CHAPTER 7

Interactive Discourse in Interprofessional Tutorial Groups

Dealing With Conflicting Views and Meaning Construction

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INTRODUCTION

In a clinical setting, interprofessional collaboration is a practice in which individuals from two or more professional backgrounds meet, interact, learn together, and/or practice, with the client at the center of care (Prentice, Engel, Taplay, & Stobbe, 2015). The World Health Organization (2010) highlighted a significant role played by interprofessional education and collaborative practice in mitigating many of the challenges faced by health systems around the world, concluding that working in interprofessional teams is critical to the provision of safe, efficient, high-quality, patient-centered care that meets the complex needs of aging, globalized societies. However, studies have revealed that health professionals often encounter barriers to successful interprofessional collaborative practice, such as difficulty in sharing the vision of an organization within which the collaboration takes place, leadership ambiguity and power relationships in teams, and individual motivation (e.g., van Dongen et al., 2016).

To address societal needs and overcome barriers and allow interprofessional practice to flourish, the importance of providing interprofessional learning opportunities for students in health professions education, including both pre- and postqualification programs, is evident. The purpose of interprofessional education (IPE) is to develop the knowledge, attitudes, and skills needed for interprofessional decision making, problem solving, and collaboration (Barr, 1998; Ross & Southgate, 2000). In fact, a growing number of institutions have incorporated IPE into their undergraduate
curricula to help students develop explicitly as future interprofessional team members. IPE is defined as occasions when “two or more professions learn with, from and about each other to improve collaboration and the quality of care” (CAIPE, 2002).

In IPE, student-centered interactive strategies are commonly adopted as key teaching and learning strategies; in particular, inquiry-based instructional approaches related to problem-based learning (PBL), case-based, team-based, and project-based learning have been viewed as best-fit ways to deliver IPE (e.g., Chan et al., 2017; Thompson, 2010). In interprofessional PBL, students from different professional fields are expected to engage in group discussion to identify and solve problems regarding a patient and/or his/her family members as described in case scenarios. Interprofessional PBL shapes students’ learning processes and ways of contributing to discourse and creates a highly interactive dynamic in tutorial groups (Imafuku, Kataoka, Mayahara, Suzuki, & Saiki, 2014).

Previous studies have contributed to evaluation of learning outcomes of PBL, such as attitude toward interprofessional teams and patient-centered care proficiency (Darlow et al., 2015) and improved self-efficacy (Nørgaard et al., 2013). However, as Reeves et al. (2016) showed in a systematic review, most studies on learning outcomes of IPE have used a quasi-experimental or experimental research design; although quantitative research methodologies are useful for establishing the effectiveness of an IPE intervention, they cannot provide a rich description of the complexities of teaching and learning processes in IPE from an emic perspective. In particular, little is known from a classroom discourse perspective about the process by which students from different disciplines collaboratively solve the care problem and negotiate social roles in an interprofessional group. Within the small body of process-driven studies on interprofessional PBL, our research team (Imafuku et al., 2014) identified two main interaction patterns in knowledge building: (1) coconstruction between students from different disciplines and (2) elaboration between students from the same disciplines. This study aims to further explore student participation patterns during interprofessional PBL tutorials, including collaborative processes of constructing knowledge and dealing with conflicting views. To do this, we developed the following research questions.

1. How did students from different fields of study work together and deal with conflicting views to develop a treatment and care plan for a patient?
2. What learning outcomes did they perceive they had achieved through the process of interprofessional learning?

**METHODS**

**Setting of the Study**

Gifu University provided a voluntary, extracurricular, two-day case-based seminar on interprofessional care for undergraduate students, which was developed by 16 academic staff members from five institutions of medical and health sciences and was open to students from those institutions (Kawakami et al., 2015). To recruit as many student participants from the institutions as possible, whoever was interested in learning interprofessional collaboration was welcome in this extracurricular seminar. As a result, in the 2013 seminar, 38 students (from year one to year four) from seven different disciplines participated (see Table 7.1). They had not been offered any previous formal IPE. All the participants consented to participate in this study.

