Interprofessional collaboration: development of a tool to enhance knowledge translation

Emmanuelle Careau¹², Nathalie Brière³, Nathalie Houle², Serge Dumont³⁴, Claude Vincent¹², and Bonnie Swaine⁵⁶

¹Center for Interdisciplinary Research in Rehabilitation and Social Integration (CIRRIS), Quebec City, Quebec, Canada, ²Faculty of Medicine, Université Laval, Quebec City, Quebec, Canada, ³Centre de Santé et Services Sociaux de la Vieux-Québec–Capitale, Quebec City, Quebec, Canada, ⁴School of Social Work, Université Laval, Quebec City, Quebec, Canada, ⁵School of Rehabilitation, Université de Montréal, Montreal, Quebec, Canada, and ⁶Centre for Interdisciplinary Research in Rehabilitation of Greater Montreal (CRIR), Quebec City, Quebec, Canada

Abstract

Purpose: Interprofessional collaboration (IPC) is a complex and multidimensional process in which different professionals work together to positively impact health care. In order to enhance the knowledge translation and improve rehabilitation practitioners' knowledge and skills toward IPC, it is essential to develop a comprehensive tool that illustrates how IPC should be operationalized in clinical settings. Thus, this study aims at developing, validating, and assessing the usefulness of a comprehensive framework illustrating how the interactional factors should be operationalized in clinical settings to promote good collaboration.

Methods: This article presents a mixed-method approach used to involve rehabilitation stakeholders (n = 20) in the development and validation of an IPC framework according to a systematic seven-phase procedure.

Results: The final framework shows five types of practices according to four components: the situation of the client and family, the intention underlying the collaboration, the interaction between practitioners, and the combining of disciplinary knowledge.

Conclusion: The framework integrates the current scientific knowledge and clinical experience regarding the conceptualization of IPC. It is considered as a relevant and useful KT tool to enhance IPC knowledge for various stakeholders, especially in the rehabilitation field. This comprehensive and contextualized framework could be used in undergraduate and continuing education initiatives.

Implications for Rehabilitation

- The framework developed integrates the current scientific knowledge and clinical experience regarding the conceptualization of interprofessional collaboration (IPC) that is relevant to the rehabilitation field.
- It could be used in undergraduate and continuing education initiatives to help learners understand the multidimensional and dynamic nature of IPC.
- It could be useful to support practitioners and managers from the rehabilitation field in their efforts to optimize collaborative practice within their organization.

Introduction

According to a recent report of the World Health Organization (WHO) (2010), the development of a “collaborative practice-ready health workforce” is the main determinant of successful interprofessional collaboration (IPC). A “collaborative practice-ready health worker” is a practitioner “who has learned how to work in an interprofessional team and who is competent to do so (p. 7)” [1]. However, consulting the scientific literature, in itself, does not necessarily help practitioners understand clearly how they should interact with each other to achieve optimal IPC practices in a rehabilitation context. Indeed, Reeves et al. (2010) report on the limited theory about IPC in the literature and write that, although all researchers generally accept that IPC improves health and social care, few have focused on developing underlying empirically-based theory [2]. Researchers often conceptualize IPC using a three-stage “input–process–output” architecture derived from organizational literature on team effectiveness, mostly emphasizing inputs (determinants) and outputs (results), but ignoring the system’s constitution. This “black box” approach may be sufficient for a simple phenomenon, but IPC is recognized as complex, multidimensional and evolving [3,4]. Thus, it is essential that rehabilitation practitioners understand clearly what happens “inside the box”, i.e. how IPC should be operationalized within different settings and with various clients.

Keywords

Interprofessional collaboration, interprofessional relations, knowledge translation

