and be willing to engage in the needed activities in order to assure the successful implementation of EBP. Regarding faculty time, the educational program must have a commitment to developing optimal training sites for their students and commit the needed resources in terms of faculty time. To accomplish this aim, the faculty champion's time commitment is accounted for in their yearly workload whereby a specific percent effort is dedicated to this program. A side benefit of this arrangement is that the faculty champion develops a partnership with a fieldwork site and has opportunities to influence practice, conduct clinical research, and impact student training. Overall, although the time commitment is notable, the findings from this study show that the investment of the university and clinical partners does result in a positive shift toward EBP. In this way, the program described in this paper provides a model for other university-clinical partnerships to facilitate the implementation of EBP in occupational therapy.

One important aspect of the program was the emphasis on use of data to guide evidence-based occupational therapy practice. We emphasized not only the use of data for outcome measurement, but also use of assessment data. The use of standardized assessment tools as a means to gather data about the clients' needs was an important aspect of the program. The faculty champion frequently introduced the fieldwork sites to assessment tools and provided guidance in their use. In addition, the faculty champion emphasized the importance of interpreting the assessment data and ways to use these data to guide intervention. When the fieldwork site was not familiar with the recommended assessments, the students often learned the assessments and brought this knowledge to the FWEs. This facilitated both the students' knowledge and skill in assessment administration and interpretation and also the FWEs' skill and knowledge in this area and ultimately, seemed to be a positive influence on practice.

Regarding outcome measurement, again, the faculty champion and DDDM facilitator both emphasized the need to identify appropriate outcome measures and use these as part of routine practice. Often this was an iterative process whereby the faculty champion, DDDM facilitator, student and FWE worked together to identify meaningful and sensitive outcomes and methods by which to measure these. In addition, they

collaborated to strategize about display and analysis of the outcome data to assure it was meaningful and useful. This process proved to be an invaluable step in the implementation of EBP.

Limitations

This study had several limitations that are important to consider. First, there was variability among the students' and the FWEs' knowledge and skill in using EBP including their use of evidence from the literature, their use of standardized assessments, and the use of outcome measurement as part of daily practice. To control for this variability we focused on the change from pre to post as the measure of change. In addition, although the study sample size was respectable, a larger sample over a longer period of time will be useful to evaluate the impact of the program on a wider scale. Finally, our results indicate this program had a positive effect on the use of evidence and outcome measurement in clinical practice. It is difficult to determine the long term impact of this program on the FWEs' skills in the use of a systematic approach to infusing evidence and measuring outcomes as part of their clinical practice. Also it would be premature to declare that students who participate in this program will be competent in using evidence in their clinical practice after they complete their academic training. However, preliminary results do indicate a significant change in both students and FWEs as a result of this program. Continued monitoring of the clinical practice at the FW sites as well as follow up of the students as they transition into clinical practice will inform us as to the long term effects of the program.

Implications for Occupational Therapy Education

This paper described the impact of an innovative partnership between our university department of occupational therapy and fieldwork sites to translate new knowledge into practice using a data driven decision making process (DDDM) (Schaaf, 2015; Schaaf & Mailloux, 2015). Our data indicates this program had a significant impact on students' perceived knowledge and skills and their FWEs' knowledge and attitudes in the use of evidence-based, data-driven practice. In addition, participation in this program provided an opportunity for FWEs to explicitly articulate the distinct value of occupational therapy at their site. Using strategies suggested in current literature as an infrastructure (Clark et al., 2013) this program proved to be a valuable method to bridge the research-gap in occupational therapy. Continued study of the effectiveness of this model in current fieldwork sites as well as new ones will validate the utility of this model as an effective tool to strengthen the link between education, research and practice.

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