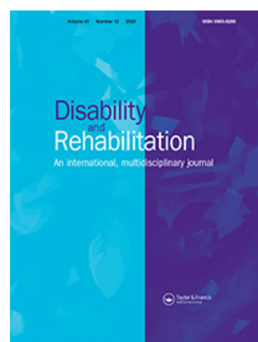

Disability and Rehabilitation

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/idre20

How to strengthen the RTW process and collaboration between patients with chronic pain and their employers in interdisciplinary pain rehabilitation programs? Patients' experiences of the Demand and Ability Protocol

Elin Johansson, Magnus Svartengren, Katarina Danielsson & Therese Hellman

To cite this article: Elin Johansson, Magnus Svartengren, Katarina Danielsson & Therese Hellman (2023) How to strengthen the RTW process and collaboration between patients with chronic pain and their employers in interdisciplinary pain rehabilitation programs? Patients' experiences of the Demand and Ability Protocol, Disability and Rehabilitation, 45:12, 2013-2020, DOI: 10.1080/09638288.2022.2083246

To link to this article: https://doi.org/10.1080/09638288.2022.2083246

© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

Published online: 10 Jun 2022.

Submit your article to this journal

Article views: 1126

View related articles

View Crossmark data

Citing articles: 2 View citing articles

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=idre20

DISABILITY AND REHABILITATION
2023, VOL. 45, NO. 12, 2013–2020
https://doi.org/10.1080/09638288.2022.2083246

RESEARCH PAPER

OPEN ACCESS

How to strengthen the RTW process and collaboration between patients with chronic pain and their employers in interdisciplinary pain rehabilitation programs? Patients' experiences of the Demand and Ability Protocol

Elin Johansson[a,b], Magnus Svartengren[b], Katarina Danielsson[c] and Therese Hellman[b]

[a]Central Hospital in Karlstad, Karlstad, Sweden; [b]Department of Medical Sciences, Occupational and Environmental Medicine, Uppsala University, Uppsala University Hospital, Uppsala, Sweden; [c]Department of Medical Sciences, Psychiatry, Uppsala University, Uppsala, Sweden

ABSTRACT

Purpose: To explore how patients who participate in an interdisciplinary pain rehabilitation program (IPRP) experience a three-party meeting based on the Demand and Ability Protocol (DAP) to assist in return to work (RTW). The DAP is a employee and his/her immediate manager under the guidance of medical staff with knowledge of the patient's work requirements and his/her current functional ability.

Materials and methods: Data included 18 semi structured individual interviews with persons having chronic pain, who participated in a DAP-dialogue during their IPRP. Thematic analysis was used to analyze the data.

Results: Four themes were identified: A structured dialogue facilitated new insights; the dialogue enabled employer participation; the facilitator enabled experiences of feeling safe during the dialogue; and the dialogue created a link between rehabilitation and work.

Conclusions: The DAP dialogue was experienced as a supportive measure for RTW where the employer naturally participated in IPRP. The structure of the dialogue supported concrete planning for workplace adaptations. Furthermore, the dialogue enabled a connection between rehabilitation and the activity of work in everyday life. The results reinforce the importance of including efforts close to the workplace in IPRP in order to facilitate rehabilitation outcomes related to RTW.

ARTICLE HISTORY
Received 21 December 2021
Revised 27 April 2022
Accepted 24 May 2022

KEYWORDS
Rehabilitation; chronic pain; return to work; qualitative method; workplace

➤ **IMPLICATIONS FOR REHABILITATION**

- A structured collaboration and dialogue between the employee, employer, and rehabilitation supports the RTW process.
- Collaboration between stakeholders is important and should be intertwined in IPRP to jointly facilitate the employee's RTW.
- Clarifying the work demands provides motivation for the RTW process.
- Healthcare professionals should collaborate with the workplace to promote employer participation.