History

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The term IPC is often defined as “the process in which different professional groups work together to positively impact health care. IPC involves a negotiated agreement between professionals which values the expertise and contributions that various healthcare professionals bring to patient care” [5, p. 2]. However, the IPC literature yields many surrogate or related concepts. Surrogate concepts include all the terms that define the phenomenon, while related concepts include most, but not all, of the defining attributes of IPC (i.e. the concept’s essential characteristics) [6]. Petri (2010) identified interdisciplinary collaboration, interprofessional collaboration, interdisciplinary teamwork, interdisciplinary practice and teamwork as surrogate concepts for IPC that are often used interchangeably by authors [7]. Related concepts include team, integrated team, cooperative work, cooperation, joint practice, working group [7], teamwork [8], cooperation, competition, compromise, avoidance, accommodation and conflict resolution [9]. The problem is that very few authors carefully define these terms, and when definitions are provided, they are often contradictory. Nevertheless, in the literature there are several frameworks that attempt to identify the relations between these concepts, and these generally illustrate IPC processes along a continuum. Some authors depict an evolution of professional autonomy, with autonomous and parallel practices at one end and a more integrated practice at the other. Here, concept-based prefixes as defined by Leathard [10] (e.g. uni-, multi-, inter-, trans-) are often used. Other authors focus on putting in sequence process-based keywords such as consultation, coordination and cooperation [11]. However, these frameworks are either incomplete or do not adequately reflect the current state of knowledge. Moreover, because they have not been developed in order to ensure effective knowledge translation (KT) between scholars and practitioners, it is difficult to use them for an educational purpose. KT is defined as a dynamic and iterative process that includes synthesis, dissemination, exchange and ethnically-sound application of knowledge [12]. To develop effective educational strategies aiming at improving practitioners’ knowledge and skills toward IPC, it is essential to contextualize the body of knowledge and tailor the message and medium to the audience [13]. In this article, we describe a mixed-method approach used to involve rehabilitation stakeholders in the development, validation and usefulness assessment of a comprehensive framework illustrating how IPC should be operationalized in clinical settings to promote good collaboration.

Methods

This initiative was part of a research project approved by the ethics committee of the Institut de réadaptation en déficience physique de Québec (project #2008-145). To develop and validate this new KT tool on IPC, we followed a seven-phase procedure outlined by Jabareen [14], with specific procedures modified according to the nature and requirements of the current study [14].

Phase 1: Mapping the selected data sources

The first phase in developing a comprehensive framework is to map the literature regarding the phenomenon being studied [14]. Our data sources consisted of governmental and institutional reports, websites of organizations dedicated to interprofessional education/collaborative practice (IPECP), and journal articles retrieved from the Medline and CINAHL databases with a search strategy using the keywords “interprofessional relations [MESH]”, “interprofessional*”, “multiprofessional*”, “transprofessional*”, “interdisciplinary*”, “multidisciplinary*”, “transdisciplinary*” AND “concept*”, “model*”, “theor*”, “framework”, “continuum”, “spectrum”. In total, we consulted 60 journal articles, 20 reports, 20 clinical guidelines, as well as several books and theses on IPECP [15].

Three of the authors (E.C., N.H., and N.B.) also attended international and national IPECP conferences over the past 5 years and engaged in informal discussions with attending practitioners and scholars to better understand the phenomenon.

Phase 2: Extensive reading and categorizing of the selected data

After examining the data, E.C., N.H., and N.B. discussed their understanding of the texts and shared information obtained during the conferences, workshops and informal discussions. They categorized data according to their source (scientific literature, clinical guidelines, political reports, editorial) and their use of keywords (concept-based, process-based or agency-based) [10].

Phase 3: Identifying and naming concepts

The aim in this phase is “to read and reread” the selected data in order to “discover” concepts [14]. Concepts related to IPC characteristics were identified in discussion sessions among the authors.

Phase 4: Deconstructing and categorizing the concepts

Jabareen [14] suggests creating a table to “identify [each concept’s] main attributes, characteristics, assumptions, and role” (p. 54). Then, we categorized the concepts and characteristics according to “inputs”, “process” and “outputs”, in order to conserve only those related to processes for our framework.

Phase 5: Integrating concepts and Phase 6: Synthesis, resynthesis, and making it all make sense

According to Jabareen [14], the aim of the fifth and sixth phase “is to integrate and group together concepts that have similarities to one new concept” (p. 54) and to synthesize the remaining concepts into a comprehensive framework. To do so, the first author synthesized the results thus far and presented the synthesis to the others. This theorization process was iterative and included several cycles of synthesis, discussion and data consultation to produce an initial framework.

Phase 7: Validating the conceptual framework

Jabareen [14] suggests seeking validation among stakeholders by presenting the framework at a conference, a seminar, or some other type of academic setting to receive feedback. Figure 1 presents the procedure we followed to validate the framework. We began the validation phase informally during clinical and academic activities, and subsequently conducted a formal validation using three consensus group sessions and one survey consultation. To recruit participants for this formal validation, 25 invitations were sent by e-mail to educators well-known for their interest and expertise in IPECP from Université Laval’s Faculties of Medicine, Nursing, Pharmacy and Social Sciences, and to clinical partners of the Collaborative Network for Interprofessional Practices in Health and Social Care (RCPI). The RCPI is a provincial network based in Québec, Canada, dedicated to supporting faculty development for IPE, promoting educational content or activities in academic programs and continuing education and, finally, reinforcing research capacity.
and KT on IPEC. Targeted experts and stakeholders had either a scientific knowledge of IPC or expertise in how IPC is experienced daily in clinical settings. At each step of the validation process, invitations were sent to all the targeted experts and stakeholders, but the number who were able to attend differed at each step. Experts’ and stakeholders’ occupations and disciplinary backgrounds are provided in Table 1.

