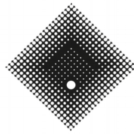
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RESEARCH ARTICLE

EXPLORING THE LEVEL OF INTER PROFESSIONAL ENGAGEMENT WITHIN A CHIROPRACTIC PROGRAM

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ABSTRACT

Background
Part of chiropractic education involves a requirement for clinical education. Traditionally the clinical education for chiropractors has been profession specific, with little inter professional engagement. There exists paucity in the literature on the amount of inter professional clinical engagements in chiropractic programs.
Objective:
To explore the perception of final year students from an American Chiropractic college regarding their level and understanding of inter professional engagement.
Methods:
A qualitative exploratory descriptive design was used for this research. Students were invited to participate. Semi structured focus group interviews were conducted with 15 students lasting 60 minutes. Thematic analysis of the transcribed interviews were undertaken.
Results:
Students expressed a strong desire for inter professional education as a component of their clinical education. Many described a low level of inter professional exposure within their clinical educational experience. Perceived obstacles to inter professional engagement were lack of knowledge about other health professions, exposure to other professions and lack of formal inter professional educational engagement.
Conclusion:
Despite the evidence in the literature in support of interdisciplinary education, in practice it was evident from this study that there is need for more work in implementation. Increased exposure within the clinical program, as well as higher levels of interdisciplinary engagement would further enhance the student understanding and confidence for future engagement.

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INTRODUCTION

Inter professional education (IPE) has been promoted as a method to enhance the ability of different health professionals to learn to work together (D'Eon, 2004). This is important for chiropractors in order for them to provide collaborative care for the patient, through developing relationships with other practitioners and referring appropriately when necessary. Several aims for IPE include improvement in patient outcomes, by providing the learning environment that enables the students themselves to gain a better understanding of teamwork, and see how each practitioner can work collaboratively without loss of their professional identity (Piterman *et al.,* 2010). Secondly, IPE leads to implementation of inter professional practice, or graduate collaboration, where care is provided to a patient by more than one practitioner.

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IPE has the objective to encourage different professions to interact and meet in learning, and then move towards collaboration in the care of patients (Reeves *et al*., 2008). It is believed that experience of IPE has more potential for enhancing collaborative practice than a programme of uniprofessional or multi professional education (Reeves *et al.,* 2008). A study on the key features of successful inter professional relationship amongst doctors and nurses found that mutual respect and trust could and often did flourish within individual nurse-doctor inter professional relationships. A sound understanding of their own, and each other's professional identities enabled demonstration of competence, the gaining of mutual respect and the ultimate development of resilient inter professional trust (Pullon, 2008).

There are a number of terms that can be used to define inter professional education. Clarity of the prefix associated with the 'profession' such as 'multi' and 'inter' warrants clarification.

‘Multi’ refers to partners working independently towards a purpose, such as parallel play; whereas ‘inter’ implies a partnership where members from different domains work collaboratively towards a common purpose (MacIntosh and McCormack, 2001) such as cooperative play. Further to this, the singular or ‘uni’ approach of ‘uniprofessional’, refers to an independent and non-cooperative or non-collaborative arrangement, or independent play. Two terms are commonly used, that is profession versus discipline. ‘Discipline’ is defined as a ‘subject that is taught’ or a ‘field of study’ whereas ‘profession’ is described as ‘a calling requiring specialized knowledge and often long and intensive academic preparation’ (Oandasan and Reeves, 2005). The utilization of ‘professional’ is supported because many disciplines may exist even within the same health field. For instance, in medicine (Oandsan and Reeves, 2005) there exists specialties within the field, such as pediatrics, internal medicine, orthopaedics to name a few; to where these subcategories within a profession are often referred to as disciplines. For the purpose of this paper, professional will be utilized as it is the accepted term utilized for the situation discussed.

Collaborative clinical engagements in the health care environment is more likely to occur if students are educated and exposed to this concept during their education program, particularly within the clinical education (McPherson,Headrick&Moss,2001). There are various ways of developing an inter professional environment of education for learners from various health professions, whether within the classroom setting, during the clinical education or both. Again, if this arrangement is simply that of a multi professional approach, then there is somewhat limited engagement and collaboration between students of different professions and a lower potential of inter professional learning from the parallel engagement (Oandasan and Reeves, 2005). Multi professional learning occurs when students are brought together, to learn in parallel within their own profession-specific paradigm with other professions (Oandasan and Reeves, 2005). This can be from students of various health profession based programs learning alongside in an educational setting, yet not requiring any level of engagement. There are then various strategies of education between these two, such as discussing the role of other professionals, from undertaking combined classes, and within these engaging in such learning tasks and strategies as problem based learning with clinical cases both real and simulated to move from a multi professional to an inter professional educational experience (Bridges *et al.,* 2011).