Introduction

Chronic pain is a widespread condition around the world. In Sweden, over one-third of the adult population report chronic pain [1], and it has been a condition of concern for several years [2]. Chronic pain is a complex phenomenon [3] having several negative consequences for the individual [1,4], such as fatigue, decreased social contacts, and reduced participation in everyday life. Previous studies have also reported that working life is negatively affected [4,5]; moreover, musculoskeletal disorders, in which chronic pain is included, is the second most common cause of sick leave in Sweden [6]. Work is an important activity in everyday life as it improves an individual's psychosocial well-being [7]. Furthermore, work is closely related to a person's identity [8]. Thus, return to work (RTW) might be an important issue to focus on in rehabilitation due to chronic pain. A traditional way of approaching RTW in healthcare and interdisciplinary pain rehabilitation programs (IPRP) has been to focus on the functional abilities and well-being of the patients before even discussing vocational issues [9]. This is congruent with a synthesis article of qualitative research, concluding that the healthcare system would rather validate pain and write sick leave certificates than focus on effective strategies to facilitate a return to work [10]. Such a dualistic approach might be counter-productive for RTW as it is known that early contact with the workplace is important for RTW [11]. Consequently, it is necessary to develop an IPRP that includes a focus on RTW.

RTW might be considered as the outcome of shifting from being on sick leave to being at work or as the process of returning to work. Young [12] focuses on the process, which starts when the individual experiences work disability and ends when a long-term outcome that the individual is satisfied with is achieved. In this article, the focus lies on RTW as a process rather than as a static outcome, but still with the primary goal of

CONTACT Therese Hellman therese.hellman@medsci.uu.se Department of Medical Sciences, Occupational and Environmental Medicine, Uppsala University, Dag Hammarskjöldsväg 60, Uppsala, 752 37, Sweden

© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

increasing work ability. RTW after sick leave is often a complex process in which numerous actors are involved [13], often with their own perspectives and areas of responsibility [14]. Involving the actors and the patient's workplace at an early stage has been proven to be successful [15–17]. It is also known that rehabilitation which interacts with the workplace is a success factor in RTW, and that work ability assessments that fail to consider the current work situation are less useful [15,18]. This is further supported by a recent systematic review showing that multidisciplinary initiatives with a multi-professional team provide better support for RTW versus individual measures, and that participation and collaboration from employers are seen as important features for a successful rehabilitation process and RTW [19,20]. The collaboration with an employer is important, as one possible barrier for RTW might be a mismatch between the employer's and the patient's expectations. Thus, development of a RTW plan including adaptation at the workplace is recommended [21,22], and there is moderate evidence that it reduces the length of absence from work [23]. From the manager's perspective, it is reported that workplace based interventions with support from a rehabilitation coordinator is valuable as it might strengthen the manager's competence and ability to act adequately in a RTW process [24,25]. Persons with chronic pain also experience that collaboration as important in order to support RTW, but also that this process is too often affected by the individual actors' (employers, health insurance, health and medical care) knowledge and will to find solutions [26]. Support from a rehabilitation coordinator is also found to be valuable by the patients [27].

There are several strategies for collaboration and planning of RTW described in the literature. For example, a problem-solving participatory intervention, involving both the employee and the employee's manager, reduced sick leave among people who were on sick leave for common mental disorders (CMD) and received care from the occupational health services [28]. Shared decision-making is also seen as an important feature in the collaboration with employers in the context of vocational rehabilitation [29]. Convergence dialogue meetings (CDM) consists of three steps; 1) individual meeting with the patient, 2) individual dialogue with the employer, and 3) meeting with both the patient and the employer. CDM have been shown to support RTW in persons with exhaustion disorders [30] and CDM in addition to physiotherapy shown to improve work ability in persons with musculoskeletal pain [31]. Thus, the CDM consists of three meetings in total and showed positive effects. In recent years the Demand and Ability Protocol (DAP) have been developed and consists of one meeting with the patient/employee and the employer without a pre-meeting with the employer. It is linked to the International Classification of Functioning, Disability, and Health, and is based on the Dutch Functional Ability List and knowledge about disability in working life. The DAP has been further developed in Norway and is primarily used in occupational healthcare services for collaboration between an employee and his/her immediate manager [32].