For the informal validation, the initial framework (Figure 2) was presented, between 2009 and 2010, at seven clinical IPEC courses in four hospitals, two rehabilitation centres, and one youth centre. Between 10 and 30 healthcare managers and practitioners attended each session. We also presented it six times within a mandatory IPE undergraduate course at Université Laval, involving each time between 200 and 500 students from different disciplines. These activities provided informal feedback on the framework’s clarity from the perspective of healthcare managers, practitioners, students, educators and researchers. During these activities, questions and comments were noted and then used, during several discussion sessions among the authors, to refine the framework.

For the formal validation, a first consensus group session of 14 IPEC experts and stakeholders moderated by the fourth author (S.D.) was organized to discuss the current state of knowledge on concepts related to IPC and to identify participants’ agreement and disagreement with each of the initial framework’s components (Figure 2). Then, a survey with four sections was sent by e-mail to the above-mentioned 25 experts and stakeholders. In the first session, the framework was presented and the rationale for each component was carefully explained. The second session gathered information about the respondent’s profile. The third section, with 13 questions (open-ended and four-point scales), documented the respondent’s opinion on the relevance of developing a new IPC framework and the usefulness of the proposed framework in various contexts (e.g. undergraduate IPEC courses, research and IPEC training for healthcare practitioners and managers). The fourth section, aimed at measuring the level of the respondents’ agreement with each aspect of the framework, comprised 40 questions using a 4-point scale (totally agree to totally disagree), two yes/no dichotomous questions, and three open-ended questions. After each question, a space for additional comments was provided. Respondents could answer the survey using word processing software and return it by email to the RCPI’s coordinator, or they could print it, complete it by hand, and return it by postal mail to the RCPI office. Finally, two more consensus group sessions, involving 11 and nine participants each, were organized to discuss the survey results, reach consensus on a final version of the framework, and discuss its perceived usefulness in various settings.

Results

After extensive reading and discussions, three of the authors (E.C., N.H. and N.B) categorized the concepts and characteristics of IPC processes into six components: the context that brings practitioners to collaborate together, the objectives of the partnership, the types of interaction between members, the integration of disciplinary knowledge, the modalities used, and the competencies for IPC. They also concluded that the importance of clients and their families (referring broadly to both relatives and other loved ones) had to be emphasized in each component. They decided that a continuum was the most appropriate way to illustrate clearly the dynamic nature of IPC processes. Indeed, most of the concepts and characteristics from
each component could be ordered along a continuum representing, at one extreme, the least intense collaborative practice and, at the other, the most intense. The “competencies” component was left out of the framework because the diversity of the associated concepts (e.g., communication, group dynamics, conflict resolution) made it difficult to illustrate them along a continuum. Moreover, those particular concepts could be better illustrated within an IPC competencies’ frameworks such as the Canadian Interprofessional Health Collaborative (2010) [16]. Figure 2 presents the initial framework developed during phases 1–6. It includes five components (e.g., “context”, “partnership’s common objectives”, “interaction between members”, “integration of disciplinary knowledge”, and “modalities”) and their associated concepts. The components are interlinked to define four different types of collaborative practices (illustrated by the grey rectangles). For example, the most intense collaborative practice should be adopted when the client’s biopsychosocial needs are complex and demand a partnership to share decision-making and adopt common intervention objectives. In this type of practice, disciplinary knowledge needs to be more integrated using an interdisciplinary approach. Different modalities can be associated with this practice, but the interdisciplinary team meeting is the most often used. Finally, the initial framework incorporated the notion that IPC can be considered as encompassing every activity of collaboration, including the least to the most intense practices, or can be associated with only the most intense practice.

Framework formal validation

Twenty persons participated in one or another step of the validation process. Table 1 presents the experts’ and stakeholders’ profiles (current occupation and core training/discipline) for each consensus group session and the survey. More than 82% of the participants considered they had good to excellent scientific knowledge, and 76% good clinical experience, of IPC. More than 75% had completed post-graduate studies, and many of them combined clinical and educational responsibilities in their current occupation.