This IPE seminar consisted of three tutorial sessions, each of which lasted 75 minutes (see Figure 7.1). The theme of the basic scenario, carried across these three tutorial sessions, was Lewy body dementia. Academic staff members were asked to take on the tasks of time management and promoting effective group functioning if needed. The goals of the seminar were to construct a treatment and care plan for a patient

**TABLE 7.1 Participants in the IPE Seminar**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>n</th>
<th>Gender</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Medicine</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Nursing</td>
<td>4</td>
<td>–</td>
<td>4</td>
</tr>
<tr>
<td>Pharmaceutical sciences</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Dentistry</td>
<td>1</td>
<td>–</td>
<td>1</td>
</tr>
<tr>
<td>Dental hygiene</td>
<td>8</td>
<td>–</td>
<td>8</td>
</tr>
<tr>
<td>Physical therapy</td>
<td>7</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Occupational therapy</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38</td>
<td>11</td>
<td>27</td>
</tr>
</tbody>
</table>
and a support plan for her family members through discussion in an interprofessional group.

In session 1, 38 students were allocated into five interprofessional groups to discuss the patient's problems, which were described in a clinical scenario on Lewy body dementia (see Appendix 1) and task materials, such as blood and urine test results and X-ray images. Through sharing knowledge related to the theme with members from other disciplines, they were expected to gain various perspectives on the patient’s problems. Furthermore, they were encouraged to identify gaps in their knowledge.

In session 2, the students were regrouped and allocated into six intraprofessional groups (i.e., medicine, nursing, dentistry and dental hygiene, pharmaceutical sciences, occupational therapy, and physical therapy). The tutorial rooms were reassigned to accommodate these different groups. In this intraprofessional group work, students were provided with additional information related to their particular discipline (see example in Appendix 2). This session was important for students (particularly those in years one or two), not only to obtain the disciplinary knowledge that could be used to find a solution to the problem but also to have a chance to discuss the roles of their professions and their own approaches to the patient with tutors and their peers. After session 2, we encouraged students to conduct self-directed learning on the identified issues, which included complex interdisciplinary problems.

In session 3, conducted on day 2, students returned to their interprofessional groups from session 1, where they were asked to share what they
had discussed in session 2 (i.e., intraprofessional group work) and what they had found in their self-directed learning. Subsequently, they were asked to create a patient-centered care plan as a product of learning in this seminar. At the end of the seminar, we offered students an opportunity to present their care plans to the full seminar group (38 students and 15 staff members).

**Data Collection and Analysis**

This study was part of a wider IPE research project. The analysis presented in this chapter focuses on students’ participation in the interprofessional group (student n = 8) in sessions 1 and 3. Purposive sampling was used to select a typical case of student interaction in this seminar based on criteria of gender, areas of study, and year of school. All participants’ first language was Japanese, as was the medium of instruction. The participants’ demographic data are provided in Table 7.2.

The three successive PBL tutorial sessions were video-recorded, and all video material was watched and transcribed by the first author; the transcription symbols used in this study were adapted from Jefferson (1984) and ten Have (2007) (see Appendix 3). Drawing on the analytical procedures developed by Aarnio, Lindblom-Ylänne, Nieminen, and Pyörälä (2013), this study analyzed the transcripts on two levels: utterances and episodes. van Boxtel, van der Linden, and Kanselaar (2000) defined an utterance as an individual message unit that is distinguished from another utterance through a “perceptible” pause, comma, or full stop. They provided several mutually exclusive and exhaustive categories of utterance, including statements, arguments, evaluations, questions, etc.

<table>
<thead>
<tr>
<th>Student</th>
<th>Gender</th>
<th>Area of study</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>M</td>
<td>Medicine</td>
<td>Four</td>
</tr>
<tr>
<td>N</td>
<td>F</td>
<td>Nursing</td>
<td>Three</td>
</tr>
<tr>
<td>P</td>
<td>F</td>
<td>Pharmaceutical sciences.</td>
<td>Three</td>
</tr>
<tr>
<td>DH1</td>
<td>F</td>
<td>Dental hygiene</td>
<td>Four</td>
</tr>
<tr>
<td>DH2</td>
<td>F</td>
<td>Dental hygiene</td>
<td>One</td>
</tr>
<tr>
<td>PT1</td>
<td>M</td>
<td>Physical therapy</td>
<td>Three</td>
</tr>
<tr>
<td>PT2</td>
<td>F</td>
<td>Physical therapy</td>
<td>Three</td>
</tr>
<tr>
<td>OT</td>
<td>F</td>
<td>Occupational therapy</td>
<td>Three</td>
</tr>
</tbody>
</table>
requests, proposals, confirmations, rejections, repeats, orders, and off-task utterances.