In this study, we focused on exploring experiences of involving the employer in the rehabilitation process by using the DAP in IPRP. This way of working is not that common in traditional IPRP, and there is still a lack of methods and interventions to use when involving the employer in rehabilitation. We aim to explore how patients who participate in an interdisciplinary pain rehabilitation program (IPRP) experience a three-party meeting based on the Demand and Ability Protocol (DAP) to assist in return to work.

Materials and methods

This is a qualitative study comprising individual semi-structured interviews with persons who participated in IPRP. Ethical approval was obtained from the Regional Ethical Review Board, D-nr 2019-01755 and 2020-00015.

The Demand and Ability Protocol

The DAP includes a employee/employee and his/her immediate manager under the guidance of a facilitator (in this study occupational therapists (OT)). The facilitator that moderates the dialogue is recommended to attend a course (two half days) to learn about how to conduct the DAP. They should also have knowledge of the patient's work requirements and his/her current functional ability. In this study, the facilitators' knowledge regarding general work requirements and work situation is based on information from the patients.

DAP considers the following domains: 1) mental and cognitive ability, 2) basic skills and social ability, 3) tolerance for physical conditions, 4) ability to work dynamically, 5) ability to work statically, and 6) to be able to work certain times. Each domain consists of a number of items that are gone through during the meeting. See Table 1. Based on these items, a structured review is performed regarding the balance between requirements and function in the individual's current work in order to identify possible adaptations and measures at the workplace. During the intervention, the work demands and the patient's function/ability are rated on a three-point scale. The ratings are self-reported and the employer starts to rate the demands and the patient starts to rate the function/ability. Thereafter, a dialogue focusing on both requirements and functions/abilities continue in order to create a shared understanding of demands and abilities. In items where the rating of the demands and function/ability does not match; thus, there is an imbalance, and adjustments or changed work tasks may be relevant to consider increasing work ability and reducing sick leave. The dialogue concludes with a summary of the situation and joint development of appropriate measures/adaptations to promote the patient's RTW. This is documented in a form, which is signed by both the patient and the employer who thereafter are responsible for implementing the agreed upon measures and adjustments.

Setting

In this study, the DAP was included as a part of the IPRP and most commonly performed at the rehabilitation clinic. The DAP dialogue was conducted after the participants had been in the

Table 1. Overview of domains and number of items in the DAP.

Domains in the DAP	Number of items in each domain	Examples of items in each domain
Mental and cognitive ability	7 items	E.g., concentration, memory, act goal-oriented and independent
Basic skills and social ability	10 items	E.g., writing, reading, handling conflicts and own emotions
Tolerance for physical conditions	8 items	E.g., heat, cold, personal protective equipment, dust, vibrations
Ability to work dynamically	14 items	E.g., work with hand and fingers, forward bending, rotation of body
Ability to work statically	6 items	E.g., sit, stand, work with arms above shoulders or in forward bent position
Ability to work certain times	3 items	E.g., working hours per day or week

IPRP for a few weeks and was seen as one measure that was offered in the rehabilitation program. Traditionally, work-related measures such as three-party meetings are not commonly included in IPRP but sometimes meetings to coordinate sick leave and RTW is conducted. In Sweden, it is the Swedish Social Insurance Agency (SSIA) who has the main responsibility for coordinating the RTW process and the employers have the responsibility to design a plan for RTW for the employee on sick leave within 30 days if it is assumed that the person will be absent for more than 60 days. However, in this study the aim was not to place the DAP dialogue into the overall sick leave and rehabilitation process as the DAP dialogue is a new feature in IPRP. Rather, the DAP dialogue was seen as an opportunity for collaboration between the patient and his/her employer. The action plan that was developed in the dialogue could be used in forthcoming rehabilitation plans but that was not mandatory.