From the outset, participants appeared to agree with the framework’s general presentation. However, in the first group session, participants recommended adding a fifth type of practice: the independent practice. They explained that even when practitioners do not collaborate at all with each other, partnerships between clients and practitioners have to be established. In the survey, when this independent practice was added to the four other types of practices, 100% of respondents agreed with the framework’s general presentation. With regard to the components of IPC, 12.5% of the survey respondents disagreed with the representation of the modalities. In the second consensus group session, participants explained that the modalities differed from one clinical setting to another, so it was too confusing to illustrate them as a component. The majority agreed that the modalities component was not essential to understand IPC; consensus was established to remove it from the framework.

The main concern raised in the first two group sessions and in the surveys had to do with the wording of certain components and concepts. Almost 30% of survey respondents disagreed with the wording of the component “objectives aimed at by the partnership” and 6% disagreed with the term “interaction between members”. Finally, the last group session led to a consensus on terms that were deemed reflective of what happens in clinical settings while being coherent with the conceptual knowledge about IPC (see the final framework illustrated in Figure 3).
Another major concern was the theorization of the concept "interprofessional collaboration". In the survey, 88.2% of respondents said they were familiar with this term, but they all had different definitions of the concept. We observed in the subsequent group sessions that the definitions used were clearly influenced by the culture of the participant’s discipline and work place. After discussing the different points of view and comparing them to definitions found in the literature, participants agreed that the common goal of practitioners getting involved in IPC was to provide quality health and social care. To do this, practitioners adopt different types of IPC, so that the intensity of the interaction between clients, families and practitioners is adjusted depending on the complexity of the situation.

Finally, the importance of clients and their families was a concern raised in all the group sessions and by survey respondents. Discussions among experts and stakeholders throughout the validation process led to a consensus that the centrality of clients and their families had to be illustrated in three of the four components (Figure 3).

The continuum of interprofessional collaborative practice in health and social care: final framework

The revised framework (Figure 3) was generally similar to the initial one. However, the four components of IPC became: the situation of the client and family, the intention underlying the collaboration, the interaction between practitioners, and the combining of disciplinary knowledge. Along the continuum, five types of IPC are represented. These practices increase in complexity and intensity as practitioners advance toward the right on the continuum. These types are: independent practice, parallel practice, consultation/reference practice, concerted practice and shared healthcare practice. This framework explains that IPC emerge from a specific situation. Practitioners have to adjust the type, as well as the intensity, of their collaborative practice according to the biopsychosocial needs of clients and their families. In general, the more complex the client’s needs, the more intense the collaborative practice should be. Thus, practitioners need to create a partnership to address those needs; and underlying these partnerships is an intention that motivates them to collaborate. Practitioners must have a minimal intention to establish an authentic partnership with clients and their families. Depending on the complexity of clients’ needs, this would then evolve into intentions to “inform”, “exchange information”, “agree on disciplinary objectives” (coordinate the healthcare and services offer), and ultimately, “share decisions and actions regarding a common objective”. As practitioners advance along the continuum, the intensity of interaction increases. Circles illustrated in the framework represent the client/family and the other practitioners. As the partnership intensifies, the “circles” move closer to one another and eventually overlap; indeed, practitioners’ interdependence increases. Finally, as the collaborative practice intensifies, practitioners emerge from their disciplinary silos and combine their specific knowledge to address complex needs: this refers to the combining of disciplinary knowledge. In unidisciplinarity, each practitioner relies on his or her own disciplinary knowledge to evaluate clients’ needs and plan interventions. In multidisciplinarity, the disciplinary knowledge of the various practitioners is fitted together like the pieces of a puzzle to produce a coherent and complete healthcare and service package. In interdisciplinarity, there are deliberate knowledge exchanges and integration that transcend traditional disciplinary boundaries to build a shared understanding and identify a common goal.

Figure 3. The continuum of interprofessional collaborative practice in health and social care: final framework.
The Continuum of Interprofessional Collaborative Practice in Health and Social Care illustrates non-hierarchical and non-linear types of collaborative practices. For individuals engaged in IPC, the challenge is to be able to move easily in both directions along the continuum. They should be competent to adequately evaluate the complexity of the situation in order to seek the right intention for partnership and adjust the intensity of IPC so the needs of clients and families can be effectively addressed.

Discussion

The Continuum of Interprofessional Collaborative Practice in Health and Social Care is a comprehensive framework that illustrates five types of collaborative practices according to four descriptive components. It was developed and validated following a seven-phase procedure that includes literature review and consultation of stakeholders from the academic and clinical settings.