An episode has been defined as a series of interactions dealing with one topic and ending when the topic changes (Aarnio et al., 2013). Here, we identified and extracted significant episodes of coconstruction of reasoning and/or of conflicting views from the two 75-minute segments of interprofessional group work. A reasoning episode is understood here as a sequence of utterances in which definitions, observations, or hypotheses about concepts are related to each other (van Boxtel et al., 2000). Coconstructed reasoning is then reasoning constructed by contributions from multiple participants. A conflict episode is characterized by nonconfirmations, counterarguments, and critical questions. According to van Boxtel et al. (2000), a conflict is “elaborated” when one student explains or justifies his or her statement or when both students contribute to the resolution of the conflict through argumentation about the solution.

Further, semistructured interviews in which stimulated recall was incorporated with eight students from the same group were conducted after the IPE seminar to elicit qualitative reflective data. Questions regarding their experience and perception of learning in IPE included the following:

- What did you learn through discussion in this IPE seminar?
- What difficulties did you find in working together with people from other fields?
- How did you relate your experience in this IPE seminar to your future learning/career?
- What do you think about leadership in interprofessional collaboration?

During the interviews, recorded discussion data were replayed to prompt the participants to recall thoughts they had had while participating in the discussion. These stimulated recall interviews aimed to elicit information about their cognitive processes during specific moments of interaction. Students were asked to voluntarily give comments or answer the researchers’ questions, such as the following:

- How were you feeling about a group member’s opinion here?
- What were you thinking during this long silence?
- Why did you decide to share your opinion at this stage?
The reflective data were analyzed using the thematic analysis approach to generate categories of perceived learning outcomes gained through interaction with students from different disciplines (Braun & Clarke, 2006). Through the systematic reading of transcripts, the data were broken down into small units according to meanings, actions, events, or ideas expressed by the participants. Each of these distinct units was labeled and grouped into more abstract categories through the comparison of similarities and differences. These steps were repeated in an iterative procedure to ensure that the researchers’ interpretation was congruent with the presented data.

FINDINGS

Our discourse-analytical account of IPE segments yielded a description of how meanings were coconstructed and negotiated among students from different disciplines. Collaborative processes of both construction of knowledge and management/resolution of conflicting views among the members were found in interprofessional group work. We have selected two episodes that best represent distinctive interaction patterns of how the students engaged in the interprofessional learning activities.

Episode of Constructing Meaning in Interprofessional Interaction

All the group members shared information related to their respective disciplines, obtained in intraprofessional discussion in session 2, and discussed how they could on that basis provide the patient with comprehensive care before and after discharge. Excerpt 1 shows a dental hygiene student (DH1) and a nursing student (N) discussing how they could collaboratively engage in the patient's oral care in the hospital. DH1 pointed out some problems regarding the patient's oral care, sharing information from the dentistry team with N (Turns 1–3). Subsequently, DH1 emphasized the importance of blowing exercises to strengthen the patient’s cheek muscles, since she did not have enough power to rinse out her mouth (Turn 5). A medical student (M) asked for confirmation of the effectiveness of blowing exercises, and DH1 offered clarification (Turns 10 and 11). The medical student’s request for clarification effected a topic shift regarding who would take charge of providing oral care for the patient (Turn 12). This was thus a key utterance, giving rise to discussion of collaboration among dental hygienist, nurse, and physician. In fact, subsequent to Turn 12, DH1 and
N negotiated their roles in giving the patient instruction on oral health. N proposed that she would first learn the blowing exercise and oral care procedures from DH1 (Turn 15), who gave a positive response to N’s suggestion (Turn 16). In particular, louder speech and repeated expressions of agreement by DH1 indicated her favorable stance toward N’s proposal of collaboration between nurse and dental hygienist (Turns 16 and 18).

