
CONFERENCE PROCEEDINGS

Keeping It Real: Practice Relevant Education. Chiropractic Educators Research Forum (CERF), June 24, 2023

Chiropractic Educators Research Forum

ABSTRACT

This conference was convened by the Chiropractic Educators Research Forum (CERF) on June 24, 2023. This meeting provided a forum for the presentation of scholarly works in education theory and practice. This conference specifically focused on research related to developing competency in practice-relevant skills, knowledge, and attitudes. As educators, we help our students develop their cognitive, psychomotor, and affective abilities. Throughout this process, we must keep in mind what we are producing: health care providers. Our graduates must demonstrate competency in relevant knowledge, skills, and attitudes to practicing health care in a professional and evidence-based manner (ie, intersection of best evidence, clinical expertise, and patient values). Therefore, integrating practice-relevant skills, knowledge, and attitudes is essential throughout our programs. During the June 2023 CERF meeting, presenters and panelists took an in-depth look at education research and how chiropractic programs work to deliver practice-relevant education.

Key Indexing Terms: Health Occupations; Education, Professional; Chiropractic; Competency-Based Education; Clinical Competence

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INTRODUCTION

The Chiropractic Educators Research Forum (CERF) holds conferences from time to time that focus on selected topics relevant to education and the chiropractic profession. This conference showcases education research, innovations, and best practices and provides a forum for the presentation of scholarly work in health professions education theory and practice.

The CERF held a virtual conference on June 24, 2023, “Keeping It Real: Practice Relevant Education,” which focused on education research and scholarship related to developing competency in practice-relevant skills, knowledge, and attitudes. As we help our students develop their cognitive, psychomotor, and affective abilities, we must keep in mind the end product that we are producing: health care providers. Our graduates must demonstrate competency in relevant knowledge, skills, and attitudes to practicing health care in a professional and evidence-based manner, which is the intersection of best evidence, clinical expertise, and patient values. Therefore, integrating practice-relevant skills, knowledge, and attitudes is essential throughout chiropractic programs.

After abstracts were submitted and went through a rigorous peer-review process, the highest-quality abstracts were selected for presentation that were relevant to the intersection of these 3 areas: chiropractic, education, and developing competency in practice-relevant skills, knowledge, and attitudes. As we have done with prior CERF conferences,^{1–5} this conference proceeding includes links to the video presentations so that these presentations may be preserved and be more widely distributed. The presentations from the conference held on June 24, 2023, are listed here in alphabetical order by the first author’s last name.

ABSTRACT PRESENTATIONS

Bridging the knowledge-to-action gap in evidence-based practice: a narrative review of facilitators, barriers, and strategies for knowledge translation in the chiropractic profession

Caroline Brereton, Brian Gleberzon, Peter Emary, Marco De Ciantis, Carol Cancelliere, Anita Chopra, Adrienne Shnier, Rod Overton

Objective: The purpose of this review was to explore facilitators and barriers to knowledge translation (KT) in evidence-based practice to bridge the knowledge-to-action (KTA) gap. **Methods:** PubMed, Web of Science, and Scopus databases were searched for KT literature using the key terms “evidence-based practice,” “knowledge translation,” “institutional practice,”

and “interdisciplinary research.” The Canadian Institutes of Health Research’s definition of KT, updated in 2016, was used. Accordingly, original peer-reviewed research published between January 2016 and December 2021 was included. The title and abstract were screened for barriers, facilitators, and/or strategies of effective KT in practice. Nonprimary articles and articles not analyzing KT facilitators and/or barriers were excluded. Relevant articles underwent full-text review, with KT themes extracted. **Results:** Of 845 articles returned in the search, 138 were eligible for full-text review, and 17 met inclusion criteria. Themes emerged at individual, colleague, and institutional levels. Facilitators included education on KT methods and importance, access to practical materials, and collaboration on KT initiatives. Barriers included noninstitutional practice settings. Strategies for implementing KT require flexibility and support of identified KT facilitators and mitigation of barriers by the institutional ecosystem. The provision of KT education and mentorship opportunities builds confidence and establishes a KT-centered culture. **Conclusion:** Facilitators and barriers to KT in evidence-based care are influenced by education at various levels of a profession’s societal engagement. We recommend that successful KT strategies be flexible and tailored to the context in which they are applied to bridge the KTA gap for chiropractic students and practitioners. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/wig7qelC6Lg>

