Perspectives of Speech-Language Pathologists and Audiologists on Interprofessional Collaboration

Points de vue d'orthophonistes et d'audiologistes sur la collaboration interprofessionnelle

KEY WORDS

INTERPROFESSIONAL COLLABORATION

SPEECH-LANGUAGE PATHOLOGISTS

AUDIOLOGISTS

PERSPECTIVES

LEGISLATION

Bracia Eaton
Sandra Regan

Abstract

Background/Rationale: Recent legislative amendments to Ontario's health professional regulatory system require regulated health professionals, including speech-language pathologists and audiologists (S-LP&As), to collaborate interprofessionally where they share controlled acts. These changes have implications on the interprofessional collaboration (IPC) of regulated health professionals and the delivery of client care. The purpose of the analysis was to examine the perspectives of S-LP&As on IPC.

Methods: A mixed methods design and secondary analysis of a subset of data from a larger study was conducted with statistical analysis of survey data (n=171) and a content analysis of comments made by S-LP&As pertaining to factors that enable or impede IPC (n=78 individual comments).

Results: Respondents had high agreement with statements that IPC is in the public interest (95.9%), improves quality of care (91.8%), and increases access to health services (87.1%). There were statistically significant differences in responses to the IPC statements for those under 40 years compared to those over 40 years related to comfort participating in IPC, IPC emphasized in education programs, experiences of teamwork among colleagues, exposure to IPC in workplace orientation, and the belief that IPC was in the public interest. Facilitators to IPC identified by respondents include positive personalities, openness to IPC, trust, respect for others' perspectives, problem-solving collaboratively, and formal team meetings. However, respondents identified more barriers that impede IPC in professional practice including regulatory guidelines and "piecemeal" policies, limited physician involvement, heavy workloads, "turf" issues, and lack of understanding of other health professionals' roles and expertise.

Conclusions: This analysis provides preliminary findings on perspectives of S-LP&As on IPC within a Canadian context. In particular, these findings provide insight into facilitators that promote and barriers that impede IPC for S-LP&As in clinical practice. Work environments that foster and support collaboration, communication, trust, and mutual respect for all team members' roles, expertise, and contributions within their scope of practice can improve health care providers' satisfaction and optimize client care. Although S-LP&A respondents support the ideal of IPC, barriers exist that impede their ability to fully implement IPC in clinical practice. Given that S-LP&As work in a variety of settings with diverse populations, future changes to ministerial, regulatory, and administrative policies are needed to facilitate IPC in multidisciplinary practice environments.

Bracia Eaton, BHSc. (Hons.), M.Cl.Sc Speech-Language Pathology Candidate,
School of Communication Sciences and Disorders, Western University, London, ON
CANADA

Sandra Regan, RN, PhD, Assistant Professor,
Arthur Labatt Family School of Nursing, Western University, London, ON
CANADA

Abrégé

Contexte/Fondement : Des amendements récents à la législation de l'Ontario sur le système de réglementation applicable aux professionnels de la santé, dont font partie les orthophonistes et les audiologistes, exigent une collaboration interprofessionnelle là où ces derniers partagent des actes contrôlés. Ces changements ont des conséquences pour la collaboration interprofessionnelle des professionnels de santé réglementés et pour la prestation de soins. Le but de l'analyse était d'examiner le point de vue des orthophonistes et des audiologistes sur cette collaboration.

Méthodes : Une recherche employant des méthodes mixtes et une analyse secondaire d'un sous ensemble de données tirées d'une étude plus large a été effectuée, incluant une analyse statistique des données du sondage (n=171) et une analyse de contenu des commentaires faits par les orthophonistes et les audiologistes relativement aux facteurs qui facilitent la collaboration interprofessionnelle (CIP) ou lui nuisent (n=78 commentaires d'individus).

Résultats : Les répondants étaient largement d'accord sur l'idée que la collaboration interprofessionnelle est dans l'intérêt public (95,9 %), améliore la qualité des soins (91,8 %), et augmente l'accès aux services de santé (87,1 %). Il y avait des différences statistiquement significatives entre les réponses données aux énoncés touchant la CIP chez les personnes de plus de 40 ans et chez celles de moins de 40 ans relativement à leur niveau de confort quant à leur participation à la CIP, quant à la CIP accentuée dans les programmes éducatifs, et quant à l'expérience du travail d'équipe entre collègues, à l'exposition à la CIP et à la conviction que la CIP est dans l'intérêt public. Les éléments facilitateurs de la CIP identifiés par les répondants sont notamment les personnalités positives, une ouverture envers la CIP, la confiance, le respect du point de vue des autres, la résolution de problèmes menée en collaboration et les rencontres formelles d'équipes. Toutefois, les répondants ont identifié plus d'obstacles qui entravent la CIP dans les pratiques professionnelles, comme les directives réglementaires et les politiques « à court terme », l'implication limitée des médecins, la lourdeur des charges de travail, les problèmes de « territorialisme », et le manque de compréhension du rôle et de l'expertise des autres professionnels de la santé.

Conclusions : Cette analyse dévoile des résultats préliminaires sur les points de vue des orthophonistes et des audiologistes concernant la CIP dans le contexte canadien. En particulier, ces conclusions donnent un aperçu des éléments facilitateurs qui favorisent la CIP et des obstacles qui l'entravent pour les orthophonistes et les audiologistes dans leur pratique clinique. Les milieux de travail qui facilitent et appuient la collaboration, la communication, la confiance et le respect mutuel à l'égard des rôles de tous les membres de l'équipe, de leur expertise et de leurs contributions dans leur champ de travail peuvent améliorer la satisfaction des fournisseurs de soins de santé et optimiser les soins dispensés aux clients. Quoique les répondants orthophonistes et audiologistes appuient la cause de la CIP, il existe des obstacles qui entravent leur habilité à pleinement mettre en œuvre la CIP dans leur pratique. Compte tenu que les orthophonistes et les audiologistes travaillent dans différents environnements avec des populations diverses, il faudrait des changements dans les politiques ministérielles, réglementaires et administratives afin de faciliter la CIP dans des contextes de pratiques multidisciplinaires.