One of the major innovations of this framework is the representation of the central position occupied by clients and their families. In the framework, the primary and shared intention behind every collaborative practice is to establish a partnership with these persons. In the literature, all authors agree the relationship with the person is important, but few affirm that establishing this partnership should be the primary motivation to collaborate. It is surprising that few researchers have conceptualized clients and their families as true participants in IPC [3]. In our proposed framework, the primary role of clients and their families is illustrated throughout the components. Indeed, the purpose of IPC is to address clients’ needs (“situation of the client and family” component), and clients and their families are considered true members of the team (“interaction between individuals” component).

The “intention underlying the collaboration” component is also an important addition to the literature on IPC. In fact, most authors agree the overall goal behind collaboration is to provide quality health and social care to clients [2,17]. Therefore, we consider this overall goal is attained when IPC are appropriately adjusted to the needs of clients and their families. The “intention sought by collaboration” component in our framework allows us to distinguish between the levels of partnership. D’Amour et al. (2005) affirm that “it is unrealistic to think that simply bringing practitioners together in teams will lead to collaboration” [3, p. 126]. Practitioners need to have a motivation to start collaborating with each other. The “intention sought by collaboration” component emphasizes that IPC cannot be applied following a recipe. In terms of collaboration, practitioners should be able to adopt a reflective practice to adjust how they collaborate depending on the situation, the clientele and the clinical setting. In our opinion, the proposed framework highlights this reality for the first time.

The framework also highlights the distinction between the concepts of discipline, which refers to a body of knowledge, and professional, which refers to a person with specific disciplinary knowledge. Our framework reduces the persistent confusion between these terms, while maintaining coherence with recent published papers on the conceptual definition of IPC [2,18,19]. It emphasizes that the combining of disciplinary knowledge is not the only component influencing IPC.

Finally, the validation process made it possible to adopt a consensual definition of the concept of IPC. As mentioned above, although there is no consensual definition among the scientific community, the term IPC is widely used by practitioners, managers and decision-makers. The conceptualization proposed in our framework is coherent with the concept’s attributes: a cooperative venture based on shared power and authority, characterized by non-hierarchical relationships, establishment of a partnership, mutual goals and commitment [8]. It is also consistent with well-known IPC definitions that points out the dynamic process whose intensity is adjusted according to the complexity of the client’s needs, and which is characterized by interdependence, partnership, collegial relationships, shared power, pursuit of common purpose, and person-centred practice [17,18].

Relevance and usefulness of the framework

From the very first group session, all stakeholders and experts strongly believed in the relevance of developing a comprehensive IPC framework to enhance KT. Indeed, in the survey, 88% of the respondents answered “highly relevant” and 12% “quite relevant”. Respondents also believed this framework would be “very useful” or “quite useful” in various contexts such as (in order of usefulness) continuing education for health and social care practitioners, undergraduate IPE courses, research, and continuing education for health and social care managers. This framework provides managers and professionals with a clearer conceptualization of IPC enabling them to better understand the concept of IPC and how the interactional factors should be operationalized within different settings and with various clients. It also highlights the importance of adopting a reflective practice in order to suitably adjust the intensity of collaboration according to the clients’ needs. Indeed, practitioners should not adopt the same functioning in every situation. They should be able to judge if their interactions with others are optimal or not. This framework could help them in their reasoning. Managers could also use this framework to support the continuous quality improvement process in their organization.

Limitations

It is important to point out that this initiative took place in a French-Canadian context. Although the literature review included mostly papers published in English, the framework’s development and validation were conducted in French with French-speaking individuals. Thus, it is possible that the meanings of some terms from the literature were obscured or modified in translation. Moreover, the results reflect the perspectives of French-speaking practitioners within the context of the Quebec rehabilitation system. The framework was translated for this paper; it would be important to validate the framework with English-speaking practitioners both in Quebec and in other geographic settings.

Conclusion

The Continuum of Interprofessional Collaborative Practice in Health and Social Care integrates the current scientific knowledge and clinical experience regarding the conceptualization of IPC. It is considered as a relevant and useful KT tool to enhance IPC knowledge for various stakeholders, especially in the rehabilitation field. This comprehensive and contextualized framework could be used in undergraduate and continuing education initiatives to help learners understand the multidimensional and dynamic nature of IPC. The framework could also be useful to support practitioners and managers in their efforts to optimize collaborative practice within their organization. Even if this framework was developed and validated within the rehabilitation field, it could probably be used to illustrate IPC interactional factors that occur in other health and social care settings. Further research is nonetheless needed to validate the framework in other contexts. We also suggest better position this framework within the other conceptual models and frameworks that exist in the IPECP field.
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Declaration of interest

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