Creation and administration of a chiropractic program student safety preparticipation screening procedure: A descriptive report

Michelle Chambers-Lewis, Beth Carleo, Jason Qualls

Objective: The purpose of this study was to describe the development of a preparticipation screening procedure. **Methods:** A committee was formed and met to discuss a questionnaire, examination, and procedure. We created a preparticipation screening procedure as an expansion of the existing procedures to screen incoming students for contraindications to participate in hands-on labs of the chiropractic program. We identified red flag signs to be evaluated by the clinic to maintain classroom safety. The incoming students were paired with second-year students for the administration of the screening. The findings were confirmed by a supervising licensed chiropractor and a determination of either “cleared to participate” or “referral warranted” was made. Referred students were restricted from classroom participation awaiting further recommendations from the clinic. **Results:** The program was successfully implemented in April 2022. Eight out of the 48 students evaluated in the first group, and 12 of the 81 in the second group had possible contraindications and were referred to the clinic for evaluation. The third group had 35 out of 146 students with suspected contraindications. Of the 55 students referred to the clinic, 15 have been cleared to return to classroom participation with no restrictions. **Conclusion:** A

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preparticipation screening procedure was successfully implemented and demonstrated the feasibility of identifying red flags and contraindications to student classroom activities. This procedure may be helpful for incoming students to see the process of screening for red flags and the importance of doing so before treating patients. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/qfaReN6LqMs>

An innovative student placement model in a United Kingdom chiropractic entry-level curriculum: A descriptive report

Paul Chesterton, Faye Deane, Daniel Moore

Objective: The aim of this report is to describe the development, implementation, and student evaluation of a novel placement model, 2 years post-implementation, into an entry-level master's degree chiropractic course within the United Kingdom. **Methods:** Students were exposed from their first semester to National Health Service (NHS) and chiropractic clinical environments. They developed assessment skills under the supervision of a practice educator. Student evaluation surveys were completed for each taught containing placement hours. The median and interquartile range (IQR) were calculated for combined responses using a Likert scale (1 = strongly agree to 5 = strongly disagree). **Results:** Forty-two students from years 1 and 2 experienced 74 placement hours per academic year in both an NHS and a chiropractic placement setting. Data were evaluated 2 years postlaunch with 40 students reporting overall satisfaction with year 1 (median 1, IQR 1–2) and year 2 (1, IQR 1–2) placement modules. Participants perceived that these clinical experiences were applicable to the workplace and their future careers across modules in both year 1 (1, IQR 1–2) and year 2 (1, IQR 1–1.5) and that continuous feedback improved their clinical learning (year 1 [1 IQR 1–2]; year 2 [1, IQR 1–2]). **Conclusion:** Students reported overall satisfaction with this placement model. Students perceived that educator feedback enhanced their clinical learning experiences and that clinical practice environments were applicable to the workplace and their future careers. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/0vjoR4jxcQ4>

Chiropractic clinical instructors' confidence in exercise prescription and counseling following an "Exercise is Medicine" workshop