Introduction and Background

Interprofessional collaboration (IPC) involves "a partnership between a team of health professionals and a client in a participatory, collaborative, and coordinated approach to shared decision-making around health and social issues" (Orchard, Curran, & Kabene, 2005, p. 1). The successful establishment and implementation of IPC are dependent on the collaborative efforts of various individuals and organizations, including but not limited to, regulatory bodies, government, policy-makers, health care professional organizations, health and social care professionals, educators, researchers, clients, and families (Health Force Ontario, 2010). A growing interest in IPC is evident from research and policy commitments to multidisciplinary, client-centered care (Barrett, Curran, Glynn, & Godwin, 2007; Ministry of Health and Long-Term Care [MOHLTC], 2009; Nolte, 2005; Reeves et al., 2008; World Health Organization, 2012; Zwarenstein et al., 2006). However, little is known about the perspectives of speech-language pathologists and audiologists on IPC. The purpose of this paper is to present findings from a study of perspectives of speech-language pathologists and audiologists regarding IPC within a Canadian context.

Legislative Changes

Recently, the government of Ontario, Canada, initiated various legislative amendments to Bill 171, *the Health Systems Improvements Act, 2007 and Bill 179, Regulated Health Professions Statue Law Amendment Act, 2009* including requirements for IPC. These amendments are intended to impact the practice of regulated health professionals, the delivery of client care, and improve the effectiveness and efficiency of the regulatory health system (MOHLTC, 2010). Amendments to the Regulated Health Profession Act (RHPA) of Bill 179 require IPC among regulated health professionals. The following excerpt from the amended legislation outlines the current obligations of Ontario health regulatory Colleges:

> To develop, in collaboration and consultation with other Colleges, standards of knowledge, skill, and judgment relating to the performance of controlled acts common among health professions to enhance interprofessional collaboration, while respecting the unique character of individual health professions and their members (MOHLTC, 2009).

The objectives of these legislative amendments were to improve access to health services by enabling better usage of multidisciplinary health professionals and to ensure client safety and quality assurance by strengthening Ontario's health professional regulatory system (MOHLTC, 2010).

Speech-Language Pathologists and Audiologists and IPC

A review of the literature revealed only a few articles regarding speech-language pathologists and audiologists (S-LP&As) and IPC. These articles related to collaboration between specific professionals (i.e., neuropsychologists and speech-language pathologists (S-LPs)) (Constantinidou, Wertheimer, Tsanadis, Evans, & Paul, 2012); teachers and S-LPs (Bauer, Iyer, Boon, & Fore, 2010; McEwen, 2007; Pena & Quinn, 2003; Ritzman, Sanger, & Coufal, 2006); student occupational therapists (OTs) and student S-LPs (Insalaco, Ozkurt, & Santiago, 2006); audiologists and otolaryngologists (Sattinger, 2007); and S-LPs and audiologists (McNamara & Richard, 2012). In a reflective article by Crukley and colleagues (2012), the authors acknowledge the need for IPC particularly in the field of audiology (Crukley, Dundas, McCreery, Meston, & Ng, 2012). Furthermore, these articles were not based on the Canadian context. No studies were found specifically pertaining to the perspectives of S-LP&As on IPC. As barriers can impede effective IPC where professionals share overlapping scopes of practice (Chung et al., 2012; Insalaco et al., 2006), it is imperative to examine the beliefs and attitudes of S-LP&As on IPC. The purpose of this paper is to present findings from a study of perspectives of S-LP&As regarding IPC within a Canadian context.

Facilitators to IPC

Drawing upon the literature, a number of factors have been identified that facilitate IPC at the individual and organizational level between various health and social care professions (See Table 1). Interprofessional education (IPE) has been defined as situations when "two or more professions [or students] learn with, from, and about each other to improve collaboration and the quality of care" (Centre for the Advancement of Interprofessional Education (CAIPE), 2002). Barr and colleagues (2005) argue that IPE creates positive interaction and encourages collaboration between interdisciplinary professions and improves client care. In order for IPC to be effective and efficient, an integral educational progression is required between the preparation of students in health professional programs and the actual professional practice in health care settings (Health Force Ontario, 2010).

Enhancing effective communication has been cited as a significant enabler to IPC. Improved communication

can facilitate collaboration and consultation among health providers and clients (Nolte, 2005). Mutual respect, consensus, and understanding between professionals can also be achieved (Prada et al., n. d.). Sharing information through meetings, communication technology, and electronic systems have been identified as important mechanisms for effective and efficient IPC among professionals (Stonebridge, 2005). Moreover, all health providers need to clearly define their roles, responsibilities, and expertise (Nolte, 2005). Zwarenstein and colleagues (2006) suggest that "key core elements of collaborative communication such as self-introduction, description of professional role, and solicitation of other professional perspectives" (p. 2) are essential to create a culture for IPC. This culture can only flourish with teamwork and leadership around common goals and values that encourage new ways and perspectives of learning and working together and that provide the most thorough and appropriate client-centered care (Nolte, 2005). Strong relationships built on trust, cooperation, and respect for other team members' contributions and areas of expertise are essential for effective IPC (Martin-Rodriguez, Beaulieu, D'Amour, & Ferrada-Videla, 2005; Nolte, 2005). Furthermore, effective client-centered care requires continuous communication and collaborative work between health care professionals and their clients (Casmiro et al., 2011). These various facilitators need to be implemented simultaneously to achieve effective IPC. In addition to factors that enable IPC, a number of barriers exist to implementing and practicing IPC in professional practice.

