

Interprofessional Learning Through Shadowing in Rehabilitations Department: A Qualitative Study of the Student's Placement in Hospital Setting

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Abstract

Interprofessional collaborative learning (IPL) is a requirement in health and social education, primary in student placements.

This study explored IPL as shadowing with seven participants at a department of physical medicine and rehabilitation in a hospital. Seven participants were divided into two groups (n=3; n=4) when caring for two patients. Both groups wrote a rehabilitation plan together with the patients.

In a submitted template, the students reflected on roles and responsibilities of health care professionals. To examine how the informants expressed their experiences of IPL, focus group interviews were conducted with each group and transcribed. The focus group transcripts, together with submitted templates, were then analysed using Giorgis' model of content analysis.

All informants expressed that IPL led to acquired knowledge about each other's responsibilities in healthcare. Participants were aware of differences and similarities between their responsibilities. They reported that leadership and communication are prerequisites for collaborative practice.

Keywords: Interprofessional learning, hospital, rehabilitation

Introduction

Over the last 30 years we have seen an increasing demand for collaboration across the professional and departmental boundaries in the health and care sector. According to WHO, interprofessional collaboration is

one of the most promising initiatives for securing innovation and improvement in the health service (Baker, 2010). The Norwegian *Coordination Reform*, White paper 47. (2008-2009), highlights the need for interaction when dealing with complex and complicated health problems. It is seen as a way of improving the quality of health and care services. The report points out that interaction across professional boundaries, hospital departments, sectors and government agencies is a prerequisite for providing good and universal health and care services. White paper. 13 (2011-2012), entitled *Education for Welfare*, was published as a follow-up report; it decreed that interprofessional collaborative learning must form a part of all educational programmes in health and social care. The white paper does not stipulate in detail how interprofessional collaborative learning (IPL) should be achieved, but it does stress that students *must* learn together, across educational programmes, and that this *ought to* involve elements of joint practice. The challenge for the educational programmes to introduce IPL during clinical placement periods is implicit. A report entitled *....and it's going to get better!*, published by the Norwegian Directorate of Health and Social Services (2005–2015), emphasises that high-quality health services must be well coordinated and demonstrate continuity. Collaborative challenges form a natural part of day-to-day work on rehabilitation wards (as is the case between hospitals and government agencies like the primary health care service). Rehabilitation wards are considered to be particularly suitable for IPL (Oandasan & Reeves, 2005), and consequently they provide a good learning arena for educational programmes in health and social care.

Official Norwegian Report NOU 2011:11, *Innovation in Care*, lists several proposals for how to meet future challenges in the health and care sector. One of these proposals refers to *new collaborative teamwork*, which requires the service to provide greater professional breadth involving a larger number of occupational groups, and to pay increased attention to a wider range of initiatives, such as occupational therapy, physiotherapy and social work. The emphasis must be on early intervention, prevention and rehabilitation on the patient's terms. This type of restructuring will require good management, an interprofessional approach and a focus on competence building.

Interprofessional practice requires empowering and communicative management, says Sirnes (2009). In order to bolster the collaborative teamworking skills available within the service, educational programmes will therefore need to incorporate IPL in order to improve the students' interprofessional collaborative competence.

To accommodate the Norwegian demand to implement IPL in placements, it might be necessary to include students from different institutions. The purpose of this study was to investigate how a group of informants from educational programmes and institutions in nursing,

occupational therapy and physiotherapy perceived their experience of interprofessional collaborative learning through practice-based shadowing.

Interprofessional collaborative learning and competence

As early as in 1988, WHO was keen to ensure that interprofessional collaborative competence would include the capability of an interprofessional team to solve problems according to the situation at hand and to act flexibly, and that practitioners of different professions would be involved. This requires knowledge of group dynamics as well as team potential. Team members are expected to be able to reflect and to analyse alternative courses of action, and to assess a situation rationally. Professional practitioners must have an ability to express themselves verbally; in other words, communication skills underpin the group dynamics and constitute a premise for effective interprofessional collaboration, according to Engel (1994). In addition to the importance of communication, D'Amour et al., (2004) point out that good interprofessional collaboration also depends on knowledge of one another's roles, a willingness to cooperate, a trust in one's own and other people's abilities, and mutual respect.