Chris deGraauw, Brittany Boot, Scott Howitt

Objective: The purpose of this study was to evaluate Canadian Memorial Chiropractic College clinical educators' (clinician) confidence in exercise prescription practices before and after an "Exercise is Medicine" (EIM) workshop. **Methods:** Clinicians ($n = 22$) attended a professional development 1-hour workshop presented by chiropractic sports specialists. The educational session reviewed the evidence for physical activity (PA) prescription, benefits and safety of exercise, motivational interviewing, and brief counseling for patients. Participants were required to complete self-reflection questionnaires prior to, during, and immediately after the workshop. Surveys focused on practitioners' current practice habits including PA counseling as well as confidence in PA prescription and the percentage of patients in whom they are assessing PA. Eight questions addressing multiple domains of confidence were rated 0%–100%. Open-ended questions postworkshop asked clinicians how they intended to change their practice habits. **Results:** Immediately following the workshop, practitioners reported 90% confidence in providing patients with PA information and advice, and more clinicians committed to assessing readiness for PA in their patients. At 3-month follow-up, practitioners reported that PA prescription increased to 76% compared to 65% from baseline and that confidence increased in all of the categories regarding PA counseling. **Conclusion:** The study showed that a 1-hour EIM workshop increased chiropractic clinicians' confidence immediately postworkshop and increased PA prescription habits at a 3-month follow-up. This study suggests that a workshop may change clinician teaching behaviors, thereby improving practice-relevant information for chiropractic students. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/bjgUo4Xw3tY>

Measuring evidence-based practice knowledge, skills, attitudes, and behavior in students of manual therapy education programs: A scoping review of instruments and their measurement properties

Lara deGraauw, Jocelyn Cox, Jaclyn Kissel, Kent Murnaghan, Sheilah Hogg-Johnson

Objective: The purpose of this review was to identify assessment instruments and their measurement properties for assessing evidence-based practice (EBP) knowledge, skills, attitudes, and behavior among students of manual therapy education programs. **Methods:** Six electronic databases were systematically searched from inception to November 30, 2021 (MEDLINE, EMBASE, CINAHL, ERIC, EBSCO Discovery, LISA, and Google Scholar.) Search terms were subject headings specific to each database (MeSH in MEDLINE) and relevant to evidence-based practice, assessment tools/instruments, and manual therapy health care professions. Eligible studies included students of manual therapy education programs (chiropractic, physiotherapy, occupational therapy, and osteopathy) and provided evidence supporting instrument measurement

properties (reliability and validity). Titles and abstracts were screened by 2 reviewers. Data on each instrument and its properties were extracted and tabulated by 2 reviewers. Instruments were compared using the Classification Rubric for EBP Assessment Tools in Education framework, including the 5 steps in the EBP model. The Joanna Briggs Institute methodology and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews checklist were followed. **Results:** Five studies were identified (3 physiotherapy and 2 chiropractic.) Two studies used a physiotherapy-focused modification of the Fresno test. One study presented the Knowledge of Research Evidence Competencies instrument. Two studies presented original instruments. Instruments focused on the knowledge domain and did not assess all 5 EBP model steps. **Conclusion:** The current literature does not address all 5 steps of the EBP model. The identified instruments have the potential to ensure that chiropractic institutions are graduating chiropractors who are highly skilled in evidence-based practice. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/YEfp9Fp34E>

Developing spinal manipulation psychomotor skills competency: A literature review of teaching methods

Eleanor De Kock, Cornelius Myburgh, Christopher Yelverton

Objective: The purpose of this study was to review the literature on the acquisition of high-velocity, low-amplitude manipulation psychomotor skills among chiropractors and chiropractic students. **Methods:** Electronic search engines HubMed, PubMed, MEDLINE, Index to Chiropractic Literature, and Google were searched between June 2015 and August 2020 with keywords "spinal manipulation" and "learning" and "augmented feedback" with broadened terms "quantifying spinal manipulation," "motor skills chiropractic," and "chiropractic adjustment forces." Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines were used for the design and reporting with eligible studies undergoing methodological quality assessment using the Joanna Briggs Institute Critical Appraisal Checklists and Cochrane Collaboration's Risk of Bias Tools. **Results:** Thirty-five articles were eligible, with 14 meeting the inclusion criteria. Of these, 10 were cohort studies, and 4 were randomized control trials. The type of augmented devices included a mannequin on a force platform, a computer-connected device, a Human Analogue Mannequin, and a 3-dimensional electrogoniometer with an instrumented spatial linkage. Measurements such as decreased preload force, increased peak force, decreased thrust rate (time-to-peak force), improved consistency, and error detection skills were demonstrated in most studies. **Conclusion:** Augmented feedback devices appear to be effective tools to include in chiropractic curricula to develop spinal manipulation psychomotor skills, which are essential to clinical practice. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/3QBNE9gqvwI>