The patients' took contact with their employer and planned a time for the meeting. This was purposively decided in order to enable the patients' to take an active role in their own rehabilitation. The DAP was planned as a single meeting and no follow-ups were conducted. The OT's that conducted the DAP dialogue had received training in order to perform the DAP dialogue as intended. This training is equivalent with the one that is recommended for use of the DAP.

Participants

Participants in the study were recruited from three different pain rehabilitation units in the middle of Sweden. A consecutive sampling method was used [33]. The following inclusion criteria were used for all participants: 1) having chronic pain (pain for more than three months [34], 2) being employed, and 3) received the DAP intervention during IPRP. Being on full-time sick leave for more than six months before the start of the rehabilitation period was set as an exclusion criteria, as the DAP focuses on the current work; this is also because during a longer period than six months, the specific requirements at work and the working conditions may change. Furthermore, it might be difficult to remember specific requirements.

At the time of recruitment, the participants received oral and written information from the occupational therapist working at the rehabilitation clinic about the aim of the study and what possible participation entailed. They were also informed that they could withdraw from the study at any time for any reason. The participants who orally accepted participation also signed a written informed consent form.

The participants who agreed to participate in the study ($n = 19$) were contacted and interviewed by a member of the research group. The participants decided the place for the interview, and three interviews were conducted at the participants' workplace, six at the rehabilitation clinic, and nine were performed digitally. One participant declined to participate due to changed working situation as a consequence of the prevailing Covid-19 pandemic. The recruitment of participants ended when 18 participants were interviewed and that was partly decided due to practical reasons. Furthermore, the research group noticed that many similarities and few new aspects were brought up in the interviews.

The study included a total of 18 patients, 14 women and four men, with a mean age of 41.6 years (range 24–62). The average years of employment at their current workplace was 7.91 years (range 1–24). The average years of pain duration with continuous pain was 9.79 years (range 1–38). See Table 2.

Table 2. Participants characteristics.

Participant	Gender	Age	Profession	Year at work	Pain duration (year)
Eva	Female	40	Bank clerk	10	1
Erik	Male	29	Storage work	3	2
Maria	Female	37	Teacher	3	1
Anna	Female	54	Teacher	8	9
David	Male	54	Plumber	5	18
Lena	Female	38	Teacher	3	38
Kristina	Female	42	Office work	2,5	1
Åsa	Female	46	Social worker	1	2[a]
Karin	Female	25	Team leader	5,5	4
Sofia	Female	42	Administrator	23	4
Charlotte	Female	25	Product quality engineer	24	20
Jan	Male	45	Assistant nurse	7	
Maja	Female	46	Teacher	20	5
Susanne	Female	52	Administrator	7	16
Frida	Female	55	Local manager	2	20
Sara	Female	24	Alarm operator	1,5	5
Erika	Female	26	Biomedical analyst	3	6
Tomas	Male	51	Supervisor	4	11

[a]Had intermittent not continuous pain.

Data collection

The data were collected through individual semi-structured interviews between July 2019 and July 2021. The interviews were conducted, on average, 2.7 months (range 1–5) after the DAP intervention and varied between about 35–60 min. All interviews were digitally recorded.

An interview guide with initial open-ended questions was used to ensure that important issues were covered during the interviews. Furthermore, several follow-up questions were asked in order to get a deep understanding and description of situations and narratives that the participants raised, and to make sure that they were understood in the right way [35]. The study began by piloting the interview guide. Only small changes were made without influencing the content of the interview guide. The pilot interview was therefore included in the study.

The interview guide was developed based on a consecutive timeline with three sections: 1) the work situation and everyday life before the rehabilitation period, 2) experiences of participating in the DAP dialogue, and 3) the work situation and everyday life after the DAP dialogue and the rehabilitation period. Examples of questions include: "Tell me about your work situation just before the rehabilitation started. How did you experience the DAP dialogue?" "How is your work situation right now?" "Please tell me how you and your manager have worked with the planned adjustments that were brought up in the DAP dialogue."