Barriers to IPC

Although IPC is not a new phenomenon in the delivery of health care (Prada et al., n.d), numerous implicit and explicit barriers exist that impede the ability to achieve IPC in clinical settings. Barrett and colleagues (2007) argue that "although multidisciplinary teams are widely lauded, collaborative team approaches are difficult to achieve and require changes to underlying structures, values, power relations, and roles" (p. 11). Studies have shown that IPC can be compromised by a variety of challenges (See Table 1). Although a significant amount of research has indicated the need for professions to collaborate in the evolving health care environment (Health Force Ontario, 2010; Prada et al., n. d; WHO, 2012), professional and cultural impediments can constrain the interprofessional collaborative process (Chung et al., 2012). "Turf" issues or professional territoriality or boundary infringements can hinder IPC when professionals share overlapping scopes of practice (Axelsson & Axelsson, 2009; Chung et al., 2012; Reeves et al., 2008). Currently, with changing roles and settings, there is considerable overlap in the roles of different health care professionals (WHO, 2011). These changing roles can present challenges in terms of professional responsibilities, autonomy, and acknowledgement (Barrett et al., 2007; WHO, 2011). "Turf" issues can lead to interprofessional disputes and territorial and competitive behaviour that may hinder the ability to integrate knowledge and can negatively impact client-centered care (Chung et al., 2012).

Professional cultures and attitudes are deeply rooted in the traditional approach to teaching professionals in silos (Margalit et al., 2009). Hall (2005) argues that the "educational experiences and the socialization process that occur during the training of each health professional reinforce the common values, problem solving approaches, and language/jargon of each profession" (p. 188). The powerful influence of the hidden curriculum (i.e., unwritten norms, values, and beliefs transmitted to learners through their immersion in the clinical environment and mainly by their observation of role models) on professional students should not be underestimated (Thistlethwaite, Jackson, & Moran, 2013). Consequently, these professional cultures and attitudes may differ from other professionals' ideologies and world views causing conflicts that impede effective IPC (Hall, 2005). Increased specialization and regulatory bodies has further immersed professions into their own professional culture, and as a result, professional roles and boundaries become difficult to define (Hall, 2005).

Medical hierarchies and authority can challenge collaboration and teamwork. Increased specialization and regulatory bodies have provided greater patient choice and access to regulated health professionals and have provided health professionals more responsibility and autonomy for their own acts within their scope of practice (College of Audiologists and Speech-Language Pathologists of Ontario [CAS-LPO], 2008a; 2008b). However, changing views and roles can "challenge the authority and boundaries of medicine" (Hall, 2005, p. 189), when interprofessional collaborative teams are not always led by physicians (WHO, 2011). Furthermore, facilitators to IPC can pose as significant challenges to IPC if not implemented in clinical practice. Poor communication and lack of understanding of other health professionals' knowledge, skills, roles, and expertise can impose boundary infringements and "turf" issues (Barrett et al., 2007). Implementing, practicing, and sustaining IPC requires a firm commitment and a

shared responsibility of a range of stakeholders, including regulatory bodies, health care professionals, academic institutions, health care professional organizations, government, policy-makers, administrators, clients, and families (Health Force Ontario, 2010).

Table 1. Facilitators and Barriers to IPC

Facilitators	Barriers
Interprofessional education in higher education institutions and professional settings[1]	"Turf wars"[7], "professional territoriality"[8], or "boundary infringements"[9]
Interprofessional collaborative communication[2]	Professional cultures[10] ,attitudes[7], and negative stereotypes[7]
Accountability mechanisms[3]	Lack of understanding of other health professionals' knowledge, skills, roles, and expertise[9]
Teamwork4 and leadership skills[5]	Poor communication[11]
Client engagement[6]	Medical hierarchies[12]
Professional autonomy, trust, and work satisfaction[3]	

Sources: [1] Oandasan, Nasmith, Soklaridis, & Kimpton, 2004; [2]Zwarenstein et al., 2006; [3] Barrett et al., 2007; [4]Nolte, 2005; [5] Freeth, Hammick, Reeves, Koppel, & Barr, 2005; [6] Prada et al., n.d.[7]Chung et al, 2012, p. 32; [8]Axelsson & Axelsson, 2009; [9]Reeves et al., 2008, p. 2; [10]Hall, 2005; [11]Zwarenstein et al., 2006; [12]WHO, 2011.

As barriers can impede effective IPC where professionals share overlapping scopes of practice (Chung et al., 2012), it is imperative to examine the beliefs and attitudes of S-LP&As on IPC. The purpose of this paper is to discuss the results of a study of perspectives of S-LP&As regarding IPC.

Methods

A mixed methods design analyzing qualitative and quantitative data was conducted to examine the perspectives of S-LP&As on IPC (Axinn & Pearce, 2006). This study is a secondary analysis of data from a larger study investigating implementation of legislative changes requiring promotion of interprofessional collaboration (IPC) by health regulatory Colleges. The purpose of the larger study was to examine the readiness of various health professional regulatory Colleges in Ontario for legislative changes; one component of this larger study was a survey of practicing health professionals from these Colleges regarding their awareness of recent legislative changes in Ontario, knowledge of controlled acts, and perspectives on IPC (Regan, Orchard, Khalili, Brunton, & Leslie, 2013). This paper focuses on the perspectives of S-LP&As on IPC. Ethical approval for the larger study was obtained from the University of Ottawa and Western University Research Ethics Boards.

Data Collection and Sample

Members of CASPLO were sent an email by the College with a link to an online survey. Information about the purpose of the survey and inclusion criteria were provided in the email. Participants were eligible to participate if they had practiced in a clinical position in Ontario at least 50% of their time in the 12 months. The survey was offered in both English and French; no French responses were received for S-LP&As. Participants indicated consent to participate in the study by answering yes to the following question: Do you agree to the terms and conditions outlined in the Letter of Information and give your consent to participate in this survey?