Correlation between student performance on an objective structured clinical examination and National Board of Chiropractic Examiners Part IV: A descriptive study

Alexandra Fiore, Bradley Hopkins

Objective: The purpose of the observational study was to describe the correlation between student performance on an objective structured clinical examination (OSCE) within their chiropractic program and their future performance on National Board of Chiropractic Examiners Part IV (NBCE Part IV). **Methods:** An OSCE that mimicked the stations of NBCE Part IV for chiropractic technique and case management was administered to 165 students from January 2021 through August 2022. There was no intervention to prepare the students for the OSCE. The OSCE was a summative assessment that contributed 7.5% toward their 8th-trimester clinical course grade. Pearson's correlation analysis described the relationship between student performances on the OSCE and NBCE Part IV. **Results:** There was a moderate relationship between student performances on the OSCE and NBCE Part IV ($r = 0.57$). Performance on the OSCE accounted for 33% of the variance in the NBCE Part IV performance ($R^2 = 0.33$). The passing rate for NBCE Part IV for students who scored $\geq 60\%$ on OSCE was 90%. Only 1% of the students who scored below 60% on the OSCE passed NBCE Part IV. Only 6% of the students who scored $\geq 60\%$ on the OSCE failed NBCE Part IV. Of the students who scored below 60% on the OSCE, 3% failed NBCE Part IV. **Conclusion:** The moderately strong correlation between student performances on an OSCE and NBCE Part IV will provide us with insights on identifying students who need additional training to meet the minimal threshold of knowledge and skill to become a licensed chiropractor. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/SN5wzH4HU44>

Attitudes of patient-centered care among patients at a South African university chiropractic clinic: A cross-sectional study

Fatima Ismail, Cheree Duif, Sharné Naidoo

Objective: The purpose of this study was to assess attitudes toward patient-centered care (PCC) by patients receiving chiropractic care at the University of Johannesburg's chiropractic teaching clinic. Attitudes of chiropractic

students have been assessed previously, necessitating this study to inform whether students have developed competency in practice-relevant PCC. Methods: A cross-sectional quantitative study was done between November 2 and 29, 2021. We used the 18-item Patient Practitioner Orientation Scale (PPOS), which has shown validity and reliability in previous studies. Patients completed the PPOS immediately after their treatment by the chiropractic students. PCC was represented with higher Likert scale scores on the PPOS using a 1–6 scale. Descriptive and inferential results were assessed for associations between variables. Reliability and validity in our sample were tested using Cronbach's alpha and exploratory factor analysis. Results: There were 183 respondents (21.4% response rate). Mean scores for the overall PPOS were 3.64 (SD = 1.48), the sharing subscale was 3.69 (SD = 1.61), and the caring subscale was 3.81 (SD = 1.52). Female patients perceived that their care was more patient centered ($p = .021$). Age and ethnicity were not significant. The PPOS showed unsatisfactory reliability (internal consistency), with Cronbach's alpha values of 0.566 (sharing) and 0.369 (caring). Conclusion: The PPOS showed poor reliability, contrary to previous studies. While there was limited reliability, a pertinent trend showed positive overall attitudes toward PCC by patients treated by chiropractic students, similar to findings of the same study previously done on students, indicating students' PCC preparedness. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/w2NDlslNA2E>

A pre/postevaluation of randomized chiropractic clinic students into targeted biopsychosocial pain education interventions

Kristin Miller, Patrick Boylan, Macy Randolph, Casey Mullen, Norman Kettner, Katie Pohlman