Excerpt 1

<table>
<thead>
<tr>
<th>Turn</th>
<th>Speaker</th>
<th>Content (Translated)</th>
<th>Content (Japanese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DH1</td>
<td>I would like to ask a question to the nurse.</td>
<td>看護に質問なんですが</td>
</tr>
<tr>
<td>2</td>
<td>N</td>
<td>yes</td>
<td>はい</td>
</tr>
<tr>
<td>3</td>
<td>DH1</td>
<td>umm. you ((N)) said that the patient can do oral care by herself (.) right?</td>
<td>さっき、自分で口腔ケアができるぐらいはあるっておっしゃいましたよね。</td>
</tr>
<tr>
<td>4</td>
<td>N</td>
<td>((nodding))</td>
<td>((うなずく))</td>
</tr>
<tr>
<td>5</td>
<td>DH1</td>
<td>I forgot to report the information of DH in my turn. but (.) because her cheek muscle is weak ((referring to the scenario)) she can’t rinse out her mouth. so (.) she can keep water in her mouth but doesn’t have enough power to blow it out. she needs to practice on it (.) by the blowing exercise. in my opinion (.) in order to rinse out her mouth, her cheek muscles need to be strengthened preferentially. hmm (.) [she has enough physical strength? ((looking at OT))] =</td>
<td>さっき話すのを忘れちゃったんですけど、ただ頬の動きがほとんどないので((資料参照))ぶくぶくうがいが今できない状態なんですね。なので水を口に含む程度で、吐き出す勢いがつかないので、その練習だけさせて()ブローイングっていうやり方で()ぶくぶくをちょっと強化するのをやらないといけない。優先的には、と思いました。で、<a href="OT%E8%A6%8B%E3%82%8B">(筋肉は大丈夫ってことだったので)</a>=</td>
</tr>
<tr>
<td>6</td>
<td>OT</td>
<td>((nods his head))</td>
<td>((うなずく))</td>
</tr>
<tr>
<td>7</td>
<td>DH1</td>
<td>= [to brush her teeth, doesn’t she?] =</td>
<td>=[たぶん歯磨きはできるんだと思う。]</td>
</tr>
<tr>
<td>8</td>
<td>NR</td>
<td>[I see (.) she can do it]</td>
<td>[できるんですね]</td>
</tr>
<tr>
<td>9</td>
<td>DH1</td>
<td>= so we need to focus on strengthening her cheek, cheek muscles which needs to be improved (Statement: observation)</td>
<td>なんで、ぶくぶくですですね。頬の動き、頬の筋肉はちょっと弱いっていうことなんで</td>
</tr>
<tr>
<td>10</td>
<td>M</td>
<td>by doing this exercise (.) [will her condition be improved?]</td>
<td>それは訓練することで[回復していくこと?]</td>
</tr>
</tbody>
</table>
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11 DH1 [yes (.) we have an approach called blowing] it'd take time but doing continuous blowing exercise enables her to rinse out the mouth on her own. I want to set our goal related to this point.

12 M who can actually give her the instruction on the blowing exercise? (Asking for clarification)

13 DH1 err whichever ([DH or N]) (.) ([N: ha-ha]) (.) but I can do it. yes I can.

14 M before this (.) we have to [assess her condition]

15 N [umm but I think (.)] first of all I'd like to ask a dental hygienist to teach me about it. so::: at the beginning [I'll observe what the dental hygienist is doing]=

(Proposal)

16 DH1 [oh (.) yes yes yes. doing TOGETHER TOGETHER. for me it's N::O problem] (Agreement)

17 N =and (.) after that nurses may take over [the role of blowing exercise for the patient] (Proposal)

18 DH1 [yes (.) I agree agree (.) through collaboration] (Agreement)

M commented on his contribution (Turn 12) to this discussion:

When I listened to the discussion between nurse and a dental hygienist, I could realize the importance of oral care for this patient and learn what dental hygienists can do for the patient care. To be honest, I didn't know the roles of dental hygienists in long-term patient care at all. So, I'd like to clarify how we, as a team, can provide oral care for the patient, like who would do what and how regarding oral care.
M’s contribution in Turn 12 was made not merely to understand the roles of dental hygienists but also to discuss how oral care should be provided as a team. Thus, asking for clarification by M here brought a perspective of team-based care to this group, which focused not on understanding the roles of each health profession in this group but on finding a better way to collaborate for comprehensive patient (oral) care.

As DH1 reflected in the interview:

At first, all members agreed that the patient could brush her teeth on her own. However, the scenario of DH said that her cheek muscles don’t have enough power for washing her mouth. . . . The nursing member said, she needed my assistance in order for the patient to rinse out her mouth on her own. I was really happy that she accepted and respected my opinion, and asked for my guidance on the blowing exercise. Through this interaction, I could better understand what interprofessional collaboration is as a dental hygienist.

The fact that each student had different information about the patient and her family members, as given in session 2, increased their sense of responsibility as health professionals in the interprofessional group. This encouraged DH1 to share information on the strength of the patient’s cheek muscles, which then led to the discussion on ways of collaborating between nurse and dental hygienist. Moreover, as seen in DH1’s comments, the discussion on how members from different professional fields could collaborate helped the learners appreciate the importance of interprofessional patient care. In particular, DH1 was impressed by N’s acceptance of and respect for the viewpoint of DH1 as a dental hygienist.