America saw the initial development of chiropractic education during the late 1800s, with the chiropractic profession being founded in the United States in 1895, and the practice of chiropractic being regulated in the United States and Canada since the 1920s (Chapman-Smith, 1996). Chiropractic institutions in America were historically established as a uniprofessional environment within the educational and clinical environment (Karim and Ross, 2008). With the presence of chiropractic programs within the university system in Australasia, Europe and Africa; opportunities for a multi professional and inter professional educational and clinical relation is more opportunistic and achievable; simply with the presence of other established health professions within an institution. Many traditionally American chiropractic institutions are establishing and incorporating other professions, such as massage therapy, oriental medicine and clinical nutrition into their institutions (Hawk *et al.,* 2011). With the emerging presence of Chiropractic education alongside other professions within the educational and clinical context of their programs, there is much to be explored in regards to the effect of this relation. Interestingly, Hawk and colleagues (2011) explored student’s attitudes towards inter professional collaboration. This study found that there was no disparity in attitudes to inter professional collaboration between students enrolled in institutions where chiropractic was combined with other health professionals compared to students enrolled in chiropractic only institutions. Yet despite this, there is a paucity of literature available informing the educational utilization of multi professional and inter professional engagements within the educational and or clinical context of chiropractic programs (Riva *et al.,* 2010).

One institution that has been providing chiropractic education alongside other health professionals for some time is New York Chiropractic College. Here students from the following professions of chiropractic, massage therapy, nutrition and oriental medicine are taught at the one facility in their theoretical and clinical education at the on campus health clinic facility. In addition, students of the chiropractic program are engaged in clinical rotations at community and hospital engagements where there is the presence of other health professions (Dunn *et al.,* 2005).New York Chiropractic College is purported to be a leader in clinical education (retrieved from http://www.NYCC.edu) because of the varied and diverse clinical engagements and use of private and public sector afforded to all students. The nature and level of the interactions between the different professions present within these clinical environments being of special interest. A valuable component of NYCC's educational programming lies in the clinical opportunities it offers students preparing for practice in integrative environments (retrieved from http://www.NYCC.edu). With their various clinic engagements in the Department of Veteran’s Affairs and Monroe Community Hospital, working in facilities with other health professions has the potential for such clinical engagements.

New York Chiropractic College consists of a ten trimester program towards the professional degree of Doctor of Chiropractic (DC), with the requirement of an undergraduate degree prior to entry. Clinical engagements commences with an introductory on campus clinic in seventh trimester, and outpatient clinical engagement at the institution and affiliate clinics from eighth through tenth trimester. Prior to this, theory and simulation has been the preparatory clinical engagement.
As previously discussed, there is paucity of research in regards to inter professional education in chiropractic educational programs, as well as future inter professional engagement or post licensure collaboration (Wyatt et al,2005; Riva et al, 2010). The purpose of this particular study is to explore the final year chiropractic students understanding of what it is to be inter professional, their level of engagement and experiences, and likelihood towards inter professional engagement as a professional on graduation.

METHODS

A qualitative exploratory descriptive design was used for this research. This approach was undertaken as it is an appropriate methodology for collecting information when little is known

about the phenomena and where data is too complex to be captured using other methods (Patton, 2002; Maxwell, 2006). Questions were developed from the literature review pertaining to elements associated with best practice in clinical education. These questions were assessed for validity through an expert panel of chiropractic academics and similar health disciplines. The line of inquiry specific for the student cohort was then piloted with a focus group of new graduates as students were not available at time of required pilot. Students from New York Chiropractic College were invited to participate through an email communication sent by administrative of the institution, as well as placement of pamphlets accessible to students in the clinical facility. These students were in their final 18 months of their Chiropractic program and selected via convenience sampling. The cohort was chosen specifically because of their engagement in the clinical education provided at the institution. Interested participants contacted the researcher with their expression of interest in being interviewed. Focus groups were then set up at a time and place convenient for them. Recruitment continued until data saturation occurred which is when no new information was given (Patton 2002). Semi structured focus group interviews, seven in total, were conducted with a total of fifteen students. These were audio recorded, lasted sixty minutes and were transcribed. Transcriptions were checked with the recording for accuracy and then coded by both the researcher and supervisor for reliability of analysis (Sandelowski, 2000).