Gordon & Walsh (2005) point out that interprofessional collaborative competence includes an understanding of the roles played by other professions, but also an ability to reflect on the development of one's own professional role. Students are expected to acquire collaborative competence through their education. Interprofessional collaborative learning (IPL) is defined as when "two or more professions learn with, from, and about each other to improve collaboration and the quality of care" (CAIPE, 1997). IPL gives students an opportunity to become familiar with and develop a respect for other practitioners, thereby reducing prejudice and stereotyping to a minimum (Barr et al., 2005). Some socio-psychological perspectives recognise that negative stereotyping constitutes a barrier to effective interprofessional collaboration (Gordon, 2006). According to Allport (1954) it is not sufficient for students to spend time together to avoid negative stereotyping. They need to work towards a common goal, have institutional support and cooperate with one another.

Allowing students to gain an insight into the roles and unique functions of various health professions, may help to reduce negative stereotyping to a minimum. IPL implies learning, and learning requires reflection. Reflection on specific situations can be viewed as a basic learning methodology, the objective being to develop practical occupational skills (Clark 2009; Hiim, 2010; Ødegård & Willumsen, 2013), such as in the fields of nursing or physiotherapy. Reflection can be used to find constructive solutions to problems (Ødegård & Willumsen, 2013). Schön (1987) points out that in addition to reflection-*on*-action, reflection-*in*-action is important. Reflective

conversations are based on specific experiences which are shared and reflected on; what emerges from this reflection process is discussed and the lessons learnt assessed as plans are made to apply the resulting knowledge (Nilssen et al., 2012; Mann et al., 2009).

Collaborative skills cannot be taught through theory alone, write Dickinson & Carpenter (2005); sharing experiences with other occupational groups in the field of practice is a prerequisite. This requires a new approach to the planning and implementation of students' practice placements. Barr et al., (2005) indicate that practice-based learning is becoming an increasingly important IPL approach.

Interprofessional activities can take place in educational institutions or in clinical practice. IPL in clinical practice is perceived by students to be highly useful for acquiring knowledge of other occupational groups (Nilsen et al., 2012). The arenas may produce different, but complementary IPL opportunities. According to Barr (1996), IPL in educational institutions may lead to a more limited understanding of collaborative teamwork, while practice-based initiatives will integrate the process as well as the content. Practice-based IPL gives rise to greater challenges of interaction than campus-based initiatives (Reeves & Freeth, 2002).

Mogensen et al., (2002) point out that hospital wards provide students with an excellent opportunity to practise their clinical skills as well as their collaborative skills. The authors write that students will acquire valuable experience as they encounter the real world that they will be engaging with as future practitioners. According to Molander (1993), practical real-world examples are the most valuable for acquiring different types of knowledge. Students rate IPL favourably when they see that the experience they gain in their practice placements is of immediate relevance to their future professional practice (Parsell & Bligh, 1998).

Students perceive IPL as a positive experience; they point out that it is easier to ask questions and to share and acquire learning from within a team of students because there is no hierarchy (Fougner & Hortvedt, 2013). One important finding from the evaluation of IPL through practice-based shadowing, is that students gain new insight into other professions' areas of responsibility (Wright et al., 2012). A practice-based shadowing programme in Northern England was found to produce interprofessional learning outcomes for those who took part (Pearson et al., 2007). Research shows that IPL through practice-based shadowing may be a suitable educational tool for students to increase their awareness of the importance of collaborative teamwork in the field of practice (Fougner & Hortvedt, 2013; Almås & Vasset, 2013; Vasset & Almås, 2015; Almås, 2011; Nastasi & Schensul, 2005), thus increasing their motivation for working across professional boundaries (Lindquist et al., 2005).

Allowing students to gain insight into the roles and unique functions of different health professionals, can help to minimize negative stereotyping about others. Furthermore, it is found that reflection in IPL, is fundamental both in the learning process and useful in problem solving. As shown above, research show that shadowing practice is an appropriate pedagogical method in relation to IPL.

To examine how students from different programmes and institutions experienced IPL as shadowing in practice-based programme, the following research question was asked:

How did informants from educational programmes in nursing, occupational therapy and physiotherapy, perceive their experience of interprofessional collaborative learning through practice-based shadowing?

Method

This study has an exploratory qualitative design and includes an analysis of focus group interviews as well as completed survey forms. The focus group interview is a useful tool for studying people's experiences (Malterud, 2011). The method is suitable for trying to find the essence of a phenomenon by studying the experiences of informants. Data is produced by group interaction surrounding a particular topic (Malterud, 2011, 2012).