Objective: The purpose of this study was to examine clinical students' attitudes/knowledge toward pain neuroscience (PN), chronic back pain (CBP), and patient-centered care (PCC) before and after educational interventions. Methods: Term 7 students ($n = 281$) from 2 universities completed questionnaires with validated surveys (Neurophysiology of Pain Questionnaire, Health Care Providers' Pain and Impairment Relationship Scale, and Patient Practitioner Orientation Scale) immediately before and after a 50-minute lecture (assigned using stratified randomization) and after 12 weeks. Each participant completed all surveys to serve as an active-control comparison group. Term 1 ($n = 160$) and term 4 ($n = 118$) students and faculty ($n = 7$) completed the same questionnaires. Pre-scores for term 7 students were compared with nonclinic students and faculty. Independent-sample t-tests evaluated changes within the groups and analyses of variance for between-group comparisons. Results: All term 7 student lecture groups (157/281 [55.9%]) had immediate improvement (PN: $3.99 \pm 3.09/100$, $p = .18$; CBP: $0.42 \pm 0.74/7$, $p = .02$; PCC: $0.25 \pm 0.12/6$, $p = .05$). Twelve-week scores did not show sustained improvement (PN: $-6.25 \pm 4.36/100$, $p = .18$; CBP: $0.33 \pm 0.16/7$, $p = .02$; PCC: $0.13 \pm 0.13/6$, $p = .05$). Compared to active controls, only the PCC intervention group's scores had a statistically significant difference at the before/after time point. Faculty (4/7 [57.1%]) scored best on all 3 questionnaires in comparison to term 1 (117/160 [73.1%]), term 4 (77/118 [65.3%]), and term 7 students. Conclusions: This study found that 50-minute lecture interventions resulted in immediate improvement for the targeted topics (PN, CBP, and PCC), but these improvements were not sustained at 12 weeks. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract https://youtu.be/19p_S9OBL8c

Identifying patient safety competency themes: A qualitative evaluation from personnel in chiropractic teaching clinics

Michael Moore, Katherine A. Pohlman, Martha Funabashi, Stacie Salsbury

Objective: The purpose of this study was to describe qualitative patient safety themes that could be developed into competencies for chiropractic teaching programs. Methods: A survey with 4 open-ended questions related to previously identified patient safety domains (communication, clinical setting, education, and leadership) was distributed to 730 chiropractic students, supervising clinicians, and administrative staff at 4 international chiropractic educational programs (Australia, Canada, France, and the United States). Thematic evaluation of the responses, both within and between the questions, was conducted by the authors. Themes that could lay the foundation for competency development were identified. Results: There were 471 respondents (392 students, 62 clinicians, and 17 staff) who participated. The themes identified were (1) known fundamentals of a patient safety culture, including patient privacy and the definition of adverse/safety events; (2) documentation of adverse/safety events and record-keeping standards; (3) identification of patient health issues, medications, and contraindications to manual therapy; (4) a professionalism model that is patient centered, includes critical thinking, and upholds regulatory policies; and (5) recognition of environmental conditions that can impact patient safety. Teaching models were an unsolicited finding within all of the questions. A systematic curricular structure was the most commonly suggested model. Proposed pedagogies included case studies, discussions, workshops, signage, and policies/procedures. Conclusion: The patient safety themes found in this study may serve as the foundation on which a panel of experts can develop future patient safety competencies. If implemented, these study findings may help chiropractic students develop

patient safety knowledge and attitudes they will use in practice. (This is a conference presentation abstract and not a full work that has been published.) Video Abstract <https://youtu.be/JnSZ20vSLr8>

Development of a clinical internship experience management system to track 31 meta-competencies: A descriptive report

