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The Correlation between Confidence and Knowledge of Evidence-Based Practice among Occupational Therapy Students

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The Correlation between Confidence and Knowledge of Evidence-Based Practice among Occupational Therapy Students

Abstract

Evidence-based practice (EBP) is used throughout multiple health-care professions and includes the use of best research available, client preferences, and the practitioner's experience. Occupational therapy educational programs are required to incorporate EBP into their curriculum. A convenience sample of occupational therapy students from a private university completed a survey designed to measure students' knowledge and confidence in EBP. The survey consisted of the Knowledge of Research Evidence Competencies (K-REC) and the Evidence-Based Practice Confidence (EPIC) scale, as well as demographic questions. Of the respondents (n = 47), third-year students indicated higher confidence in the ability to utilize EBP and higher levels of knowledge related to EBP than second- or first-year students. The more didactic and clinical experience that the students had, the more knowledge related to EBP they had, which increased their confidence in the implementation of EBP. The knowledge and confidence that students gain of EBP within their educational training and clinical experiences can influence their future use and implementation of EBP as clinicians. Without this information, therapists will lack the confidence and ability to apply EBP principles in a changing and demanding health-care environment.

Keywords

Evidence-Based Practice, Confidence, Knowledge, Education, Occupational Therapy

Cover Page Footnote

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Background and Literature Review

Evidence-based practice (EBP) focuses on a clinician's ability to formulate a clinical question, use resources to find the most relevant information, and determine if the information is valid and reliable to put into clinical practice (Salbach & Jaglal, 2011). EBP can be defined as the integration of clinical expertise with client values and the available research evidence (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). Many practitioners have positive attitudes toward EBP and believe it is an essential component of their careers (Salls, Dolhi, Silverman, & Hansen, 2009). However, there is a lack of use of EBP within the clinical setting. Healthcare professionals report the following barriers that affect their implementation of EBP: A lack of relevant research, lack of ability to translate the research into practice, and lack of time (Salls et al., 2009; Sudsawad, 2005).

Efficient and effective implementation of EBP involves specific knowledge and skills. There are five core steps to the proper use of EBP that have been incorporated into one model known as the EBP reference model (Thomas, Saroyan, & Snider, 2012; Tilson, 2010). The steps of the EBP reference model include: (a) Ask a clinical question, (b) acquire the literature to answer the question, (c) appraise the validity and importance of the literature, (d) apply the research found to the treatment of a client, and (e) assess the effectiveness of the intervention (Thomas et al., 2012). Each of these steps employs different levels of knowledge and skills (Ilic, 2009).

Healthcare professionals agree that EBP is a

critical and necessary part of their careers (Heiwe et al., 2011; Salls et al., 2009). A study by Salls et al. (2009) found that more than 96% of the occupational therapy (OT) practitioners believed that EBP was important in the field of OT. Furthermore, 87% felt that research was helpful in their practice. A similar study was conducted that focused on physical therapists' attitudes and beliefs about EBP. The study found that 90% of participating physical therapists felt that EBP was an essential component to their careers and 82% believed that research is helpful and useful in the physical therapy (PT) discipline (Fruth et al., 2010). Researchers have found that healthcare professionals believe that EBP improves the quality of care that clients receive (Graham, Robertson, & Anderson, 2013; Heiwe et al., 2011).

Despite the belief that integration of EBP improves care (Graham et al., 2013; Heiwe et al., 2011), multiple barriers often limit implementation (Fruth et al., 2010; Heiwe et al., 2011; Salls et al., 2009; Sudsawad, 2005). Therapists are not able to research the literature throughout the workday due to insufficient time and resources (McKenna et al., 2005). Healthcare professionals report not only lacking the time to look for research or resources, but they are also lacking the time to implement the evidence into practice due to strict time constraints with each client (Chang, Russell, & Jones, 2010). Additionally, another notable barrier is a lack of access to multiple forms of information. This barrier could be due to a lack of computer access or a lack of access to journal databases (Chang et al., 2010).