Data analysis

A thematic analysis with an inductive approach was used to analyze the data [36]. This analysis process contains six steps, where the first step aims to get acquainted with the material; all interviews were carefully listened to and compared with the transcripts. Furthermore, the material was read through repeatedly and imported into the NVivo software, version 12, in order to prepare for the forthcoming steps in the process. In the second step, the coding process was initiated by dividing the material into smaller segments and labelling the codes with words close to the transcripts, which reflected the content. In this step, the entire data material was coded systematically, interview by interview. The first interviews were coded by the first and last authors, who first worked independently with the coding and then compared and discussed until a consensus was reached. After the joint

coding, the remaining interviews were coded by the first author. Some data were double coded as they contained several meaningful units. In the third step, codes were sorted into potential themes by comparing the initial codes from each interview. This step started when all interviews were coded and sorted. Here, all interviews were analyzed together as a whole by testing how the codes can be combined into more general themes [36]. In step four, themes were reviewed and checked against the codes and interviews by going back to the transcripts. In the fifth step of the analysis process, themes were defined and named. In this step, all authors, representing an interprofessional research team, discussed the emerging themes and categories until a consensus was reached. This was valuable in order to limit the risk that the analysis would be characterized by the first author's professional background in IPRP, but also to ensure the reliability of the study [37]. A selection of the participants' interview comments was included when writing the report to strengthen the credibility of the study. To support the analysis, memo-writings were used during all steps.

Results

The findings are presented in four themes and eleven sub-themes. These are presented in Table 3, and each theme is presented more in depth in the following text. See Table 3.

A structured dialogue facilitated new insights

A central theme focused on the support and the clear guidance that the DAP dialogue offered in order to clarify the specific demands placed at work. The participants expressed that even though some managers were aware of their pain related problems before the DAP dialogue, new aspects related to the work demands emerged due to the richness of details in the questions. The dialogue did not always identify a great number of mismatches between the demands at work and the abilities of the participants. Still, the participants described the thorough discussion of each aspect as important and beneficial, as it decreased the risk of missing significant work demands. To have a shared platform in which managers, rehabilitation professionals, and patients could gather and share knowledge from their own perspectives made it easier for the patients to talk about their abilities in relation to work.

> … So, it became very clear and concise (…) domain by domain and that you really had to dive deep into what could be a concern. (Åsa)

The participants also expressed that the DAP dialogue enabled a clear and straightforward communication with the manager. They expressed that this clear communication was enabled through the possibility of focusing on areas where mismatches were identified. This communication was needed as it became evident that a dialogue focusing on demands at work was seldom conducted at the workplace, and a natural context for such dialogue seemed to be lacking for many of the participants. The participants also related that they did not initiate such a dialogue due to their unawareness of the actual demands placed in the work tasks, and they experienced that the demands were not communicated clearly.

> I think it was quite liberating and nice to have the open dialogue. We have talked a lot about it before, but now it really came in black and white that this is my situation. And above all, I heard what she thinks and what she thinks the demands are and what the demands should be. (Erika)

Having this dialogue focusing on demands and abilities also increased the participants' understanding that their own requirements sometimes exceeded the requirements of their managers. This increased awareness, together with a clear dialogue about the demands at work, sometimes contributed to a re-evaluation of their demands. The participants described that they felt confident in lowering the requirements and the pace, as they knew that they lived up to the managers' expectations.

> I don't know what they have demanded of me, what I should achieve, how to look at all these questions that were asked. So, I think it was really great to hear, and I almost had such an aha-experience. (Kristina)

The dialogue enabled employer participation

Besides the structured dialogue and clarity regarding demands at work, the participants also valued the possibility of including the manager in the rehabilitation process. However, how the managers acted during the dialogue played a significant role in how the dialogue was experienced. Even though most of the participants experienced positive feedback from the managers and colleagues after the DAP dialogue had been conducted, some were also hesitant before the dialogue. For example, one participant described feeling exposed because of the detailed discussions that were about to take place. However, the same participant also concluded that it is up to each person how much information to share. Furthermore, the participants also raised the importance of providing a thorough description of the aim with the dialogue to both the manager and the patient. One participant described a situation where this had not been done, with the consequence that the manager did not fully understand the long-term goal with the dialogue, which, in turn, resulted in feelings of anxiety for the participant.