Christopher Petrie, Christopher Smoley, Katie Burns Ryan

Objective: The purpose of this study is to describe the development of a clinical internship management system that simplifies the collection and tracking of internship data. Methods: The Clinical Education team, comprised of 4 full-time staff members, developed a system to collect and aggregate assessment data on the 31 Council on Chiropractic Education (CCE) meta-competency outcomes (MCOs) utilizing a customizable, Web-based tool to collect assessment data and a business intelligence (BI) suite to house and aggregate those data. Further development enabled direct access for students to their individual dashboards and added automated workflows to process and move assessment data into the BI platform. The addition of links within the BI system to forms and workflows that update BI data enabled a fully integrated platform. Results: The system that was developed provides real-time access to assessment and clinical experience data to stakeholders via robust dashboards. Individual students can access their complete assessment history, current competency ratings across the 31 MCOs, categorical breakdowns of clinical encounters, assessment scores charted over time, and all clinical graduation requirements. Program staff can view aggregations at the cohort and program levels along with comparisons against program benchmarks. Automatically generated alerts based on predefined remediation criteria facilitate prompt identification and intervention to address students' individual development needs. Conclusion: We developed an integrated system for managing the clinical internship experience that provides ongoing access to current MCOs, thus giving insight into students' learning and curricular effectiveness. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/b0C-nHPd7NA>

Assessment of back pain behaviors, attitudes, and beliefs of chiropractic research conference attendees after a biopsychosocial educational workshop

Alec Schielke, Clinton Daniels, Katie Pohlman, Jordan Glied

Objective: The purpose of this study was to assess the behaviors, attitudes, and beliefs of chiropractic students, clinicians, researchers, and educators toward chronic low back pain (CLBP) before and after a biopsychosocial (BPS)-based CLBP educational workshop. Methods: This single-arm intervention study used the Health Care Providers' Pain and Relationship Scale (HC-PAIRS) and CLBP-related clinic vignettes to assess behaviors, attitudes, and beliefs toward CLBP before and after a single, 90-minute educational workshop. This occurred at the July 2022 Association of Chiropractic Colleges Educational Conference and Research Agenda Conference. Workshop content emphasized the BPS model based on the text *A World of Hurt: A Guide to Classifying Pain*. HC-PAIRS is a 15-item self-reporting questionnaire measuring several dimensions of attitudes and beliefs. Responses to the 3 CLBP-related clinic vignettes gauged beliefs of symptoms and pathology and behaviors regarding recommendations for activity and work. Results: Forty out of 56 attendees completed the intervention, and 18 completed the intervention assessment. The pre-education intervention HC-PAIRS mean score was 44.8 (SD = 9.22), and the post-score was 39.5 (SD = 6.49). This decrease of 5.32 reflects meaningful improvement in attitudes and beliefs. Both beliefs and behaviors connected to the clinic vignettes showed improvement. Conclusion: There was an immediate change in HC-PAIRS scores following a BPS-based CLBP educational intervention. Although there are limitations with this study, a BPS intervention could be considered to improve the behaviors, attitudes, and beliefs of future and developing health care providers. These practice-relevant attitudes may help prepare chiropractors to better understand the complexities of CLBP management. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/cEQ7-WWP6Fk>

Analysis of contrast bias effect between clinic manipulation exit exam score and overall student graduating grade-point average

Michael Sheppard, John Ward

Objective: The objective of this study was to determine if clinicians demonstrate contrast bias when grading chiropractic interns during clinic spinal manipulation exit exams. Methods: A total of 116 clinic spinal manipulation exit exam scores were analyzed over 20 months in relation to students' cumulative grade-point average (GPA). The spinal manipulation exit exam was the last spinal manipulation assessment in the final trimester at the college. During the clinic exit exam, graders assessed student interns on several sub-attributes of spinal manipulation using a 1–4 modified Dreyfus model scoring system. An overall average was determined from the student's score on each individual dimension of the scoring rubric. Results: Pearson's correlation between clinic adjusting exit exam and student graduating cumulative GPA was $r = 0.131$, which indicates a low positive correlation between the 2 variables. There was little correlation between a high-GPA student and their score on the clinic spinal manipulation

exit exam or for a low-GPA student. Conclusion: We recognize that clinical skills are more than scores achieved in a didactic setting. However, for this study, there was a lack of correlation between graduating students' overall GPA and clinic exit exam scores for spinal manipulation. These findings preliminarily suggest that clinician grader contrast bias may be occurring or that student manipulation skill is increasing as to be expected as they progress through their clinical education. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/1z2aFsBspfA>