Data analysis followed steps identified by Dey (2003) with thematic analysis as the chosen method for this study. According to Morse and Field (1995) thematic analysis occurs through reading the transcripts and identifying categories. This enables the data to be categorised into themes. Full ethics approval was obtained from RMIT University Human Research Ethics Committee and from the Independent Review Board of the host institution. Prior to interviews all participants were given plain language statement informing them of the research and consent forms for them to sign. Transcripts were identified numerically related to the focus group and participant number. Participants were discouraged from identifying themselves or colleagues by name during the sessions. Presented here are the results from the focus group interviews of these students. Several emerging themes were developed from the data, including the positive and negative aspects of the clinical education and inter professional education. This paper will only discuss the inter professional education theme. Direct quotes from participants have been provided in order to support the findings.

RESULTS

A total of 15 students were interviewed, with 12 male and 13 Female. Average age was between 22-45 years of age. The students were from 7thto 9th trimesters of an overall 10 trimester program, or final 18 months. The clinical education program has an arranged series of clinical rotations during trimester 8 through to 10. Students are allocated to a choice of one of the primary clinics of NYCC, known as a "hub", which then pre allocates them to a series of specifically associated clinical rotations dependent upon their primary hub clinic allocation, referred to as "spoke" clinics. These spoke clinics are provided at various community based settings, such as the Department of Veteran's Affairs clinic, long term care hospitals and community outreach facilities, as well as nearby college campus health centres. Each clinic has an inherent variation in that there are different clinical supervisors, variations in locations throughout the state of New York, variation in the patient populations seen at these locations, and the communities they serve. Allocation to one primary clinic is associated with clinical rotations through certain pre-arranged placements. There is a range of length in which students may be placed on one of these rotations, usually over a four week period dependent upon the size of the student cohort. Hence there is inherent variation to students' clinical engagements and experience, dependent upon their allocation, patient case mix and the clinical model provided at each location. No clinical rotation is identical with the range and variation available through the spoke clinics. This inherently has allowed for the varied responses from the participants dependent upon their rotation sites.

Inter professional education in the clinical curriculum

There was a variable perception identified from the data as to whether inter professional engagement was a component of the student's clinical education or not, and therefore varied understanding of what this meant. There were those students that had minimum understanding of the meaning of inter professional. For instance, one participant requested a definition of 'inter professional' prior to responding. Needless to say, this participant perceived not experiencing this, but acknowledged that for them the clinical rotations had only just commenced. Inter professional engagement for this participant meant:

So with other professions or just, I haven't seen it(FG25125 P2)

One of the reasons why this group of students had limited understanding of the meaning of IPE could be explained by the fact that they appeared to not have had any inter professional engagement within their clinical education. This was because these respondents were mainly from the earlier period of their clinical program, that is, trimester 7. These participants therefore had no recollection of inter professional experience. They instead had only experienced the profession specific, or uniprofessional practice through the campus clinic. From one trimester 7 student, their response reflected a poor understanding of the concept

> *I haven't had much experience working with other practitioners, but it seems like the ones that I work with we don't share the same patients it seems very amicable I have had no problems.*(FG21522 P1)

There was variation of understanding amongst the participants about the meaning of inter professional. For instance, some viewed it at the level of having more than one profession within a clinic facility with not necessarily any engagement between them. As illustrated;

> *I don't feel that there is very much interdisciplinary, and I know there are multiple disciplines within this building* (FG 25130 P3)

There were other participants who had a better understanding of inter professional, but again viewed this more as professions working in isolation, in other words multi professional

Right, but I don't think that we as interns are exposed to the other disciplines; (in the VA rotation) we're just in a little section, but I, just my experience that it does have chiro, there's one dermatologist and like one podiatrist, like down the hall; we don't shadow them or see what they're doing or (FG25130 P3).

Even students in the final stages of their program did not understand what being inter professional was. This often reflected low level of inter professional engagement, with many relating this as at the level of sharing patient records with other professionals.

We see the records that have been written (FG25128 P4).

A common interpretation was that being inter professional was about referring a patient to another professional.

Each new patient, we either write a letter to the primary physician coordinating care ..., like referring out to surgeries, referring out for imaging or bringing in some other professional that is going to co-manage the case (FG25129 P1).

It was evident that some students believed that there was the potential for inter professional involvement, but practical logistics made it difficult to achieve;

We have an intern program with acupuncture as well for the school. So it's hard to get multiple interns in the same room. They don't want to take away from the other interns' experience(FG25129 P1).