The survey consisted of basic demographic questions (e.g. age, sex, education), scaled questions, and open-ended questions. Among the questions, respondents were asked their perspectives on 22 items related to IPC based on a 4-point likert scale: 1-(Strongly Disagree); 2-(Disagree); 3-(Agree); and 4-(Strongly Agree). The IPC

items were developed based on a review of the literature and aims of the study. In addition, participants were asked the following open-ended statement: *Please tell us what factors enable or impede your ability to collaborate with other health professionals in general and to carry out shared controlled acts specifically.*

Analysis

SPSS 21 (IBM Corp., 2012) was used to analyze survey responses. Statistical analysis included calculating the frequency participants agreed or strongly agreed with each item. Participant responses were also grouped based on age, those 40 years and under and those 41 years and older, with mean group differences on each of the 22 items examined using the t-test.

S-LP&A participants provided 78 relevant responses to the open-ended statement: *Please tell us what factors enable or impede your ability to collaborate with other health professionals in general and to carry out shared controlled acts specifically.* A qualitative content analysis was conducted to examine these responses and group responses into categories (Krippendorff, 2013; Schreier, 2012).

Results

Of the 171 S-LP&As who participated in the survey, 11 of the participants were male (6%) and 160 were female (94%). S-LP&A participants ranged in age from 27 to 71 years and the average age was 44.6 years. A total of 60 participants were under 40 years of age (35%) and 111 participants were 40 years of age or older (65%). All participants were English speaking and had University level education.

Based on the content analysis of the qualitative comments and the IPC survey items, we grouped the findings by broad themes to report the results: IPC and health care services, IPC and the workplace, IPC and colleagues, and IPC and the profession. See Table 2 for additional details regarding S-LP&A responses to the 22 survey items on IPC.

IPC and Health Care Services

Respondents had high agreement among items 1, 3, 7, 9, 10, 12 and 15 reflecting support for the importance of IPC for improved access to health care services and quality of patient care. There was high agreement among S-LP&As with statements that IPC improves quality of

Table 2. Perspectives of Speech-Language Pathologists and Audiologists Regarding

	How strongly do you agree or disagree with the following statements?	% Agree / Strongly Agree - All participants	Means (SD) ≤ 40 years/ > 40 years4
1.	When all health professionals can practice to their fullest extent of their knowledge, skills, and expertise, patient access to care is improved.	97.1	3.64 (.57)/ 3.58 (.53)
2.	I am comfortable participating in interprofessional collaborative practice.	97.1	3.52 (.61)/ 3.33 (57)*
3.	Greater interprofessional collaboration is in the public interest.	95.9	3.64 (.57)/ 3.42 (.57)*
4.	My workplace supports interprofessional collaboration.	93.0	3.36 (.62)/ 3.29 (.68)
5.	In my workplace, my colleagues and I share similar ideas about patient care.	92.4	3.40 (.60)/ 3.19 (.67)*
6.	My colleagues value each team member's expertise.	92.4	3.30 (.74)/ 3.26 (56)

7.	Interprofessional collaboration on shared controlled acts will improve the quality of care.	91.8	3.21 (.57)/ 3.13 (.63)
8.	Interprofessional collaboration will increase health professional satisfaction and retention.	89.5	3.20 (.59)/ 3.08 (.59)
9.	Different standards for how health professions perform the same controlled acts can impede interprofessional collaboration.	88.9	3.25 (.77)/ 3.28 (.63)
10.	Different standards for how health professions perform the same controlled acts can impact negatively on the quality of care that is provided.	88.3	3.18 (.69)/ 3.26 (.61)
11.	My colleagues are willing to cooperate on new practices.	87.7	3.16 (.57)/ 3.06 (.65)
12.	Interprofessional collaboration will increase access to health services.	87.1	3.25 (.73)/ 3.06 (.68)
13.	There is a lot of teamwork among my colleagues.	86.5	3.31 (.66)/ 3.08 (.71)*
14.	My immediate colleagues understand the roles and responsibilities of all team members.	84.8	3.13 (.69)/ 3.02 (.64)
15.	The sharing of controlled acts provides an opportunity to promote greater interprofessional collaboration.	84.2	3.03 (.58)/ 2.94 (.65)
16.	My regulatory College enables interprofessional collaboration.	80.1	3.15 (.66)/ 2.92 (.73)*
17.	My workplace provides orientation for new staff that involves all health professionals being oriented together.	63.7	2.91 (.79)/ 2.62 (.88)*
18.	Interprofessional collaboration was emphasized in my health professional education program.	61.4	3.09 (.83)/ 2.50 (.85)*
19.	There are "turf" issues around controlled acts among some members of the team.	45.6	2.48 (.80)/ 2.52 (.74)
20.	My colleagues and I fully appreciate which other health professions can now carry out controlled acts in this legislation.	45.0	2.48 (.68)/ 2.39 (.66)
21.	My colleagues discuss working together in support of the legislation to collaborate on controlled acts.	36.8	2.36 (.75)/ 2.30 (.71)
22.	Some colleagues still restrict the controlled acts that can be carried out to those before this new legislation was enacted.	31.6	2.22 (.65)/ 2.26 (59)

Note. Scale 1-4 Strongly Disagree to Strongly Agree. N=171.
*Denotes statistically significant differences (t-test significance $p < .05$)

care (91.8%) and increases access to health services (87.1%). S-LP&As agreed highly that IPC was in the public interest (95.9%), however, there were statistically significant differences in mean scores between S-LP&As based on age; younger S-LP&As had a slightly higher agreement that IPC was in the public interest.