As N reflected in the interview:

Through participation in the IPE seminar, I’ve learned that dental hygienists are deeply committed to oral health and swallowing in patient care. I think nurses are one of the professionals who often directly communicate with patient, but we also have limits to what a nurse can do. By working together with a dental hygienist, I think a nurse can effectively provide the patient with an opportunity for oral rehabilitation on a daily basis, which is an advantage of interprofessional collaboration.
N said that through this discussion she had gained a better understanding of the role of dental hygienist and the limits of her own professional role. Comments by M, DH, and N in the interview show that they realized that interprofessional collaboration led health professionals to provide comprehensive care that is beyond the limits of each professional. The reflective data indicate that students could effectively negotiate their own role(s) as health professionals and came to better understand the importance of interprofessional collaboration in interactions with others in health-care practice contexts.

**Episode of Dealing with Conflicting Views in Interprofessional Interaction**

This study demonstrates the processes by which students dealt with conflicting views about the patient care plan among interprofessional group members. For instance, Excerpt 2 shows that medical and physical/occupational therapy students felt it difficult to build consensus on whether they should prioritize promoting the patient’s activities of daily life (ADL) or ensuring her safety after discharge from the hospital. M asked a critical question about the necessity of the patient’s walking with a stick at home and elaborated an argument that emphasized the risk of her breaking a bone if the patient fell down (Turns 1 and 3). In contrast, a physical therapy student (PT1) argued that the patient was motivated to do housework to some extent, and as a physical therapist, wanted to meet the patient’s desire (Turn 4). Responding to PT1, M put forward the suggestion that the patient might be able to use a wheelchair at home (Turn 5). However, an occupational therapy student (OT) offered the counterargument that a wheelchair could not be used in the home due to the narrowness of passages between rooms and the many steps in the house (Turn 6), and that restriction of the patient’s ADL only for the purpose of fall prevention might result in depriving her of vitality in daily life (Turn 10). M made another suggestion, that the patient could walk not at home but in a day-care facility, which would ensure her safety, and emphasized the possibility that falling down would cause serious problems that could confound the patient’s current condition (Turns 11 and 13). PT1 claimed that promotion of ADL would be essential to sustaining the patient’s sense of balance and muscular strength and suggested that they could select an appropriate stick for the patient’s condition from various types, such as the quad cane, T-cane, and walking frame with wheels (Turn 15). M suggested that the priority of their approach to patient care should be to ensure the patient’s
safety, and they could allow the patient to walk at home depending on the results of the reassessment of her condition (Turn 16). OT’s response implied that she partially agreed with M’s suggestion, but complete group consensus was not reached (Turn 17). Eventually, however, the group members adopted M’s suggestion as a group opinion.

Excerpt 2

<table>
<thead>
<tr>
<th>Turn</th>
<th>Speaker</th>
<th>Content (Translated)</th>
<th>Content (Japanese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>have a minute? I’m still unclear about the purpose of encouraging the patient to walk with a stick in our previous discussion. why do we encourage her to walk at home? = (Critical question)</td>
<td>ちょっといいですか。杖歩行の目指すところってどういうところなのかって。どうして屋内で=</td>
</tr>
<tr>
<td>2</td>
<td>PT1</td>
<td>umm (.) yeah</td>
<td>うーん。そうですね。</td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>=using the stick indoors (.) might have a high risk of stumbling, people who will possibly take care of her are (2.0) her husband and daughter (.) right? umm but I don’t think that they could afford the full in-home assistance. so for example when she visits a daycare facility, she should undergo the rehabilitation of walking with assistance from a specialist (.) but there is a great risk if she walks with the stick at home by herself. for example when she stumbles (.) there would be a high possibility of breaking her bone due to her age. I’m really afraid of this kind of accident. if possible (.) umm I think I’d like her to refrain from moving around at home. I’m sure that it’s important for her to train her muscles necessary for the transferring motion to use a portable toilet, but umm (.) I rather doubt the necessity of walking with the stick at home. (Counterargument)</td>
<td>=屋内で杖を使ってていうことですからリスク高いですよね。家の中で介助をされる方は旦那さんと娘さんなんで、すごく支えがしっかりされている方でないのですで、例えばデイケアに行った時にどうかしちゃりとした方がやってもって杖歩行の練習をするのがいいって思ってます。屋内でご自身でされるのはかなりリスクが高くなるかなとして、例えば転倒された時に年齢的なものもあるし、骨折のリスクも高くなるので、あまり家の中で動き回るのではいいかなと思ってますよね。家の中では安定したポータブルトイレを置いて動作っていうのは必要だとは思ってるんですけど、家の杖歩行の必要性はどうなのかって</td>
</tr>
<tr>
<td>4</td>
<td>PT1</td>
<td>umm (.) I see (4.0) I’m not confident in this point (.) well (.) but she desires to do housework, umm her husband has never done it and her daughter is under such a situation ((having her daughter is assessed that she is borderline intellectual functioning)). umm (.) but I think her daughter may mainly manage the household in that situation. so she (the patient) needs to help her daughter. she said she doesn’t want to cause her family members a great deal of trouble (.) and desires to do housework by herself in the near future (.) [umm so:::] (Counterargument)</td>
<td>そうですね。ちょっとそこらへんがしっかりしてないんですけど、ただこの方が家事に戻される感じが強いので、うーん。旦那さんがやらないっていうか、娘さんがいなので、メインは娘さんがなると思うんですけども、その補助とかで少し動いたりする感じ、まあ、イメージというか、家族に迷惑をかけたくないと言われてるので、手伝いそうな傾向はみられるんですね。[うーん、なので]</td>
</tr>
</tbody>
</table>
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[can we introduce] a wheelchair to her? is it difficult?