Another obstacle is a deficiency of relevant research available to integrate into clinical practice. Healthcare professionals report a lack of communication between what researchers find relevant, and what practitioners consider relevant to their clinical practice (Sudsawad, 2005). Practitioners also struggle to differentiate or interpret the information the researchers report. For example, practitioners struggle to translate research into clinical practice. This barrier could be due to a lack of knowledge and skills associated with EBP (Sudsawad, 2005). Heiwe et al. (2011) conducted a study with occupational therapists, physical therapists, and dietitians that examined the perceived barriers associated with the use of EBP. The researchers found at least 30% of the participants reported that the lack of statistical knowledge, critical appraisal skills, and research skills were all barriers keeping practitioners from implementing EBP. McKenna et al. (2005) found the same barriers and concluded that a lack of skills in accessing the research contributed to the absence of EBP implementation.

Fruth et al. (2010) found physical therapists identified a lack of confidence in searching the literature and a lack of ability to generalize the research to their patients. Graham et al. (2013) found only 66% of occupational therapists surveyed felt confident in searching for literature, while only 60% felt confident in distinguishing the importance of the research. A crucial component to consider when implementing EBP is not only to use multiple sources of information, but also to incorporate and apply the information specific to the client's needs

and circumstances. Without these skills, healthcare professionals may struggle to implement EBP into the clinical setting (Fruth et al., 2010; Heiwe et al., 2011; McKenna et al., 2005). Practitioners are relying solely on their clinical experiences, colleagues, and continuing education courses, instead of integrating research to guide their clinical decisions (McKenna et al., 2005).

OT and PT clinicians practicing more than 20 years may not have received formal didactic training on the principles of EBP. However, the current accreditation standards for both OT and PT entry-level degree programs mandate that students learn to apply EBP to implement the skills in the clinical setting (Accreditation Council for Occupational Therapy Education [ACOTE], 2012; Commission on Accreditation in Physical Therapy Education [CAPTE], 2014). The ACOTE accreditation council explains that graduates of OT programs must be prepared to be continuous learners and stay current with the latest research, using "evidence-based professional practice" (ACOTE, 2012, p. 1). This is consistent with the Occupational Therapy Code of Ethics (American Occupational Therapy Association, 2010). EBP is identified in the Occupational Therapy Code of Ethics as a professional responsibility (Salls et al., 2009).

Similar to OT, other healthcare professions integrate EBP into their educational accreditation stands. One of the topics CAPTE (2014) addresses is the use of didactic information and the application of that knowledge to the clinical setting. The didactic part of the students' education

provides students with the essential knowledge and skills needed to become a physical therapist, while the clinical component allows students the opportunity to apply those skills and knowledge. Although it is important for all healthcare students to learn how to implement EBP in the classroom, it is equally important for students to see EBP applied in the clinical setting with practicing clinicians. While students are on clinical placements, they need to be exposed to role models who use EBP to guide their practice (McCluskey, 2003).

Students in OT programs must demonstrate skills in effectively finding, understanding, appraising, and incorporating research (ACOTE, 2012). Throughout their program of study, students learn to develop clinical questions, how to effectively search the available literature, and to critically appraise appropriate evidence (Morris & Maynard, 2010). Stube and Jedlicka (2007) emphasized the importance of teaching EBP to students by stating, “Our hope was that the foundational preparation provided to students within our academic program would be an impetus to merging evidence into their clinical learning” (p. 54).

Healthcare professionals, however, are not implementing EBP in the clinical setting (Crabtree, Justiss, & Swinehart 2012; Fruth et al., 2010; Heiwe et al., 2011; Salls et al., 2009; Sudsawad, 2005). Crabtree et al. (2012) explored this topic further in a recent study, which included OT students in a master’s level program. The students in the program completed an entry-level EBP course along with an eight-week fieldwork experience. The

results indicated that students had significant increases in EBP skills and knowledge at the end of the EBP course than at the beginning of the course. However, students’ scores significantly declined from the completion of the course to the completion of fieldwork. The researchers found that while OT students did gain EBP knowledge and skills from the EBP course, they had difficulty applying EBP knowledge and skills in the clinical setting. Further studies have examined the different skills related to EBP among different cohorts. Thomas et al. (2012) examined OT students from three academic cohorts and experienced practitioners and found that different cohorts exhibited different EBP competency skill levels. OT students demonstrated a greater knowledge of EBP as compared to the practicing therapists. Practicing clinicians demonstrated the use of EBP skills gained through clinical practice, for example using evidence for clinical decision making and evaluating the efficacy of the intervention. Students, however, were able to better create a clinical question, search the literature, and appraise the evidence.