Part of the problem identified from the data was that participants commented that they did not actually know what other professions did. It was difficult therefore, for them to embrace being inter professional. In other words;

I think it's hard because you really need to understand what other health care practitioners do. And I don't, personally(FG25125 P1).

This lack of knowledge of other professions also meant that they could not adequately advise patients in order to refer them.

I agree. I think I, and I've been trying to maybe make some connection to go shadow like an orthopaedic surgeon or a neurosurgeon just to kind of see what they do because I feel like I'm not, I don't know like the nuances exactly who to refer to for what issues. (FG25130 P3)

Unfortunately, lack of knowledge of other professions can often lead to prejudices. This is because a lack of understanding of other health professions can lead to negative interpretations and impressions and barriers. The result being
This profession hates this profession (FG25126 P1)

it's just so unfortunate to see that people would rather sit back and fight rather than get to know each other and build a successful, like medical community (FG25126 P2) (find a spot for this!)

In addition, There was a concern that this lack of knowledge of other professions may lead some practitioners to refer patients to certain professions in preference to others. This referral may, or may not, achieve the best outcome for the patient.

I think it's more a factor of knowing ... There are some things that I've heard different practitioners say that "we (chiropractic)can help with". There are other practitioners who have said, "No, I'd rather refer them to physical therapy." So it depends on the group of people you're talking about and do they understand what your role is and why you're there. If they don't then it's not going to work (FG25129 P).

Some participants commented they had a vague idea about what other professions do because they had studied with them in their undergraduate education.

in my mind I know what an MD does. In my mind I know what a physical therapist does. Undergrad, I went to school with a lot of them that either went physiotherapy or medical. So you kind of get the basis behind it but what exactly they do or are able to do, I feel like I don't really know…….. I have no problems seeing patients and saying, "Well, go see the MD.(FG25129 P)

There were a number of strategies identified by the participants regarding how education of other professions could occur. One of these strategies was just to follow a person from another profession around in the clinical setting and learn from observing

I think I, and I've been trying to maybe make some connection to go shadow like an orthopaedic surgeon or a neurosurgeon just to kind of see what they do because I feel like I'm not, I don't know like the nuances exactly who to refer to for what issues.(FG25130 P3)

It was clear from the data however that there was no formal arrangements to do this. Many students commented that they were doing this in an ad hoc manner. Other participants took the initiative to take this further and almost force their engagement by inviting themselves on the grand rounds. Grand rounds are where doctors take a group of medical students and go from bed to bed discussing a patient's diagnosis and management. These were not an organized or a formal component of the clinical education at the facility provided to chiropractic students

On the rotations that I've been, if there is no patient. You go up to the medical doctor and you tell him you're ready for grand rounds. And then they take you with them and they teach because that's how it works in the medical community. You just go up to the doctor and say I'm ready for grand rounds….(FG25128 P3).

Grand rounds were seen as the pinnacle by many of the participants, and was not just about inter professional engagement, as illustrated by the following quote

but the grand round is thought of as the most exciting thing you can go on. You can go on and they teach

you one on one what's going on and you can learn from that.(FG25128 P3)

The experience of grand rounds was also a powerful experience in modeling professional behaviours to students

> *... grand rounds, it is actually teaching me how to play nice with them.... but just to learn from them, just teaching me how to interact with the doctors and what would you do?* (FG 25128 P3)

It was clear from focus group discussion that this strategy of ad hoc, self-invitation on grand rounds was something that other participants did not realize was available to them. This was evident by the interactions that occurred with other participants in the group commenting that they did not know they could do this. This invoked discussion that they would now seek these opportunities themselves. For example

> *So put in your paper that we all just learned something from another student. We didn't know we could do it.* (FG25128 P4)

There was some evidence that some level of IPE was provided by the college to help facilitate IPE was by providing students with ways to communicate with other professionals through referrals and so forth.

> *We know how to write proper radiology reports, how to write referral letters, we learn that in the new business practice management which I don't think the other students have. Just to start I think it's great. It's showing students how to communicate as a professional.* (FG25127 P1)

A number of issues were identified from the data about the feasibility of IPE. It is not inherent yet to the program, and students were unsure as to how it may be accepted if requested

> *And I don't even think if I asked tomorrow can I sit on an acupuncture clinic, I don't think they'd let me.* (FG25130 P1)

There was also the belief that other professionals would not necessarily be happy to have a student observe their practice. Further issues were explored in regards to coordinating an inter professional arrangement by observational capacity, but not to detract from the student's experience involved in the patient care. This was not just a space issue.