Although S-LP&As support IPC, many respondents' comments indicated that significant barriers currently exist that impede the ability to fully implement IPC in clinical practice. Some respondents identified barriers that negatively affect health care services and patient care including policies that impede the ability to refer and diagnose clients, limited physician involvement, differing managerial policies in different settings, lack of administrator support, and fragmentation of services.

Some respondents indicated that the quality of client care is improvised and access to health services is reduced due to policies that inhibit the ability for S-LPs to diagnose language disorders:

> As speech language pathologists in the school system we do not have the controlled act to diagnose a language disorder, despite having extensive background in this area. We have shorter wait times for assessment than our psychology counterparts and it would speed up service for children with communication disorders if we were able to diagnose language impairments.

In addition, policies were identified as impediments to audiologists' ability to refer and diagnose patients which affects the quality of client care. Several participants indicated that the inability to refer clients directly to an otolaryngologist causes unnecessary delays for treatment and services:

> One interprofessional limitation that impedes my collaboration with other health professional in general is the inability to refer directly to an otolaryngologist. This limitation affects communication of results and can slow down and cause difficulties with the controlled act of hearing aid prescription.

Ministerial policies were identified as "piecemeal" and "fragmented" that limit access to services for children with speech and language disorders. Several participants commented on these "divided" policies that result in inefficiencies in service delivery and a lack of essential services for school aged populations:

> Ministry guidelines (tri-ministerial agreement) [lead to] division of speech-language pathology services for school aged children and are too piecemeal and divided. [These guidelines] severely limit the services available to students who may have both language disorders and speech/voice/fluency issues.

The need for physician involvement and the "buy in" from administrators to facilitate IPC and improve patient care were indicated by several participants' comments:

> A number of community services have not recognized the value of collaboration. In my view, administrators need to 'buy in' to the value of team care in order for this approach to be supported at the level of clinical care. Physician involvement in this process would be valuable but at present specialists (e.g., otolaryngologists) are not/choose not to participate in this process which invariably limits optimal care of the patient.

Different workplace policies can impact service delivery and compromise patient care. In particular, S-LPs indicated that different settings have varying policies regarding the role of the S-LP in performing modified barium swallowing studies (MBSS):

> I have worked in two hospital settings. At [one] hospital, performing (MBSS) was an act that was delegated to the S-LP without direct supervision. At [another hospital], this was not the case. I found that having trust in the knowledge and expertise of the S-LP in the area of MBSS assessment provided for more efficient service delivery with very minimal compromise to patient safety.

IPC and the Workplace

There was high agreement among S-LP&As with statements that their workplace supported IPC (93% - item 4). A smaller majority (63.7%) agreed or strongly agreed that their workplace provided orientation for new staff that involved all health professionals being oriented together (Item 17). Younger S-LP&As were more likely to agree that staff were oriented together than their older counterparts ($p < .05$).

Respondents indicated the importance of the workplace in supporting IPC and providing education on effective collaboration:

> It has been my experience throughout my career that collaboration occurs when the philosophy of the work setting allows it to, but more importantly there has to be education on the different models of collaboration as well as professionals who are comfortable with

their own skills that they can respect that another professional also has a role to play.

IPC and Colleagues

Respondents had high agreement among items 2, 5, 6, 11, 13 and 14 reflecting support for the importance of teamwork and collaborative practice. S-LP&As were in high agreement with statements that their colleagues cooperated on new practices (87.7%), shared similar ideas about patient care (92.4%), and participated in teamwork (86.5%). Moreover, S-LP&As were in high agreement that their colleagues valued each team member's expertise (92.4%), and understood the roles and responsibilities of all team members (84.8%). However, only a minority of S-LP&As respondents agreed or strongly agreed that their colleagues discussed working together in support of the legislation to collaborate on controlled acts (36.8%) and fully appreciated which other health professions could now carry out controlled acts (45%). Nearly half of participants indicated that "turf" issues existed around some controlled acts by colleagues (45.6%). There were statistically significant differences based on age with comfort participating in interprofessional collaborative practice, sharing similar ideas about patient care, and teamwork among colleagues with younger S-LP&As having mean scores on these three items.

The following quotes from different S-LP&As illustrate the types of "turf" issues that exist among colleagues:

> Serious turf wars between physicians and audiologists are destroying the profession of audiology; physicians are dispensing hearing aids and are not even trained.

> Antagonist turf wars between audiologists. I think that when money becomes a factor in the equation, then there is a change in the professional leading to poor communication between colleagues and a fight for patients to come in and buy their hearing aids from one audiologist vs. the next.

> Turf wars regarding dysphagia, and occupational therapists (OT) thinking they are the only ones qualified to address it.

> Specific acts that I'm well trained to do but are risky (e.g., dysphagia assessments) should be considered a controlled act. Because they are not, other colleagues (i.e., OT, dieticians) with minimal training and expertise can or are being asked to perform these acts to save hospital money...There is great risk of harm to the general public, as well, it fosters turf issues and affects interprofessional relationships.

"Turf" issues and misunderstandings can occur when colleagues do not understand the roles and responsibilities of all team members. Moreover, different perspectives among multidisciplinary colleagues can impede IPC:

> There is a divide between physicians and allied health and other professions in my job setting, such that there is probably not a good understanding amongst physicians as to what S-LPs or other professionals can do.

> Lack of time or a different focus impedes IPC. For example, OTs might want to focus solely on a student's gross motor skills and need for wheelchairs/walkers/standers etc., when I might also need their support (e.g., physical access and mounting) for augmentative and alternative communication in students presenting with severe physical disabilities and complex communication needs.

IPC and the Profession

There was high agreement among respondents that IPC increases retention of health professionals (89.5% - item 8). However, only a small majority of respondents indicated that IPC was emphasized in their health professional education program (61.4% - item 18). Statistically significant differences based on age were noted with respondents under 40 years of age showing high agreement that IPC was emphasized in their health professional education program (80% - mean = 3.09); whereas, only half of respondents 40 years of age or older indicated that IPC was emphasized in their health professional education program (51%- mean = 2.50).