there’s many steps and the house is a bit small (.) particularly the width of the passages would not be enough for the wheelchair. I can’t surely say about that because we don’t have info on the house layout.

I’m just worried about the risk of her walking indoors.

(Counterargument)

providing handrails in the house can be the next step for the patient care (.) but (.) at this stage (.) personally I’m a bit reluctant to let her walk with the stick at home. in my opinion

(Counterargument)

because her symptom is progressive (.) her condition will be possibly getting more serious. so (.) if we can equip her house with handrails (.) we have to do that. it’s true that using the handrails can be safer than the stick in walking around indoors (3.0) but for fall prevention (.) if we strictly restrict her walking distance at home per day (.) we can’t enhance her motivation. so I wonder if saying “please don’t walk for your safety” is a good idea [in terms of her qol (.) I’d like her to walk as frequently as possible.]

(Counterargument)

[of course (.) she can do that in a day-care facility which ensures her safety.]

((nods her head))

I’m really afraid of the possibility of causing her serious problems due to her falling over at home. after this accident (.) her ADL may abruptly decline.

(Counterargument)

Ha-ha (.) yeah
as a way of dealing with this issue, we can give her family instructions on the lines of flow in the living space and we have to identify the proper walking distance for her walking with the stick taking such points into account it's important to keep a balance between her safety and activity but she appeared to be decreasing motivation for ADL. our instructions such as don't walk may result in a decline in her muscular strength. in addition, a decline in her sense of balance would cause a situation where she can't keep standing and sitting positions properly. to ensure her safety well there are some types of stick such as a quad cane which has a larger bottom or using two t-canes. if she has considerable difficulty in walking we'll then introduce a walking frame with wheels. so we have to define her situation and maintain her muscular strength by helping her walk with some assistance, which are PT's and OT's approaches to patient care.

(Counterargument)

Reflecting on this episode in the interview, M said that although he understood the importance of ADL, he wanted other members to pay more attention to the high risk of the patient's falling down at home:

They (PT and OT) tended to think that moving about actively at home is good for the patient's ADL. It's true, but, we have to also think about the patient's condition after the activity. At that time, I wanted to confirm if the members have a long-term vision of patient care. . . . As a medical student, my role is to manage
a group discussion, particularly when they have focused on only one aspect of the patient. And, I also need to let them know if their discussion doesn’t adequately cover the patient’s problem. . . . I think that doctors have to make a clinical decision aptly and immediately in a setting of acute medical care, but this time was in a situation of chronic illness care. I felt that what doctors could do was limited and we needed more contributions from other health professions. Given this situation, it’s important for doctors not to take the initiative in the discussion as a team leader but to manage the discussion as a moderator.

As a medical student, M saw himself as a moderator in this interprofessional group discussion and took the role of encouraging the other members to analyze the patient’s condition and discuss the care plan from different perspectives. Specifically, in the interview, M pointed out that there was less discussion of the patient care from a long-term viewpoint, leading M to ask a critical question about the necessity of walking around with a stick at home. However, as OT remarked regarding M’s contribution to this discussion in the interview:

In medical member’s opinion, walking with a stick at home is highly risky for her. However, from the viewpoint of an OT, if we restricted her ADL, her motivation and QOL ((Quality of Life)) would decline sharply. I understand the importance of fall prevention, but I also wanted him to understand my opinion better. I found it really difficult to balance both medical and OT’s opinions. However, this experience allowed me to think about the importance of teamwork and building a group consensus.