Undergraduate and graduate level healthcare programs are incorporating EBP teaching into their curriculum (Morris & Maynard, 2010). Specifically, students in OT programs receive a significant amount of training regarding how to locate, use, and apply relevant research into clinical practice (Stube & Jedlicka, 2007). The knowledge and confidence the students gain in their educational training and clinical experience affect their future use of EBP as clinicians. The relationship between knowledge and confidence in

using EBP in clinical settings is not clearly defined in the literature for entry-level students.

Methodology

Participants

Researchers used a convenience sample of OT students from a private university after receiving approval from the Institutional Review Board. Researchers used email and face-to-face recruitment to solicit participants. The study included three cohorts of entry-level master of occupational therapy (MOT) students. The participants provided electronic consent to participate in the study.

Measures

Evidence-Based Practice Confidence (EPIC) Scale. The Evidence-Based Practice Confidence (EPIC) Scale was created for use across multiple healthcare disciplines to evaluate practitioners' confidence in their ability to use EBP (Salbach & Jaglal, 2011). The EPIC Scale consists of 11 questions that enable participants to identify their confidence on performing steps of the EBP process on a scale from 0-100%. Salbach, Jaglal, and Williams (2013) determined the EPIC Scale has high internal consistency and test-retest reliability when tested with physical therapists. Additionally, researchers found a relationship between self-efficacy and education, indicating that individuals with higher levels of education were associated with higher confidence.

Knowledge of Research Evidence Competencies (K-REC). The Knowledge of Research Evidence Competencies (K-REC) was developed from the Fresno Test, designed to

measure EBP knowledge in physicians. Lewis, Williams, and Olds (2011) developed the K-REC to be used with an interdisciplinary healthcare population. The K-REC measures EBP cognitive skills in entry-level healthcare students. It addresses the first three steps of the EBP reference model, assessing students' ability to form a clinical question, acquire the appropriate literature to answer the question, and appraise the literature (Thomas et al., 2012). Marking guidelines for the 12-point scale are provided for scoring consistency. As the K-REC is designed for entry-level healthcare students, it does not assess the students' ability to apply EBP or assess the efficacy of integrated EBP into clinical practice. The K-REC consists of nine multiple choice, open-ended, and true or false questions. This instrument was found reliable and valid when comparing entry-level student populations. The validity of the tool is unknown for use with an expert population due to a potential ceiling effect.

Demographic questionnaire. Researchers developed nine demographic questions to gather additional information from participants to allow for improved data analysis. The questions asked about the program in which the students were enrolled; their graduation year, age, gender, educational background, and undergraduate major; and any prior research training they may have had.

Data Collection

Initially, expert faculty members and alumni reviewed the tools. Researchers then revised demographic questions based on feedback. Student participants received a link via email to participate

in the study and complete the survey. The electronic survey was completed via Qualtrics® and consisted of an informed consent, nine demographic questions, K-REC questions, and the EPIC scale. Participants were sent an initial email, followed by two reminder emails over a three-week period at the beginning of the school year. First-year students were just admitted into the OT program and had not participated in OT didactic coursework, while second-year students had engaged in a full year of research coursework. The third cohort was off campus in clinical fieldwork experiences after having two years of applied research content. All responses were anonymous.

Data Analysis

Quantitative data was analyzed using Qualtrics® and SPSS® Version 19. Responses to the K-REC were scored according to published marking guidelines (Lewis et al., 2011). For improved inter-rater reliability in scoring the K-REC, four separate researchers scored the data and compared the results as a group. An outside expert reviewed any discrepancies regarding qualitative data from the K-REC. Descriptive statistics were run to determine parameters and frequencies. An analysis of variance (ANOVA) was used to compare data across the three cohorts.