Sample

The study was conducted in the department of physical medicine and rehabilitation at a medium-sized Norwegian hospital. The intervention spanned two practice placement periods. The study involved seven informants from two different educational institutions; they were split into two groups. The informants were students of physiotherapy, occupational therapy and nursing. They were selected because they had been placed in clinical practice on this particular hospital ward at the relevant time. Consultants at each of the educational institutions were responsible for organising the practice placements, and thus the selection of students.

Description of the intervention

As shown in figure 1, the intervention included a three-hour teaching session in interprofessional collaboration, shadowing of other students in clinical practice, and the drawing up of a rehabilitation plan in consultation with patients. Additionally, the informants reflected on the various professions' areas of responsibility by completing a survey form. The intervention of IPL through practice-based shadowing lasted for a period of four days in the spring of 2014. A representative from the Norwegian

Federation of Organizations of Disabled People took part in the study's planning process in order to safeguard the patients' safety.

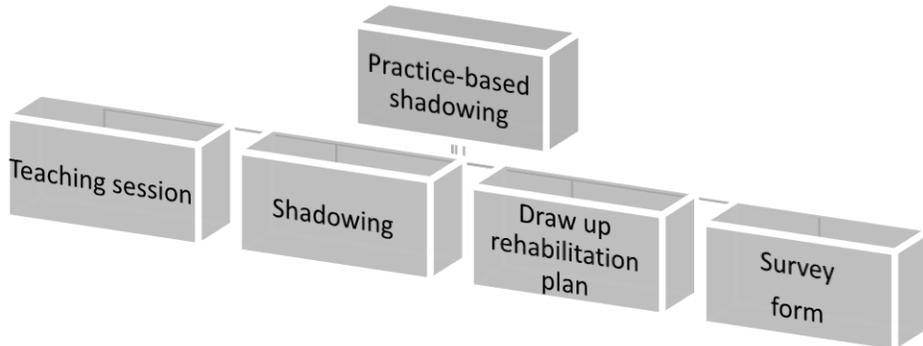


Figure 1. IPL through practice-based shadowing

At the end of the practice period, data were collected by means of focus group interviews (Malterud, 2011) and individual survey forms.

a) Shadowing one another

Practice-based interprofessional shadowing means that informants shadow or observe one another while engaged in a professional practice placement. This took place over the course of four days. The ward management selected patients who needed an interprofessional approach. Pairs of two informants were each allocated responsibility for patients. They were asked to reflect on their own and other people's professional roles and to complete a survey form. This educational intervention provided an opportunity to observe working environments, occupational practice and professional skills through practice-based shadowing (Hiim, 2010). This allowed the students to gain an understanding of the roles and unique functions assigned to practitioners of other professions. The shadowing sessions were pre-arranged to ensure that everyone was given an opportunity to shadow everyone else.

b) Working on the patients' rehabilitation plan

In consultation with the patient, the informants contributed to the drawing up of a rehabilitation plan. This work formed a part of the practice-based shadowing intervention and supervisors on the rehabilitation ward were involved with the process.

c) Reflections recorded on survey forms

Having completed their shadowing sessions, the informants filled in a survey form. Their responses described their own areas of responsibility as well as those of other professions. On the last day, the informants were joined by the researchers when reflecting on the participants' future roles and unique functions. Discussions were based on the completed survey forms. The informants had recorded the names, roles and areas of responsibility of the relevant professions. The informants further reflected on their own

profession's usual teamworking partners, where they work, their unique function and what else might be useful to know about their profession.

Data material

The data material comprised the submitted survey forms (concerning the roles and unique functions of other professions) and two focus group interviews. The survey form has a qualitative design with open-ended questions. The form was developed by the Institute of Interprofessional Health Science Education, McMaster University, Canada, and we obtained their permission to use it.

We drew up a semi-structured interview guide for the focus group interviews, featuring questions associated with the students' experience of IPL through practice-based shadowing on the ward (shadowing of others, rehabilitation plan, survey form with reflections) and what knowledge they felt they had acquired. Focus group interviews were conducted with informants from each of the groups (4 informants in group 1 and 3 informants in group 2). The main themes were: How do you rate your experience of practice-based interprofessional shadowing on the ward? How do you rate the past week? The intended learning outcomes were for you to familiarise yourselves with one another's areas of responsibility and to appreciate the importance of interprofessional collaboration. Could you say something about that? What are your thoughts about using the survey form. Was it useful? What is your impression of the patient's experience of practice-based interprofessional shadowing?