OT felt that M did not accept the approaches of occupational therapists and physical therapists. OT’s experience in this discussion led to a feeling of the difficulty of integrating or compromising among different approaches to patient care used by different professionals in an interprofessional team. At the same time, the importance of teamwork and building a group consensus were acknowledged by OT.

PT1 perceived this experience differently from OT. As PT1 reflected in the interview:
The medical student cast doubt on the necessity of walking with a stick at home. His question gave me a chance to deeply rethink my opinion. I realized that the viewpoints of different health professionals allowed me to comprehensively understand the patient's problem.

PT1’s comments imply that knowing viewpoints of other disciplines is connected to a better understanding of one’s own viewpoint and roles/responsibilities. Through dealing with conflicting views in an interprofessional group, their attention was directed to the importance of critical thinking, building a group consensus, and decision-making skills. Moreover, they, particularly OT, realized the necessity of negotiating power relations in terms of professional autonomy.

**DISCUSSION**

This process-driven study of interprofessional PBL shows that students actively negotiated meaning and coconstructed knowledge related to patient care in highly interactive discourse. Even in conflict episodes, they reflected that they could achieve meaningful learning and gain a new awareness, such as realizing the importance of interprofessional collaboration and (re)negotiating their roles/responsibilities as health professionals in their group. Although this IPE seminar is only a single educational intervention, it has a pedagogical impact on students’ perceptions of interprofessional collaboration. To some extent, the findings of this study are congruent with those of the previous studies exploring perceived learning outcomes in an IPE curriculum (e.g., Imafuku et al., 2018). The participants’ perceptions of the learning outcomes they experienced in the IPE seminar, as they emerged from the interview data analysis, are summarized here:

- Critical thinking process (e.g., comments from PT1)
- Importance of interprofessional collaboration and provision of comprehensive care (e.g., comments from DH1, N, and PT1)
- Leadership (e.g., comments from M)
- Teamwork and building a group consensus (e.g., comments from OT)
• Understanding of one’s own professional group’s roles and responsibilities (e.g., comments from M, N, DH1, PT1)
• Understanding of other professionals’ roles and responsibilities (e.g., comments from N)

As the findings described show, the seminar had a positive impact on the learning of the students, who had never previously experienced IPE. Therefore, the findings of this study suggest that providing IPE learning opportunities, even just a single intervention, is essential to improving students’ understanding of interprofessional collaboration. However, as the approach offered here indeed involves only a single intervention, opportunities to facilitate students’ interprofessional socialization process cannot be offered continuously or systematically. For further educational development, IPE thus needs to be integrated in a stepwise, systematic manner in education programs (Imafuku et al., 2018; Wilhelmsson et al., 2009).

This study corresponds to the findings of the previous studies that analyzed coconstruction processes of knowledge in IPE or PBL (e.g., Almajed, Skinner, Peterson, & Winning, 2016; Hmelo-Silver & Barrows, 2008; Imafuku et al., 2014). First, as shown in Excerpt 1, a plan to provide oral care for a patient in the hospital was constructed collaboratively among M, DH1, and N. This discussion included negotiation of professional roles/responsibilities between nurse and dental hygienist. Through their mutual engagement in discourse around interprofessional PBL, the patient’s oral care was discussed deeply but practically, and the group’s collective understanding was improved (Hmelo-Silver & Barrows, 2008).

At the same time, this study found some conflict episodes in the discussions. A conflict process in interaction is not always seen as a negative event; as Wenger (1998) elucidated, the process by which a newcomer becomes a full participant (i.e., legitimate peripheral participation) is not necessarily characterized only by a harmonious process but also by a conflictual process of negotiation and transformation in a community of practice. Disagreement, challenges, and competition can all be forms of participation (Wenger, 1998, p.77). As PT1 mentioned, students have learned many things regarding interprofessional collaboration from their experiences of handling conflict with professionals from different backgrounds: critical thinking, a better understanding of their own professional roles, and teamwork and building a group consensus in a team. This is in line with van Boxtel et al. (2000)’s resolving conflicts dimension, which
reflects a productive, elaborative discourse. However, we need to note that if students perceive conflicts as unproductive and competitive discourse, they are more likely to avoid conflicts (Visschers-Pleijers, Dolmans, Wolfhagen, & Van der Vleuten, 2005). Johnson and Johnson (2009) also argued that challenging each other competitively can be perceived to be threatening and may weaken relationships among students in a group. Aarnio et al. (2013) thus suggested that students and tutors be alert to competitive orientations in group discussions.