Perceptions and experiences of chiropractic master's students on evidence-based practice during their clinical practicum

Tasmiya Tayob, Desiree Varatharajulu

Objective: The aim of the study was to determine chiropractic master's students' perceptions of evidence-based practice (EBP) during their clinical practicum at a teaching clinic in KwaZulu-Natal, South Africa. **Methods:** A qualitative, exploratory, and descriptive design was utilized. Homogeneous purposive sampling was used; 14 clinically active chiropractic master's students were interviewed. Semistructured interviews used 3 key questions and relevant probes. Data were stored electronically and transcribed verbatim. The transcripts were coded and analyzed using Tesch's method of thematic analysis for themes and relevant subthemes. The coded data were then interpreted. **Results:** Four main themes were identified: perceptions and necessity, undergraduate education and its role, the importance of clinical experience, and EBP implementation. Students had a positive perception regarding EBP with some reporting limitations to its practice. Students believed that training at the clinic provided a solid foundation; however, a lack of training in multiple aspects was found. These aspects included insufficient training in theoretical and clinical aspects as well as preclinical preparation. A disparity between clinicians' views versus students' views, a lack of literature, and a theory-practice gap were limitations and barriers. Measures of improvement suggested were to implement a journal club and an EBP workshop prior to the clinical practicum. **Conclusion:** Perceptions and experiences included knowledge, application, skills, proficiency, confidence, support structures, training, and challenges. Although the chiropractic curriculum caters to an EBP approach, these findings suggest that the protocol may need to be reevaluated and improved to better prepare graduates for practice. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/cQnDPD2UCs4>

Survey of attitudes toward interprofessional education and practice in North American chiropractic programs

Anna-Marie Ziegler, Ross Mattox, Matthew Knieper, Jason Napuli

Objective: The purpose of this study was to describe the views and attitudes of educators teaching in doctor of chiropractic programs (DCPs) toward interprofessional education (IPE) and practice and to identify how IPE and interprofessional communication were implemented. **Methods:** An ethics board-approved, investigator-designed survey was electronically distributed as a Google Form to 20 educators (faculty, clinicians, and administrators) employed at the 16 DCP with Council on Chiropractic Education accreditation. Additional recruitment occurred via snowballing. Closed-ended question responses were analyzed in Excel. Open-ended question responses were analyzed by grouping similar responses and identifying overarching themes. **Results:** Surveys from 32 educators from 12 DCPs were received. A majority had primary roles as an administrator ($n = 13$) or full-time faculty ($n = 15$) and confirmed that their institution incorporated interprofessional education ($n = 22$) and interprofessional communication ($n = 23$). Participants responded positively (strongly agree or agree) toward most prompts related to attitudes toward IPE or communication; some participants disagreed with statements about the willingness of chiropractors to share information/resources ($n = 4$) and chiropractors working well with each other ($n = 8$). Participants shared that across-program collaborations, grand rounds, referrals, rotations, hosting continuing education events faculty training, and coursework were methods of integrating IPE and communication into DCP curriculums. Areas for improving IPE included increased access and earlier exposure to IPE environments, earlier clinical education, clinical rounds, and postdoctoral training. **Conclusion:** This study identified the implementation of IPE and communication in DCPs while also identifying areas for improvement in educating future chiropractors in IPE. (This is a conference presentation abstract and not a full work that has been published.)

Video Abstract <https://youtu.be/LGWKK1yvZfY>

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About the Organization

The Chiropractic Educators Research Forum (CERF) is an online forum where chiropractic educators share their insights and learn new information about research and scholarship. The CERF mission is to build scholarship and research capacity for chiropractic educators throughout the world. Contact information may be found at CERFweb.org.

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