The first and last author conducted the interviews and shared the roles of moderator and note-taker. Clarifying questions were asked to clear up any ambiguities, ref. Malterud (2011). The focus group interviews lasted for approximately 30 minutes and were recorded on tape before being transcribed and made the subject of thematic content analysis.

Content analysis of interview transcripts and survey forms

The analysis followed Giorgi's (1985) recommendation for content analysis in that statements were condensed and categorised before being assigned to the main themes featured in the interviews. The analysis was conducted in four steps (Giorgi, 1985, Malterud, 2012). Step one: in order to establish an overall impression of the informants' experiences, the texts were read through by the first and last author. Step two: close reading of the transcripts in order to identify meaning units. Step three: the content of the meaning units was then abstracted and coded. Step four: categories were established by synthesising the essence of each code group, thus forming the basis for our findings.

Research ethical considerations

The study, the survey forms and focus group interviews have been approved by the Norwegian Centre for Research Data (NSD). Educational learning interventions such as practice-based shadowing in hospitals, are not subject to NSD's consent and approval.

The informants received verbal and written information about how the data would be used, and they gave their written consent to participating in the focus group interviews. They were told that they were free to withdraw from the focus group interview at any time, without stating a reason for doing so.

The researchers did not know the two participating patients and had no access to the rehabilitation plans that were drawn up in the course of the shadowing period. All clinical data were retained on the hospital ward. The authors who were based on the ward took care of this part of the study.

Findings

The study investigated how informants perceived their experience of IPL through practice-based shadowing on a hospital rehabilitation ward. The findings are based on transcripts and analysis of focus group interviews as well as completed survey forms. The data obtained through student interviews and survey responses were divided into three categories: 1) insight into the need for an interprofessional approach (focus group interviews); 2) patient involvement with interprofessional teamwork (focus group interviews); and 3) knowledge of other practitioners' areas of responsibility (survey forms).

During the focus group interviews the informants reflected on the need for IPL, and whether they had acquired any interprofessional collaborative competence in terms of recognising the need for interprofessional collaboration, and knowledge of one another's areas of responsibility. Patient involvement formed a natural part of the exercise.

The need for an interprofessional approach

Data obtained from focus group interviews

The informants expressed their perception of the need for IPL in this way: *In my opinion, IPL should be mandatory for students everywhere.* Most informants described how an interprofessional approach was important for solving complicated challenges associated with the rehabilitation processes. When the informants talked about patient treatments that required a range of different contributions, they accentuated the importance of input from other professions.

There are three of us to assess the patient's needs. Normally, I work with the patient on my own ... Nurses are usually alone with patients when we provide personal care. Now there are other people present who also attend to the patient and are able to see things that I don't.

We discover things we were not aware of before. We pick up on different things.

The informants pointed to a need to involve complementary competencies in the patient care pathway and suggested including students from other professional education programmes. Medicine and social work were given particular mention.

Furthermore, the informants pointed to the need to be familiar with other professions' areas of responsibility, as this allowed them to see alternative courses of action. The informants emphasised that this was not the case in real practice.

The informants pointed out that good communication is a prerequisite for health professionals to be able to collaborate across professional boundaries: *I can see how important it is that there is good communication across the professions.* Several informants emphasised how important it was that interprofessional collaborative teamwork was fully endorsed at management level. They felt that this affected the prospect of a good collaborative climate, with employees being treated the same, whatever their level of education. In the words of one student: *we communicate on the ward, even across the boundaries of education.* It was pointed out that reflection was key to interprofessional collaboration.

Patient involvement in the rehabilitation plan

Data obtained from focus group interviews

In this study, patients formed part of the interprofessional collaboration. Informants were asked about their experience of interacting with the patients when drawing up their rehabilitation plan. The informants took a positive view on patient involvement with the interprofessional teamwork, and they felt that patients also had a positive perception of the experience. Informants described the usefulness of involving the patient from the beginning. With reference to their experience of patient contact, they pointed out that: *We have been able to spend a fair bit of time with the patient. It may well have been a bit too much for him.*

While working on the rehabilitation plan, informants found that the existing plans were incomplete. *We did find that some of what had been entered in the existing plans was rather poor. Some things had not been recorded in the plans,* and they entered these things in consultation with the patient. The informants explained that they had been working on the plan over several days because it took a while to get to know the patient.