Results

Demographics

Forty-seven of the 158 OT students (29.75%) consented to complete the survey. Table 1 shows the breakdown of surveys sent and returned by cohort. The average age of all participants was

24 years. One male (2.13%) and 46 females completed the survey (97.87%).

Table 1

Occupational Therapy Student Responses

Cohort	Sent	Response	%
1 st Year	54	13	24.07%
2 nd Year	52	19	36.54%
3 rd Year	52	15	28.85%
Total	158	47	29.75%

The majority of participants completed their bachelor's degree at the time of the study (78.72%). The most common undergraduate majors (Table 2) included psychology (36.17%), exercise science (23.40%), and biology (19.15%).

Table 2

Undergraduate Majors

Major	n
Psychology	17
Exercise Science	11
Biology	9
Other (education, therapeutic recreation, adapted physical education, business, telecommunications)	5
Kinesiology	3
Health Science	3
Sociology	1
Athletic Training	1

More than two-thirds (70.12%) of the students indicated that they had some training in research prior to completing the survey, either through an academic program or place of employment (Table 3).

Table 3

Source of Prior Research Training

Major	n
Academic-related	28
None	16
Work-related	5

EPIC

The participants ranked their overall confidence (Table 4) highest in the ability to “ask their patient or client about his/her needs, values and treatment preferences” (Q9) with 80.90%. The ability to conduct an online literature search (Q3)

followed with 75.55%. The participants felt least confident with a mean of 51.40% (Q7) in their ability to “interpret study results obtained using statistical procedures such as linear or logistic regression” (Salbach & Jaglal, 2011, p. 800).

Comparison by cohort (Table 4) shows that for all questions, third-year OT students ranked their confidence higher than first- and second-year cohorts. Table 4 also identifies with which step of the EBP reference model the question aligns. A one-way ANOVA was run to determine significance among cohorts. Figure 1 displays these comparisons. The largest differences between first- and third-year cohorts were in Q10, which related to selecting a course of action based on evidence, and Q11, which asked about confidence in relation to evaluating the selected course of action. An ANOVA was run comparing the three cohorts and statistical significance was found ($p < .05$).

Table 4

Mean EPIC Scale Results

	EBP Reference Model Step	Cohort			
		1st Year	2nd Year	3rd Year	Overall
Q1	Ask	30.8%	67.8%	72.9%	60.9%
Q2	Ask	38.5%	66.7%	79.3%	62.4%
Q3	Acquire	56.2%	81.1%	86.4%	75.6%
Q4	Appraise	53.1%	63.9%	69.3%	62.4%
Q5	Appraise	31.7%	58.3%	65.7%	55.5%
Q6	Appraise	38.5%	56.1%	61.4%	52.7%
Q7	Appraise	42.5%	53.9%	56.2%	51.4%
Q8	Apply	50.8%	73.3%	83.6%	70%
Q9	Ask	70%	78.3%	94.3%	80.9%
Q10	Apply	33.1%	66.1%	85%	62.4%
Q11	Assess	43.9%	71.1%	86.4%	68%
Total		44.46%	66.95%	76.41%	63.84%