> *We have an intern program with acupuncture as well for the school. So it's hard to get multiple interns in the same room. They don't want to take away from the other interns' experience.* (FG25129 P2)

Further discussions from students ensued as to opportunities missed, as well as perception of the fact that this level of engagement was not encouraged within the clinical program. Despite the difficulties in achieving IPE, there was a strong desire from the student perspective for more inter professional engagement in their clinical program.

> *Yeah, a little bit more would be nice, so that you could explain to a patient what the other person does.* (FG25129 P)

The biggest obstacle appeared to be lack of formal arrangement to facilitate this process occurring;

> *...I think we would all choose to do that but we don't have the opportunity, it's not like encouraged.* (FG25130 P1)

It was clear from the data that the students were aware of the importance of inter professional engagement within healthcare. Together with the realization that one health profession cannot care for all aspects of a patient's health.

> *They need a well-rounded treatment. I still believe that chiropractic works and it's going to be the best treatment for a patient, but that doesn't mean that they can't have other treatments as well*(FG25128 P3).

In addition, the students demonstrated an understanding and awareness of their own professional limitations and the need to refer to other practitioners for the benefit of the patient

> *there is not one physician out there who can treat every single thing that someone's going to have, and if you think you can you're not going to be a good doctor* (FG25126 P1).

Referring patients to another health professional also meant that the health professionals need to work collaboratively to achieve the best care for that patient. It was obvious from the responses, that this did not always happen;

> *... I think what's best for the patient to work together. I think everybody should do it. It's too bad that some don't, but it's not that you have to work in the same office or anything, but you know, keep those ties of communication open, with your patient's other doctors... Get your patients better* (FG25128 P).

In other words:

> *I think that being with other doctors in other professions is crucial to being successful because there is not one physician out there who can treat every single thing that someone's going to have, and if you think you can you're not going to be a great doctor. And that goes for* ***any profession, including chiropractors***(FG25126 P1).

There was also identified in the data a negative side towards professions working together. One student, for instance commented on the fact that they had witnessed an example of a professional conflict between a chiropractor and physiotherapist. There was an apparent lack of understanding of the other practitioner's scope of practice, and a conflict resulted. This student reflected on this experience

> *I think so.... yeah, I've got one negative experience but... I don't think it's like that everywhere* (FG25126 P2).

Inter professional after graduation

Pleasingly was the notion that most of the participants want to be inter professional as a graduate. In fact, several participants

articulated that interprofessional engagement was an essential component to professional practice

> *Absolutely. Almost every patient I have, hopefully (will be inter professional).* (FG25129 P)

> *In regards to feeling in order to be successful you need to be inter professional.* (FG25125 P1)

It was evident from the data that some participants, however, only had a vague understanding of what this meant. In reality;

> *Yeah and again that would also be better because I'm not on my own in my own office I'm working in an office with a group of doctors who can all be references for questions that I have for the patient…*(FG25127 P1).

DISCUSSION

This investigation indicated that the students generally had a limited understanding about what it meant to be inter professional, seeing this as patient referrals to other practitioners and reading other professional's patients notes. Furthermore, the student's exposure to inter professional practice in the clinical environment appeared to be minimal. This understanding and exposure reflected more a limited, low level and somewhat uni-directional and non-reciprocal engagement with other professions. Despite this, there seemed enthusiasm and desire for further and more coordinated exposure within clinical education and as a professional.

Such limited understanding of inter professional practice has also been demonstrated in students from other health professionals, such as nursing, medicine, occupational and physical therapy, and identifying gaps in their perspectives (Broer *et al.,* 2009).Outside of the student cohort, differences have been found in understanding what inter professional collaboration is, most notably between medicine and allied health professionals (McCallin, 2001). It is, therefore, not surprising that the students participating in this study should demonstrate a difference of understanding despite the various definitions provided in the literature. Most promising, however, is that many participants felt compelled towards being inter professional for the purpose of a patient centred model of health care as well as practitioner benefits. Patient centred model of care is one of the goals of inter professional collaborative care. There were several students that acknowledged that not one health profession was capable of taking care of all patient needs, but again seemed to refer to inter professional as being a method of 'referral', as opposed to being collaborative in the patient care. This again suggests a lower level of being inter pofessional (Kinnaman and Bleich, 2004; Boon *et al.,* 2009).