Knowledge of other practitioners' areas of responsibility

Data obtained from completed survey forms

Several informants explained that they were given an insight into the competencies of other participants by shadowing or observing them while practising their profession. *You become more aware of what other people are doingit's easy to see nothing but your own discipline and only the things that you personally consider to be important.* Several informants stressed that even though the various professions take a different approach to the patient, they do have a lot in common. One informant said that knowledge of other people's areas of responsibility makes it easier to get in touch with them whenever there is a need for complementary competence.

The role and unique function of the occupational therapist.

Occupational therapy is a relatively new occupational group and the discipline has a lower profile than nursing and physiotherapy. *I knew very little about the occupational therapist profession. Now I can see how she works.* The informants pointed out that the occupational therapist's job was to plan and follow up on initiatives and rehabilitation. It emerged that the occupational therapist must assess each individual patient's functionality and organise training in accordance with the patient's needs.

The role and unique function of the physiotherapist. Some described the physiotherapist's area of responsibility as helping patients to become as self-sufficient as possible. One informant reported that she had acquired knowledge from the physiotherapist: *When I was shadowing the physiotherapist, I learnt a lot about transfer techniques.*

The role and unique function of the nurse. When describing the nurses' work, informants accentuated its reliance on procedural knowledge; wound dressing and stoma care were mentioned, and ... *a focus on the patient's basic needs.*

Discussion

The purpose of this study was to examine how informants attending educational programmes in nursing, occupational therapy and physiotherapy perceived their experience of practice-based interprofessional shadowing. The study shows that the informants acquired knowledge of one another's areas of responsibility and qualifications, and the need for interprofessional collaboration. The informants were made aware of the value of patient involvement and management support for interprofessional collaborative teamwork.

The need for an interprofessional approach

In this study, patients took part in the interprofessional collaborative teamwork and all patient interactions were real, which according to Molander

(1993) and Parsell & Bligh (1998) is important for learning. Earlier studies have shown that student motivation for interprofessional collaboration appears to be strengthened by IPL through practice-based shadowing (Fougner & Hortvedt 2013, Lindqvist 2005). Because the informants were able to observe one another while practising their profession, they found IPL through practice-based shadowing to be useful. This may mean that the informants assumed that complementary competence will provide better follow-up for the patient. Some participants stressed that all health and social care workers ought to have a shadowing opportunity. This suggests that the students appreciated the relevance of IPL through practice-based shadowing, and that in their opinion more students should have an opportunity to take part in similar educational schemes.

IPL implies learning, and learning requires reflection in order to find constructive solutions to complicated or complex challenges in the health service (Clark, 2005, Hiim, 2010, Ødegård & Willumsen, 2013, Schön, 1987, Pearson et al., 2007, Wright, 2012). The practice-based shadowing, the survey forms and the discussions surrounding IPL, may have enhanced the informants' reflections on the need for complementary competence in the health service. Earlier research points out that joint activities and discussion, more so than lone work, will lead to reflection (Nilsen et al., 2012; Mann et al., 2009).

The informants became aware that good communication across occupational groups was a basic premise for achieving interprofessional collaboration, which is also a point made by Engel (1994). The participants stressed that another prerequisite for achieving functional collaboration across professional boundaries, was for IPL to be fully backed by management. This is further supported by Sirnes (2009).

The patient's contribution to interprofessional collaboration

User involvement was an important part of this intervention. The informants stressed the positive aspects of patient involvement with the intervention, but also discussed whether the patients may have been surrounded by too many people and that this may have been wearying for them. The informants improved the quality of the rehabilitation plans in consultation with the patients. The patient was a key participant throughout this process, and ownership of the plan lay with the patient. Personal activity and coping were key themes throughout the rehabilitation process and plan. The question was whether more patients would be able to cope with personal care by themselves if the physiotherapist had greater involvement with their morning and evening care. Interprofessional collaboration appears to improve health services associated with the rehabilitation process, a point which has also been made in a number of public policy documents (Report no. 13 to the

Storting 2011–2012; Report no. 47 to the Storting 2008–2009; Report published by the Norwegian Ministry of Health and Social Affairs 2005–2015; report no. 26 to the Storting 2012–2013; Report no. 29 to the Storting 2012–2013). Research shows that IPL yields rewards in terms of increased quality of health care as perceived by patients, better job satisfaction, and increased productivity and efficiency of services (D'Amour & Oandasan, 2005).