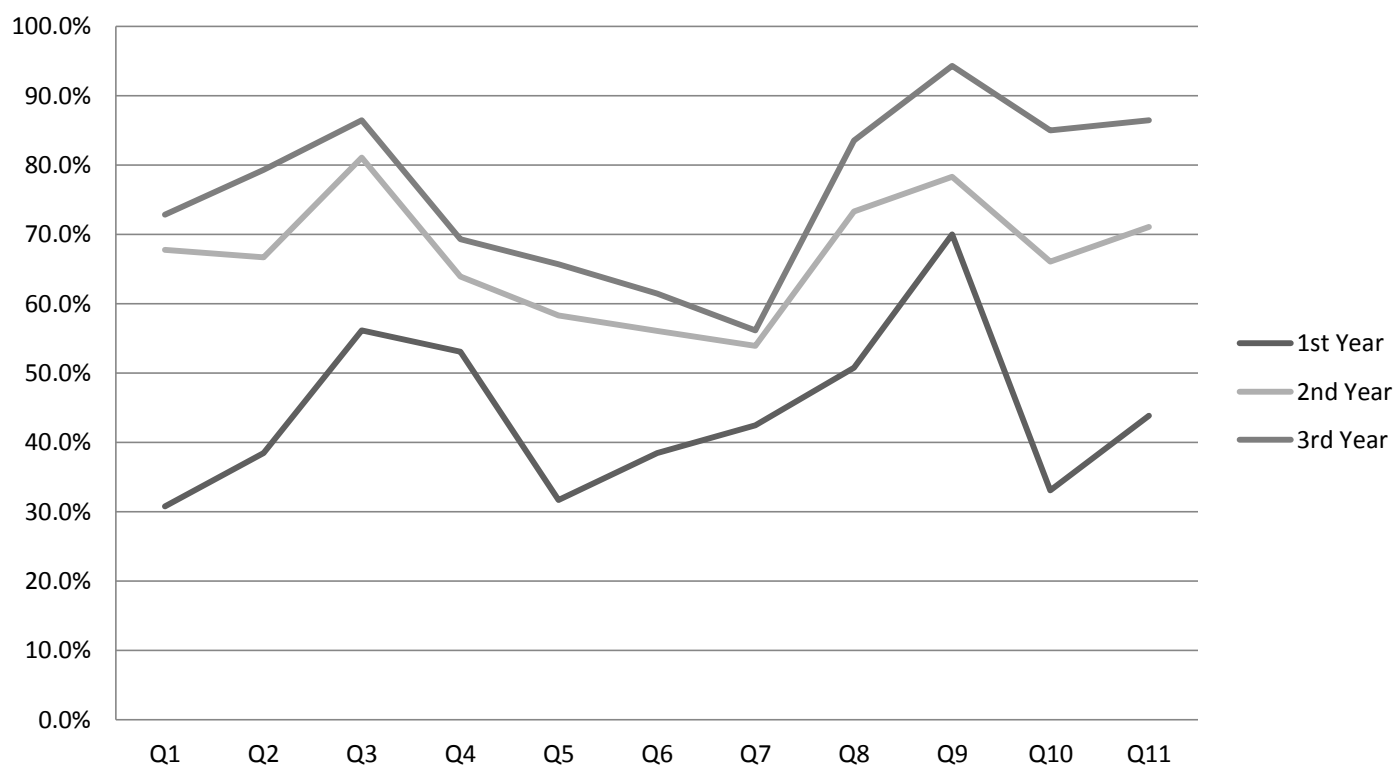


Figure 1. Mean percentage by cohort

K-REC

K-REC scores rated the participants' overall knowledge on a 12-point scale. The average total score for all participants was 4.16, with the third-year cohort having the highest average of the three (Table 5). The third-year students had the most exposure to EBP throughout both sets of curriculum and more clinical experience compared to the first- and second-year students. The first-year cohort had the lowest total average, having received the least amount of exposure to EBP in the curriculum at the time of survey.

The 12-point scale was derived from a total of nine questions related to a provided clinical

scenario. The third-year cohort of participants frequently demonstrated higher knowledge levels when applying EBP skills. When asked to identify the most appropriate research design (Q3), 100% of the third-year cohort answered the question correctly compared to 58% of the second-year cohort and 0% of the first-year cohort. This knowledge difference was also demonstrated when asked to determine the rigor of an article's methodology (Q6). Cohort scores for individual questions are identified in Table 5. An ANOVA was run comparing the three cohorts and statistical significance was found ($p < .05$).

Table 5
Mean K-REC Results

	Total Points	Cohort			Overall
		1 st Year	2 nd Year	3 rd Year	
Q1	2	.85 (42.5%)	.89 (44.5%)	1.18 (59%)	1.04(48.7%)
Q2	2	.65 (32.5%)	1.08 (54%)	1.07 (53.5%)	.93(46.7%)
Q3	1	0 (0%)	.58 (58%)	1.00 (100%)	.53(33.5%)
Q4	.5	.19 (38%)	.24 (48%)	.27 (54%)	.23(46.7%)
Q5	.5	.21 (42%)	.24 (48%)	.33 (66%)	.26(52%)
Q6	1	.15 (15%)	.21 (21%)	.53 (53%)	.30(29.7%)
Q7	2	.38 (19%)	.78 (39%)	.89 (44.5%)	.68(34.2%)
Q8A	1	0 (0%)	.28 (28%)	.07 (7%)	.12(11.7%)
Q8B	1	0 (0%)	.17 (17%)	0 (0%)	.06(5.7%)
Q9	1	.36 (36%)	.36 (36%)	.70 (70%)	.47(47.3%)
Total	12	2.27 (18.9%)	4.32 (36%)	5.6 (46.7%)	4.06(60.8%)