Students from this American college had a mostly multi professional, and minimal inter professional engagement within their clinical education, despite potential opportunity existing (Riva *et al.,* 2010; Karim, 2011). Many felt they would like to engage in an observational arrangement to learn from these other professions. They felt a lack of formal arrangement for an inter professional clinical model, even to be purely observational capacity. Promising from this data, is that despite minimal contact, most students responded the desire to engage in inter professional engagement as a graduate. The difficulties being that they lacked confidence, lacked contacts to form these relations, and also lacked the knowledge of other health professions to be able to fully engage competently and confidently in a collaborative nature professionally. Likewise Baerg (2012) found from their study that participants frequently identified knowledge of other disciplines, their roles and practice, as important to inter professional collaboration. Some expanded this concept to include awareness of the culture, training, and service delivery systems of other professionals (Baerg *et al.,* 2012).

Despite this desire expressed by students, it must be noted that effective inter professional collaboration does not spontaneously emerge simply when people from various professions are grouped together (Baerg *et al.,* 2012). Further to this, professionals or students may not engage in inter professional collaborative training if they feel that they already possess the requisite skills (Baerg *et al.,* 2012). Hence students' lack of training, understanding and experience will not necessarily lead to implementation as a professional. It is noted that post-licensure interventions and training can improve inter professional collaboration (Baerg *et al.,* 2012), however chiropractors' practicing tendencies outside of the hospital and community settings common to medicine, nursing and allied health can reduce likelihood towards such training (Wyatt et al; 2005).

Consideration of the varying levels of inter professional engagements have been developed by a number of authors. One of these is the four model approach provided by Kinnaman and Bleich (2004). This model identifies progression towards greater inter professional involvement starting with toleration, coordination; moving further in complexity and involvement towards cooperation, and collaboration. At the lower end toleration displays mostly marginal communication, as little interaction and engagement is involved. This is considered superficial, limited and does not involve conflict (Kinnaman and Bleich, 2004). Similarly, Boon *et al.* (2009) propose seven different inter professional levels; of which there are incremental progressions dependent upon the level of engagement, interaction and organization. This progression of inter professional engagement ranges from parallel practice, to collaboration to integration, considered the highest level on the continuum (Boon *et al.,* 2009). The level of interaction described within this study would be considered the earlier levels of parallel practice, and toleration (Boon *et al.,* 2009; Kinnaman and Bleich, 2004). To reach the upper level of the inter professional continuum, more education and exposure is required (Boon *et al.,* 2009).

Despite the evidence in the literature in support of inter professional education, in practice it was clear there is need for more work in implementation. Within the educational setting is considered most optimal, even if through a shadowing experience (Riva, Lam, Stanford, Moore, Endicott, and Krawchenko, 2010). Chiropractic is behind other disciplines of health in implementation of IPE. This highlights the need for introducing a range of measures to facilitate IPE, including education on the role of other professionals, undertaking education with other professions for theory as well as during their clinical. In addition, mandatory inter professional shadowing experiences for chiropractors during their training

can enhance future collaborative practice and provide success in reaching a goal common to each profession - improved patient care. (Riva, Lam, Stanford, Moore, Endicott, & Krawchenko, 2010).Constraints to implementation are usually because IPE requires a highly complex and coordinated arrangement. Key determinants for collaborative practice involving team members sharing, which include knowledge of each other's roles; good communication including negotiation skills; willingness to work together; trust related to self-competence and competence in other's abilities; and mutual respect implying knowing other health professionals and their contributions to patient care (Oandasan and Reeves, 2005). Student responses illustrated on several occasions the logistical issues and constraints associated with the step from the multi professional to an inter professional environment, such as administrative issues, problems in scheduling, lack of understanding of the importance of IPE, and the issue of 'turf wars' between professions (Buring *et al*., 2010). It is clear that more work needs to be done in this area.

Limitations to this study include the small sample size, and the variation in the students' access to all clinical experiences available. Several participants were from lower trimesters, early in their clinical education and limited in their responses from not yet experiencing the inter professional experience available in the latter trimesters of the program. To include the new graduate data would further enhance the inquiry.

Conclusion

Despite the evidence in the literature in support of interprofessional education, in practice it was evident from this study that there is need for more work in implementation. Student perceptions of inter professional education was seen as a positive experience, and students seemed encouraged to continue as a graduate based on their experiences. Further exposure and high level inter professional clinical educational experiences could further potentiate a better understanding of being inter professional for these chiropractic students. It was evident from this study that there is a need for more theoretical preparation as well as more formal processes in the clinical arena in order to facilitate inter professional practice.

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