Knowledge of the practitioners' areas of responsibility

Practice-based shadowing means that students gain new insight into the areas of responsibility of other professions (Wright et al., 2012). IPL gives students an opportunity to become acquainted with and respect practitioners of different professions, thus reducing prejudices and stereotyping to a minimum (Alport, 1954; Gordon2006). It is likely that IPL through practice-based shadowing will generate respect for other health and social care professions. Mutual recognition of one another's work and resources can prevent negative perceptions of other professions, say some researchers (Dickinson & Carpenter, 2005). This may lead to better collaboration across professional and departmental boundaries, which in turn may increase the quality of care provided throughout the patient's care pathway.

The informants pointed out that a period of practice-based shadowing meant that they were given insight into the work carried out by practitioners of other professions. This was clearly demonstrated by the survey responses and the focus group interviews. The students became eager to identify what tasks were specific to their respective disciplines, or complementary, and what tasks could be carried out by several occupational groups. The participants described the unique functions assigned to the professions involved with this study of practice-based shadowing.

The informants said that occupational therapists organise training in accordance with the patient's needs. One student explained that she had little previous knowledge of occupational therapy as a discipline, or the importance of this occupational group. One of the occupational therapist's responsibilities is to design the physical environment in residential properties and public buildings with a view to safeguarding the patients' safety and participation (Regjeringen.no, 2005), in other words, they facilitate the patients' activities. The occupational therapist's function is to enable patients to look after themselves and to be self-sufficient, says Fisher (1998).

The survey responses showed that physiotherapists also work to help patients cope and engage in activities. It was reported that physiotherapists help patients become as self-sufficient as possible. According to Richardsen et al. (2002), the physiotherapist's area of responsibility includes maintaining the individual's physical, mental and social well-being. These adaptations may help the patient cope in their everyday lives.

One informant said that the physiotherapist employed different and probably better transfer techniques than those used by themselves. In this way, those who have benefited from IPL may be able to make use of better transfer techniques in their own practice. The intention behind IPL is for students to learn with, by and about one another (CAIPE, 1996). This may in turn help to increase the flexibility of the patients' rehabilitation process. Ingstad (2013) writes that the roles should be flexible enough to provide a mutual overlap, but that practitioners nevertheless keep professionally updated within their own disciplines.

Nurses play a key role in the health and care sector. In addition to their procedural clinical work, they coordinate the involvement of other professions in the care provided for patients, and they liaise with patients and their relatives (Orvik, 2015). Interprofessional understanding and work may therefore be of particular importance to them.

The study shows that the students gained knowledge about the other participants' areas of responsibility, which coincides with the findings of earlier research (Nilsen et al., 2009; Almås & Vasset, 2013; Vasset & Almås, 2015; Nastasi & Schensul, 2005).

Implications for practice

The challenge posed by this IPL model is one of logistics, and the question is how to organise concurrent placement periods for different groups of students from several educational institutions on the same hospital ward. The participants felt that even more student groups could take part. For IPL to be successfully introduced on a ward, it is important that there is an overriding ideology which fully embraces the values and standards of interprofessional collaboration. For example, IPL could be accommodated on all hospital wards, and in the primary health care service. If there are insufficient student groups available, IPL can be achieved by shadowing fully trained staff (e.g. physiotherapist, occupational therapist).

Limitations of the methodology

The study included relatively few informants. The students took part because they happened to have a practice placement on the hospital's rehabilitation ward. Based on the students' assessments, there is nothing to suggest that they were not representative of a larger sample, but there is reason to believe that a greater variety of views would have been expressed had there been a greater number of participants. Some of the informants were fully trained, which may have introduced a hierarchy to the intervention. The fact that both researchers conducted the analysis in partnership may strengthen the validity of the study. In order to gain insight into the patients' perception of IPL through practice-based shadowing, we could have interviewed the

patients. This was not the purpose of the study and was therefore ruled out on this occasion. Later research may include patient informants to record their experience of IPL through practice-based shadowing.

Summary

The informants who took part in this practice-based interprofessional shadowing study reported that they acquired knowledge of one another's areas of responsibility and that this formed part of their interprofessional collaborative competence. They emphasised that they had been given an insight into the need for an interprofessional approach to complex challenges on a rehabilitation ward. They found that some of their tasks were the same as those of other professions and that communication, and management support, are key prerequisites for interprofessional collaboration.

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