Discussion

The goal of using EBP is to provide the best possible care to clients. In order to implement EBP, practitioners must have the knowledge and confidence to use EBP effectively and efficiently. This study indicates there is a correlation between EBP confidence and knowledge among OT students as demonstrated by the EPIC Scale and K-REC.

Confidence

In this study, students reported the most confidence in regard to asking their patients what their needs and values are, and students reported the least confidence on items pertaining to the interpretation of statistical tests. These findings suggest that students feel more confident with obtaining client information than with analyzing

research results. These findings are similar to those found in a systematic review, where Thomas and Law (2013) reported a theme in which practitioners were using client information as a priority over research-based information. A similar result appeared among OT practitioners who reported using clinical decision making more frequently than EBP resources due to their lack of confidence in research-related skills (Bennett et al., 2003).

Additionally, the results of this study indicated that students had high confidence in searching the literature as evidenced by the majority of students reporting 90% or higher confidence in conducting an online literature review. This parallels previous study results that found therapists are quite confident to highly confident in searching research literature (Bennett et al., 2003; Graham et

al., 2013; Salls et al., 2009). Participants in the current study also expressed confidence in determining the clinical significance of research findings, which is demonstrated with the majority rating themselves 70% or more confident in determining if evidence from the literature applies to a client's situation. This is comparable to previous findings that reported therapists were quite confident to highly confident in distinguishing the importance of the research literature (Bennett et al., 2003; Graham et al., 2013).

In addition, a majority of the participants in this study reported 60-70% confidence in their ability to critically appraise strengths and weaknesses of a study's methodology. This finding correlates to the findings of Jette et al. (2003) and Salls et al. (2009) where respondents reported confidence in their abilities to critically appraise the research literature. High confidence was reported in the current study with the ability to select an appropriate course of action based on integrating research evidence, clinical judgment, and patient/client preferences. The participants reported high confidence in their ability to continually evaluate the effect of a chosen course of action related to client outcomes. These findings are similar to a study by McCluskey (2003) in which the participants were moderately to highly confident in their ability to evaluate their own clinical practice.

The participants in this study reported lower confidence in questions related to statistical analysis. Students reported low confidence in interpreting study results through statistical analysis

as well as low confidence when evaluating statistical measurement properties. Items that assessed the confidence of these skills had the lowest average scores of the questions on the EPIC Scale. Lyons, Brown, Tseng, Casey, and McDonald (2011) found that occupational therapists understood the importance of EBP; however, they reported deficiency of confidence in their research knowledge as a common barrier in EBP use. The lack of confidence related to research utilization is reported throughout current literature as a barrier to EBP implementation across healthcare disciplines (Fruth et al., 2010; Heiwe et al., 2011; Thomas et al., 2012; Upton, Stephens, Williams, & Scurlock-Evans, 2014).

This study indicated third-year OT students had the greatest confidence in their EBP skills as compared to second- and first-year students. This trend continued as second-year students demonstrated greater confidence than first-year students and could be explained by the fact that third-year participants received the most training and exposure to EBP through didactic material and clinical experience. This amount of training and experience would be followed by second-year students and then by first-year students. This relates to several studies that have shown higher confidence among those who have received more training in EBP (Bennett et al., 2003; Hankemeier et al., 2013; Kristensen, Borg, & Hounsgaard, 2011; Salls et al., 2009).