Respondents identified several facilitators and barriers that enable or impede the ability to collaborate interprofessionally in clinical practice. Facilitators include positive personalities, openness to IPC, trust, respect for others' perspectives, problem-solving collaboratively, and team meetings. S-LP&A respondents commented on the facilitators that enable IPC in clinical practice:

> Enabling factors [to IPC] would be administrative support, times for collaboration, which allows time for discussion, meetings, etc., and valuing the synergy when two different perspectives come together to problem solve for the client.

Barriers to IPC include lack of understanding of other health professionals' expertise and roles, lack of time, competition, heavy workloads, conflicting interpretations of results, and regulatory policies. Participants indicated that busy schedules impede IPC:

> Time…often people feel too busy with their assigned patient care tasks that they don't feel they have time to reflect on this and discuss meaningfully with colleagues and continue learning about each other's roles.

While for some respondents they perceive their regulatory body's regulations and policies may impede the ability of some S-LP&As to work effectively on a team:

> As a health professional…there are huge barriers to interprofessional collaboration as a result of the [college's] regulations. While psychologists and social workers are free to discuss students in a general way without explicit parental consent, we have to be excluded from the discussions because of our college's insistence on obtaining consent for discussions at multidisciplinary meetings…Our college regulations and the college interpretation of legislation about privacy and consent are oriented toward functioning in a health care setting, ignoring the fact that many of us work in schools. In fact, the psychologists, who are health professionals, do not have the same stringent requirements regarding consent from their college, allowing them to work more effectively consulting to teachers and special education staff.

Discussion

The findings from this study enhance our understanding of S-LP&A's perspectives regarding IPC. In particular, these findings provide insight into facilitators that promote and barriers that impede IPC for S-LP&As in clinical practice. S-LP&A respondents support the ideal of IPC as evident with their high agreement with statements that IPC is in the public interest, improves quality of care, and increases access to health services. However, many respondents identified several barriers that impede IPC and negatively impact health care services and client care. These barriers include limited physician involvement, lack of administrator support, government, College, and workplace policies that impede the ability to refer and diagnose clients, and fragmentation of services. Many of these barriers to IPC identified by S-LP&A respondents are consistent with those found in past research among other health care professionals. Systemic barriers, such as the lack of clear policies governing professional practice, can make the implementation of IPC in clinical practice difficult (Martin-Rodriguez et al., 2005). The findings from this analysis suggest that College regulations and government and workplace policies should reflect the current direction of interdisciplinary team practices in the clinical environments of S-LP&As.

The workplace plays an important role in coordinating, orienting staff, and supporting IPC. This is consistent with current research that IPC can be enhanced through IPE in the workplace by creating positive interaction and encouraging collaboration and discussion involving all interdisciplinary professions (Barr et al., 2005; Martin-Rodriguez et al., 2005). While S-LP&As were in high agreement that their workplace supported IPC, only a small majority of respondents indicated that their workplace provided orientation for new staff that involved all health professionals being oriented together with younger S-LP&As more likely to have experienced this than older S-LP&As. Previous research suggests that factors such as the organizational structure, administrative support, resources available to team members, and coordination and communication mechanisms within the organization help define teamwork in the workplace (Martin-Rodriguez et al., 2005). To facilitate IPC for S-LP&As, workplaces should promote orientation sessions and forums or formal meetings that involve all team professionals. In addition, because younger S-LP&As are more likely to have had this exposure during orientation, workplace education should address knowledge gaps of older S-LP&As.

Interprofessional education (IPE) appears to be an integral part of S-LP&A professional development programs for recent S-LP&A graduates. A high majority of S-LP&A respondents under 40 years of age indicated that IPC was emphasized in their health professional education program. The emerging trend of incorporating IPE in professional education programs can improve the effectiveness and efficiency of IPC in actual practice and likely explains why younger S-LP&As are more comfortable with IPC. This is consistent with the literature that IPE can promote IPC when there is an integral educational progression between the preparation of students in health professional programs and the actual professional practice in health care settings (Health Force Ontario, 2010). IPC professional development programs should be offered by professional associations or in the workplace for S-LP&As who may not have received IPE in their professional education program.

While S-LP&As support teamwork and collaborative practice, several barriers impede the ability to achieve the ideals of IPC. These barriers arise from long-standing issues in professional cultures (Hall, 2005) including "turf" issues, lack of understanding of the roles, skills and expertise of other health care providers, and varying perspectives on what constitutes IPC. Turf issues or professional territoriality discussed by S-LP&As occurred when professionals share overlapping scopes of practice. This is consistent with current research that suggests that structures, values, power relations, and obscure role boundaries between health care professionals can present challenges to IPC in terms of role allocation and professional autonomy (Barrett et al., 2007). However, these barriers may be overcome by focusing on the needs of the client and improving client care. Interprofessional teams require continuous interaction and mutual respect for other disciplinary contributions and perspectives that center around common goals such as excellent client care. With common goals, positive outcomes can be best achieved through collaborative efforts with other professionals (Barrett et al., 2007). The role of regulatory policies, health professional education programs, the professions of S-LP&As and clinicians are interrelated in facilitating and/or impeding IPC in clinical practice. It is recommended that stakeholders across these sectors work collaboratively to find ways to incorporate IPC into their education, policies, and culture to optimize client-centered care.

Limitations

As with all studies, there are limitations. The sampling approach for the survey was a non-probability sample limiting the ability to make generalizations to the larger S-LP&As population. S-LPs and audiologists were not identified separately in the survey limiting the ability to examine whether differences exist in their perspectives. This is a secondary analysis of data from a larger study therefore limiting the scope of the analysis. The qualitative data obtained from S-LP&As respondents was in response to one open-ended statement eliciting written online comments only. Future studies might examine perspectives through more in-depth interviews to better understand S-LP&As perspectives on IPC.