Table 3. Themes and sub-themes.

Themes	Sub-themes
A structured dialogue facilitated new insights	• Richness of details • Shared platform to use in the dialogue • New insights regarding demands at work
The dialogue enabled employer participation	• Confirmation from the employer of being needed at work • Resolved misunderstandings • Increased understanding from the employer
The facilitator enabled experiences of feeling safe during the dialogue	• Knowledge of the participants' everyday life created feelings of security • Seen as a neutral part in the dialogue • Contribute with suggestions regarding work adaptations
The dialogue created a link between rehabilitation and work	• Prepared for the dialogue during rehabilitation • Enabled a continued dialogue between the participant and the employer after rehabilitation

> It would probably have been good to have a letter and give it to my employer, because he did not know what this was either. So, I tried to explain to him, but it was like this; ok. Yes, let's go on. (Sofia)

The participants expressed a wish that the dialogue should contribute with increased understanding from their managers and an important aspect to reach this goal was that the manager became involved in the rehabilitation. The involvement of the manager gave signals of being needed, and it was important for the participants to get confirmation that their contribution at work was valuable.

> I think it has made me a little more confident and open about this with my work as well as with my boss. And the goals I have for myself could have been easier or I mean, work is a big part and being able to make the boss understand a little more. (Sara)

The interviews revealed that some participants previously had felt misunderstood by their managers due to their limited knowledge of chronic pain and their sole focus on how the patients function at the workplace. They described that managers did not have knowledge about the consequences of chronic pain and how a day at work could affect their everyday life, for example, not being able to manage any activities after a full day at work. A common experience among the participants was related to worries of being viewed as lazy by their managers and colleagues because of, for example, recurrent short-term sick leave periods. The DAP dialogue contributed to a decrease in such feelings, as it enabled a thorough dialogue about the work situation and chronic pain.

> … he sees me at work where I work flawlessly, but he does not see what happens when I get home. It was just like that, yes, but it's just as good to talk about as it is. But I can imagine that not everyone can or wants to do that. (Kristina)

Some participants had not talked about their pain before the rehabilitation, and it was then a challenge to realize and accept their functional abilities, both for themselves and toward their managers. The participants thought that their managers were responsive and attentive during the dialogue; furthermore, once they returned to work, the managers continued to ask questions regarding the participants' well-being and asked if the agreed upon work adaptations had any effect.

The facilitator enabled experiences of feeling safe during the dialogue

The dialogue was facilitated by an occupational therapist working with the IPRP. This person was perceived as a supportive link between rehabilitation and the workplace and had a significant role in the dialogue. The support from the facilitator and his/her knowledge about the participants' social and everyday life generated feelings of security for the participants, as these were aspects that the manager often did not know so much about. The facilitator had no previous connection to the workplace, and the participants described that the lack of prior knowledge enabled a facilitation without leading the dialogue in a particular direction.

> In a way, I think it would have been different if someone had been involved in our business because then you could have become, that is, unconsciously biased. Meaning that you look at what are the benefits of the business and what can we change and what can't we change based on what is best for the business and not what is best for me then, so to speak. (Erika)

The facilitator's knowledge of both rehabilitation and the participant's situation enabled an in-depth discussion. The participants described that it was easy to highlight their difficulties when the facilitator was well-known. Furthermore, in cases where the participants minimized their difficulties because of fear of being perceived as a person who could not manage his or her work tasks, it was possible for the facilitator to support the patient by raising such issues in order to have a constructive dialogue and identify possible work adaptations.

> I experienced that it is possible to find, well, what should I say. You can change small details that can result in great change. Both in, […] the mental work environment and also the physical. So, I thought we could access things that can make it easier. I myself could not, as it were, specify that I needed help. (Maja)

The facilitator also played a significant role in giving suggestions for possible work adaptations. Furthermore, the participants experienced that the facilitator gave important information through his/her role as experts in rehabilitation and chronic pain. Giving the managers the possibility of meeting a person from the rehabilitation team to ask questions and who could inform them was viewed as beneficial.