Lack of Skills

Lack of skills in searching for literature, formulating a question, and understanding the

results of a research study all impact the use of EBP. According to Bennett et al. (2003), 54.7% of occupational therapist participants perceived a lack of skills in locating research evidence as a barrier to the use of EBP. Physical therapists have also identified a lack of knowledge in locating published, reliable research as a barrier (Fruth et al., 2010). McCluskey (2003) surveyed 85 occupational therapists of which 50% reported limited skills in searching relevant literature as a barrier to implementing EBP. The findings of the current study supported previous findings as 50.5% of the participants did not correctly answer K-REC questions related to the use and understanding of research search engines.

An essential component to the EBP reference model is the ability to develop a research question, specifically a question that includes the elements of a PICO (Population-Intervention-Comparison-Outcome) question (Thomas et al., 2012). The PICO format is often used to help students learn how to develop a clinical question. In the current study, none of the participants received full points on the K-REC question asking participants to develop an appropriate PICO question. However, 57.1% of third-year students scored 75% on this item, while fewer than a third of first-year students received a similar score. Shuval et al. (2007) found that physicians improved their skills in formulating a clinical question and developing searching strategies after receiving in-depth training. As OT students receive additional education on how to create a clinical question, their skills improve.

EPIC and K-REC Comparison

Participants were asked to formulate a PICO question in order to guide a literature search as part of the K-REC. In addition, they indicated their level of confidence in formulating a clinical question as part of the EPIC scale. Third-year students reported an average confidence of 79.3% on this item, while first-year students reported an average confidence of only 38.5%. Despite the significant difference in confidence between these two cohorts, the gap in knowledge was smaller. Third-year students received an average score of 59% in developing a PICO question, and first-year students received a 42.5%. The third-year students' confidence did not match their skill level when it came to formulating a PICO question. Lai and Teng (2011) also found that medical students' self-perceived competence did not match with their objectively measured competence. The current results coincide with the Lai and Teng (2011) statement that, "... students' self-ratings suggested that they might have acquired some skills in EBM [evidence-based medicine] but found it difficult to apply their skills in practice" (p. 6). Thus, student confidence may or may not accurately relate to ability, as their awareness may be limited until they gain experience as independent practitioners.

The K-REC measured the participant's ability to differentiate study methodology when critically appraising EBP literature. This corresponded with an item on the EPIC scale that assessed confidence in the same skills. First-year students reported a mean confidence of 53.1%, second-year students reported 63.9%, and third-year

students reported a mean confidence of 69.3%. For the K-REC question exploring study design, zero first-year students received full credit, while 58% of the second-year students received full credit and 100% of the third-year students received full credit. From these results, it can be inferred that increased educational training enhanced knowledge associated with study methodology. This was paralleled in higher confidence levels in the ability to differentiate study methods.

When answering a K-REC item addressing knowledge associated with statistical analysis, a total of three participants (6.52%) selected the correct answer. However, students indicated increasing confidence in their ability to interpret study results based on statistical analysis per two items on the EPIC Scale. First-year students reported an average confidence of 40.5%, second-year students reported an average confidence of 55%, and third-year students reported an average confidence of 58.8%. As students were exposed to additional training, their overall confidence in statistical analysis increased. When asked to apply their knowledge, however, a significantly smaller number of participants were able to select the appropriate response. This again coincides with the Lai and Teng (2011) findings that students may have acquired a particular skill but struggle to apply it in clinical practice.

Educational Background

Results of this survey indicate there is a significant difference in the overall confidence and knowledge of applying EBP in third-year students as compared to first-year students. The participants

who were further along in their educational training had higher mean confidence scores in all areas addressed on the EPIC Scale. This increase in confidence paralleled the rise in cohort scores on the K-REC. Hankemeier et al. (2013) found similar results among athletic training students and clinicians. The more educational training students had, the more knowledge they demonstrated when it came to formulating a PICO question, using appropriate search strategies, and interpreting the statistical results of articles.

Clinical Experience

The findings from this study support similar research on the influence of fieldwork experiences on students' knowledge and ability needed to complete EBP (Salls et al., 2009; Stube & Jedlicka, 2007; Thomas et al., 2012). Several research studies have indicated a lack of understanding of the EBP process on behalf of the students, as well as an inability to recognize the EBP process during observation experiences before completing fieldwork (Salls et al., 2009; Stube & Jedlicka, 2007; Thomas et al., 2012). Results of the current study indicated there was a significant difference in confidence in clinical application of EBP between the third-year students, who had completed more fieldwork experiences, and the first- and second-year students, who had completed fewer or no fieldwork experiences. The third-year students reported higher confidence in being able to apply research in a clinical setting.