Conclusion

This study provides preliminary findings on the perspectives of S-LP&As on IPC. Recent legislative amendments to Ontario's health professional regulatory system require regulated health professionals, including S-LP&As, to collaborate interprofessionally where they share controlled acts. These changes have future implications on the IPC of S-LP&As and the delivery of client care. Work environments that foster and support collaboration, communication, trust, and mutual respect for all team members' roles, expertise, and contributions within their scope of practice can improve health care providers' satisfaction and optimize client care. Although S-LP&As respondents support IPC, barriers exist that impede their ability to fully implement the ideal of IPC in clinical practice. Given that S-LP&As work in a variety of settings with diverse populations, future changes to government, regulatory, and workplace policies may be needed to facilitate IPC in interdisciplinary practice environments. A shared commitment among policy-makers, regulatory bodies, employers, and clinicians is required to find ways of implementing, practicing, and sustaining IPC in clinical practice that respect and value each professional's unique knowledge and expertise, while also meeting the increasing needs and expectations of clients and families.

References

Axelsson, S. B., & Axelsson, R. (2009). From territoriality to altruism in interprofessional collaboration and leadership. *Journal of Interprofessional Care, 23*(4), 320-330.

Axinn, W., & Pearce, L. D. (2006). *Mixed method data collection strategies.* New York, NY: Cambridge University Press.

Barr, H., Koppel, I., Reeves, S., Hammick, M., & Freeth, D. (2005). *Effective interprofessional education: Argument, assumption & evidence.* Oxford, UK: Blackwell Publishing Ltd.

Barrett, J., Curran, V., Glynn, L., & Godwin, M. (2007). CHSRF synthesis: Interprofessional collaboration and quality primary healthcare. Canadian Health Services Research Foundation: Ottawa, ON. Retrieved from http://www.cfhi-fcass.ca/Migrated/PDF/SynthesisReport_E_rev4_FINAL.pdf

Bauer, K., Iyer, S., Boon, R., & Fore, C. (2010). 20 ways for classroom teachers to collaborate with speech-language pathologists. *Intervention in School and Clinic, 45*(5), 333-337. doi: 10.1177/1053451208328833.

Casmiro, L., Hall, P., Archibald, D., Kuziemsky, C., Brasset-Latulippe, A., & Varpio, L. (2011). Barriers and enablers to interprofessional collaboration in health care. Ottawa: Academic Health Council-Chaplain Region. Retrieved from http://www.ahc-cas.ca/wp-content/uploads/2012/09/Montfort-Rapport-de-recherche_ang_1.pdf

Centre for the Advancement of Interprofessional Education (CAIPE). (2002). Interprofessional education: The definition. United Kingdom. Retrieved from http://www.caipe.org.uk/resources/

Chung, C. L. R., Manga, J., McGregor, M., Michailidis, C., Stavros, M., & Woodhouse, L. J. (2012). Interprofessional collaboration and turf wars how prevalent are hidden attitudes? *The Journal of Chiropractic Education, 26*, 32-40.

College of Audiologists and Speech-Language Pathologists of Ontario (CASLPO). (2008a). Audiologists. Retrieved from http://www.caslpo.com/AboutTheProfessions/Audiologists/tabid/64/Default.aspx

College of Audiologists and Speech-Language Pathologists of Ontario (CASLPO). (2008b). Speech-language pathologists. Retrieved from http://www.caslpo.com/AboutTheProfessions/SpeechLanguagePathologists/tabid/65/Default.aspx

Constantinidou, F., Wertheimer, J. C., Tsanadis, J., Evans, C., & Paul, D. R. (2012). Assessment of executive functioning in brain injury: Collaboration between speech-language pathology and neuropsychology for an integrative neuropsychological perspective. *Brain Injury*, 26, 1549-1563.

Crukley, J., Dundas, A., McCreery, R., Meston. C. N., & Ng, S. (2012). Re-envisioning collaboration, hierarchy, and transparency in audiology education, practice, and research. *Seminars in Hearing, 33*(02), 196-206.

Freeth, D., Hammick, M., Reeves, S., Koppel, I., & Barr, H. (2005). *Effective interprofessional education: Development, delivery and evaluation.* CAIPE: Oxford, UK: Blackwell Publishing Ltd.

Hall, P. (2005). Interprofessional teamwork: Professional cultures as barriers. *Journal of Interprofessional Care, Supplement 1*, 188-196. doi: 10.1080/13561820500081745.

Health Force Ontario. (2010). *Implementing interprofessional care in Ontario: Final report of the interprofessional care strategic implementation committee.* Retrieved from http://www.healthforceontario.ca/upload/en/whatishfo/ipcproject/hfo%20ipcsic%20final%20reportengfinal.pdf

IBM Corp. Released 2012. *IBM SPSS Statistics for Windows*, Version 21.0. Armonk, NY: IBM Corp.

Insalaco, D., Ozkurt, E., & Santiago, D. (2006). Attitudes and knowledge of students in the allied health professions toward their future professional team members. *Journal of Allied Health, 35*(3), 142-146.

Krippendorff, K. (2013). *Content analysis: An introduction to its methodology* (3rd ed.). Thousand Oaks, CA: Sage.

Margalit, R., Thompson, S., Visovsky, C., Geske, J., Collier, D., Birk, T., & Paulman, P. (2009). From professional silos to interprofessional education: Campus wide focus on quality of care. *Quality Management in Health Care, 18*(3), 165-173. doi: 10.1097/QMH.0b013e3181aea20d.