Methodologically, this chapter contributes to the understanding of discourse-based qualitative research design in PBL. Jin and Bridges (2016) pointed out that the majority of the literature in their review used self-reported participant perception designs, and that ethnographically oriented studies such as analyzing video recordings of classroom interactions were fewer in number. This study attempted to explore both PBL in action and participants’ perceptions of learning by combining data analyses of classroom interactions and stimulated recall interviews. The methodology used in this study enables researchers to provide a richer description of what actually happens in PBL from an emic perspective.

CONCLUSION

In summary, this chapter sheds light on how learners can gain more from their learning experiences in IPE. It corroborates the previous studies on small group discussions in a PBL setting; moreover, it adds a new perspective, in that its focus was directed at both collaborative processes of knowledge construction and conflict management in interprofessional PBL. However, there are also some limitations to be noted in this study. First, we investigated students’ participation in only a single intervention, and the results are not generalizable to all pedagogical contexts due to the small number of participants. It also needs to be noted that the participants were highly motivated students who are not representative of the general population of students in health professions education. For transferability of the findings, we need to investigate a variety of cases of students’ learning processes in an interprofessional tutorial setting. Furthermore, this study did not focus on tutors’ perceptions of student learning in the IPE seminar; even though tutors were not expected to participate actively as facilitators in this seminar, it remains important to investigate their perspectives in a
seminar context to provide pedagogical implications, that is, to show how they can facilitate students’ learning more effectively, particularly when the students are dealing with conflicts. Further research should thus examine changes in students’ perceptions of interprofessional collaboration in health care and the process of identity formation as “interprofessionals” from a longitudinal viewpoint.

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REFERENCES


APPENDIX 1

Scenario (basic information)

Patient
- Yoshiko Yasuda (aged 79, female)
- Lewy body dementia
- Day 10 of hospitalization

Her family members
- Husband: Amputation of fingers of his left hand due to a serious accident during his work in a factory
- Elder daughter: living far away from the patient’s home
- Younger daughter: Intellectual quotient (IQ) score 70 (borderline intellectual disability)

Yoshiko has not slept well for these several years, and has experienced visual hallucinations which sometimes cause panic disorder, for the past several months. The day after she has this symptom, she seems not to feel well in the daytime. Recently, she started to have urinary incontinence at night. Moreover, when she feels a need to urinate, she cannot make it to a toilet in time. Now, she has no choice but to use an undergarment for incontinence.

10 days ago, she was hospitalized for examination and was diagnosed with Lewy body dementia. During the hospitalization, her blood sugar level was controlled effectively. Her family members want to have her discharged as soon as possible due to the high cost of hospitalization and the difficulty of staying with her in hospital. A care manager was introduced to them to take care of her after discharge, but her husband said that he does not need support from the care manager, because he can manage and provide care for her by himself and their daughter is also there to give support.

These past few days, she has had fits of coughing, and this symptom was getting serious like pneumonia. As $\text{SpO}_2$ was 93%, she was given an antibiotic agent intravenously and used a nasal oxygen cannula. Because we need to see how her condition develops and if it will stabilize, her hospitalization is lasting longer than planned. . . .

Discuss and make a plan of treatment and care for Yoshiko and her family members.
APPENDIX 2

Additional information (for students of dentistry and dental hygiene)

Yoshiko has used dentures for a long time, but they were left at home during her hospitalization. We asked her family to bring them to hospital. Due to poor denture fit on the upper jaw and gums, they come off during chewing sometimes. Yoshiko can take a meal on her own without any support. However, the oral activity is very slow. When five to ten minutes have passed since she has started eating, she cannot swallow food which is in her oral cavity, and she becomes “out of it” and closes her eyes with the food in her mouth. In such a case, she will wake up when we call out to her. However, she needs care for meals, and leaves about 30% of her food every time. Soft textured foods are used, but because her dentures do not fit properly, she tends to wash them down with green tea or soup.

Yoshiko brushes her teeth if we have prepared a toothbrush and paste set. However, brushing time is usually only 10 seconds. Movement of cheeks cannot be observed as she rinses out her mouth; she can just hold water in her mouth and spit it out feebly . . .

APPENDIX 3: TRANSCRIPTION SYMBOLS
(Adapted from Jefferson 1984 and Ten Have 2007)

[ beginning of an overlap
] end of an overlap
( ) a brief pause
:: : prolongation of an utterance
(italic) the transcriber’s comment or nonverbal activity
? rising intonation
. falling intonation
CAPITAL the speaker is emphasizing the speech
(1.0) the time (tenths of seconds) of a pause in speech
= no gap between utterances
ha ha laughter