Previous research examined further understanding and confidence of the EBP process after completing fieldwork experiences. The

relationship in confidence and knowledge post clinical experiences could be attributed to repetitive use of EBP with clients in a clinical setting, a process associated with the fieldwork experience (Thomas et al., 2012). Another key factor during the fieldwork experiences is the influence of the fieldwork educator. Research indicates that the fieldwork educator is a crucial factor in contributing to clinical reasoning skills, as well as the application of EBP in the clinical setting (Stube & Jedlicka, 2007). Stronge and Cahill (2012) echoed this sentiment, reporting that 40% of OT fieldwork students stated that they did not observe EBP while on fieldwork, and 20% of the students surveyed stated that they did not view themselves as evidence-based practitioners because they did not see others demonstrating these EBP behaviors. Therefore, if students are not seeing the application of EBP skills by their fieldwork educators, the students' ability to apply EBP in practice may be limited.

Limitations

Limitations of the study included the survey design, the number of participants, and the use of a convenience sample. The first limitation stems from the ability of the participants to leave items blank within the survey or to select "Don't Know." This could have led to lower scores for particular questions and lower overall survey scores. It could be inferred that these responses were based on a lack of confidence. The flow of the survey was designed for participants to complete the EPIC Scale prior to completing the K-REC. This may have affected their reported

confidence level. If knowledge was assessed first, the participants may have reported lower confidence scores. Furthermore, the study used a convenience sample from one university.

There were also some additional limitations related to the tools used. In the EPIC, some of the statements may have measured the participants' confidence in their ability to implement client-centered intervention instead of integrating EBP, for example, "Ask your patient or client about his/her needs, values, and treatment preferences" (Salbach & Jaglal, 2011, p. 800). Another limitation is associated with the tools we selected to compare. The EPIC measured confidence in using EBP and the K-REC measured knowledge and skills of the EBP process. The EPIC measured all steps of the EBP reference model; the K-REC only measured the first three steps. This difference limited the ability to compare confidence and knowledge in all areas of the EBP reference model.

Future Implications

The authors of the study found OT students with more EBP training to have more EBP confidence and knowledge than those students with less training. This is significant for educational institutions to take into consideration. Future researchers should recruit a greater number of participants across healthcare disciplines so data can be compared among the various groups. Future studies should also incorporate multiple educational institutions to increase generalization of the data.

Further research should include tools that measure all areas of the EBP reference model: ask, acquire, appraise, apply, and assess (Thomas et al.,

2012). In addition, research related to the confidence and knowledge of the EBP process should be conducted with practicing occupational therapists to further understand the extent to which EBP is being used in practice. This additional research can aid academicians in not only providing information to their students, but also in offering training on the EBP process with experienced clinicians.

Conclusion

The participants in this study were confident in their ability to implement certain components of the EBP reference model. They demonstrated the most confidence in asking patients about their needs, conducting a literature search, and determining if the evidence applies to their client's situation. The participants were least confident in their EBP skills associated with using statistical procedures and statistical tests to interpret study results. Greater confidence related to EBP was linked to increased EBP training. Previous research is consistent with these findings, suggesting that

individuals with more EBP training have more confidence in their ability to implement EBP.

Results of the K-REC and EPIC indicate a correlation between EBP knowledge and confidence in the ability to implement EBP into the clinical setting for students. Participants with more EBP training had more EBP knowledge than those with less training. Students that had the opportunity to integrate their didactic knowledge into fieldwork experiences demonstrated higher scores on the K-REC and EPIC, indicating more EBP knowledge and confidence as compared to students with less classroom and clinical experience.

In conclusion, it is important that OT students have the opportunity to obtain knowledge and information about the EBP process to be able to integrate this skill into practice. As students transition into practitioners, there is a need for training on how to integrate EBP into different practice settings. Without this information, therapists will lack the confidence and ability to apply EBP principles in a changing and demanding healthcare environment.

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