Martin-Rodriguez, L. S., Beaulieu, M., D'Amour, D., & Ferrada-Videla, M. (2005). The determinants of successful collaboration: A review of theoretical and empirical studies. *Journal of Interprofessional Care, Supplement 1*, 132-147.

McEwen, S. D. (2007). *Critical review: Efficacy for SLP – Teacher collaboration for classroom based intervention.* Retrieved from http://www.uwo.ca/fhs/csd/ebp/reviews/2006-07/McEwen.pdf

McNamara, T., & Richard, G. (2012, March 13). Better together. *The ASHA Leader.* Retrieved from http://www.asha.org/Publications/leader/2012/120313/Better-Together.htm

Minister of Health and Long-Term Care. (2009). *Bill 179, Regulated Health Professions Statute Law Amendment Act.* Toronto, ON: Legislative Assembly of Ontario. Retrieved from http://www.ontla.on.ca/web/bills/bills_detail.do?locale=en&BillID=2189

Ministry of Health and Long-Term Care. (2010). *Health professions regulatory policy and programs branch.* Toronto, ON. Retrieved from http://www.professionssanteontario.ca/UserFiles/file/Floating/Program/Marketing/health-professions-regulatory-symposium-june-2010-en.pdf

Nolte, J. (2005). *Enhancing interdisciplinary collaboration in primary healthcare in Canada.* Ottawa, ON: Enhancing Interdisciplinary Collaboration in Primary Healthcare Initiative (EICP). Retrieved from http://www.eicp.ca/en/resources/pdfs/enhancing-interdisciplinary-collaboration-in-primary-health-care-in-canada.pdf

Oandasan, I., Nasmith, L., Soklaridis, S., Kimpton, S. (2004). *Actively building capacity in primary health care research: Opportunities and challenges of implementing and advancing interprofessional education curricula across health care disciplines in higher education institutions in Ontario.* Toronto, ON: University of Toronto. Retrieved from http://www.ocfp.on.ca/docs/research-projects/abc-final-reports-appendices---university-of-toronto.pdf

Orchard, C., Curran, V., & Kabene, A. (2005). Creating a culture for interdisciplinary collaborative professional practice, *Medical Education Online, 13*(10), 1-3.

Pena, E. D., & Quinn, R. (2003). Developing effective collaboration teams in speech-language pathology a case study. *Communication Disorders Quarterly, 24*(2), 53-63. doi:10.1177/15257401030240020201.

Prada, G., Swettenham, J., Stonebridge, C., Schaafsma, M., Grimes, K., & Thompson, V. (n. d.). *Interdisciplinary Primary health care: Finding the answers-a case study report.* Ottawa, ON: Enhancing Interdisciplinary Collaboration in Primary Health Care Initiative. Retrieved from http://www.eicp.ca/en/toolkit/EICP-Case-Studies-Report-Final-Aug-14.pdf

Reeves, S., Zwarenstein, M., Goldman, J., Barr, H., Freeth, D., Hammick, M., & Koppel, I. (2008). Interprofessional education: Effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews, 1*, 1-22. doi:10.1002/14651858.CD002213.pub2.

Regan, S., Orchard, C., Khalili, H., Brunton, L., & Leslie, K. (2013). *Policy analysis of interprofessional collaborative requirements under Bill 171 and Bill 179: Final Report.* Submitted to the Ontario Ministry of Health and Long-Term Care.

Ritzman, M., Sanger, D., & Coufal, K. (2006). A case study of a collaborative speech-language pathologist. *Communication Disorders Quarterly, 27*(4), 221-231. doi: 10.1177/15257401060270040501.

Sattinger, A. M. (2007). Collaboration between otolaryngologists and audiologists can benefit both. *ENT Today*. Retrieved from http://www.enttoday.org/details/article/526395/Collaboration_Between_Otolaryngologists_and_Audiologists_Can_Benefit_Both.html

Schreier, M. (2012). *Qualitative content analysis in practice.* Thousand Oaks, CA: Sage.

Stonebridge, C. (2005). *Individual providers and health care organizations in Canada.* Ottawa, ON: Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP). Retrieved from http://www.eicp.ca/en/resources/pdfs/individual-providers-and-health-care-organizations-in-canada.pdf

Thistlethwaite, J., Jackson, A., & Moran, M. (2013). Interprofessional collaborative practice: A deconstruction. *Journal of Interprofessional Care, 27*, 50-56. doi: 10.3109/13561820.2012.730075.

World Health Organization. (2011). Patient safety guide. Retrieved from http://www.who.int/patientsafety/education/curriculum/who_mc_topic-4.pdf

World Health Organization. (2012). Modern health care delivery systems, care coordination and the role of hospitals. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0008/158885/BRU-report-Modern-health-care-delivery-systems.pdf

Zwarenstein, M., Reeves, S., Russell, A., Kenaszchuk, C., Conn, L. G., Miller, K. L., ...Thorpe, K. E. (2006). Structuring communication relationships for interprofessional teamwork (SCRIPT): A cluster randomized controlled trial. *Trial, 8*(23), 1-14. doi: 10.1186/1745-6215-8-23.

Acknowledgements

The primary study was funded by the Ontario Health Human Resources Research Network. The authors thank the College of Audiologists and Speech-Language Pathologists of Ontario and their members for supporting the survey. The authors wish to acknowledge the work of co-investigators, Dr. Carole Orchard and Dr. Hossein Khalili, on the primary study. In addition the authors acknowledge the following for their work in developing the survey: Drs. Ivy Bourgeault, Arthur Sweetman, Rishma Walji, and Mike Landry. The opinions expressed in this paper are those of the authors only.

Authors' Note

Correspondence concerning this article should be addressed to Dr. Sandra Regan, Assistant Professor, Arthur Labatt Family School of Nursing, Western University, Health Sciences Addition H25, London, ON N6A 5C1 CANADA. Email: **sregan4@uwo.ca**.