> You got things out of your system. I know how my boss feels, and she knows how I feel; there was a rehabilitation staff there who could help and offer support if there were any questions and concerns. So, you were not left out; instead, it feels cozy and calm and nice. (Maria)

The dialogue created a link between rehabilitation and work

The collaboration and coordination between the IPRP and the workplace contributed to feelings of security in the continued rehabilitation process after the medical rehabilitation. During the interviews, the participants described that the insights gained during rehabilitation contributed to an awareness of how their activity pattern and behavior influenced their work ability. They perceived the DAP dialogue as a supportive intervention with regard to connecting the new insights from the medical rehabilitation into the work context.

The DAP dialogue took place after the participants had been in the IPRP for a few weeks and had thus gained valuable insights regarding their functional demands and resources. They learned about chronic pain and new strategies for handling their pain in various activities. Strategies included, for example, increased attention and awareness of the importance of taking breaks. The participants felt that these insights were important to share when it was time to involve the manager. Feeling prepared to collaborate and communicate with their managers at the time of the DAP dialogue was perceived as important and having time to get new knowledge about oneself facilitated these feelings. They described having a heavy load, both at work and at home, and shared the experience of having new insights about their workload and occupational balance during rehabilitation. Having these experiences before conducting the DAP dialogue was beneficial and thus made the dialogue an important step in the efforts to reach a sustainable RTW.

> It is about changing a behavior that you have had which has been harmful to the body and it is not enough with just conversations because it was more about how you were at work and how I worked and stuff like that, but it is just as much leisure time that has been a vicious circle. So, I mean, it's everything, and that's probably what has made me realize when it comes to pain rehab that you can't go on like this anymore. (David)

The structure of the DAP dialogue contains a summary of identified imbalances and planned work adaptations at the end of the dialogue. It also highlights who has the responsibility for the planned interventions and adaptations. Both the patient and the manager documented in and signed this summary, which was

deemed to be a helpful tool when trying to make a reality of the planned interventions.

> Easier to, like, get a structure on where you are at, rather than just having to sit and talk and then you have to write down a lot of notes and then it's just like bla bla bla. (Maria)

Furthermore, the participants described that it was easier to continue the dialogue regarding work demands and adaptations with their managers when having started the discussion through the DAP dialogue. Having the written document also made it easier for the patient to remind the managers of what had been agreed upon during the dialogue.

> It's really smart to get the connection when you go to the pain rehab, it's good even if you do other things like this for sure, that you then get a connection to actually the workplace so that you can use what you have learned and that, otherwise, it does not work fully out I think. I think you have to get that help too and that the boss in my case then gets to talk to someone who has met me for nine weeks over there and knows how I work. (Sofia)

The participants viewed the DAP dialogue as a supportive tool when they were about to implement the new knowledge, strategies, and insight from rehabilitation into their everyday life.

Discussion

This qualitative study explored how patients who participated in IPRP experience a three-party meeting based on the Demand and Ability Protocol (DAP). Previous research have shown that early contact between the healthcare, patient, and employer [18], and workplace adaptations [22] facilitate RTW. Even though it is known to be an important factor for successful RTW, it is not yet a natural part of IPRP [9]. Findings from our study showed that the participants experienced the involvement of their managers as positive and that it enabled a constructive connection between rehabilitation and their working life. A previous study pointed out that linking rehabilitation to everyday life is important in maximizing and sustaining positive outcomes from rehabilitation [38]. Furthermore, previous research focusing on patients' experiences of RTW emphasized the need for knowledge transfer from pain rehabilitation to other involved stakeholders, such as the managers [26]. Similar findings have been identified in patients with stress-induced exhaustion disorder [30], and they were also highlighted in our findings. The participants emphasized the value of having the experts from rehabilitation, facilitating the dialogue as they were able to explain common consequences of pain and how it often affected persons at work. Some participants had previously felt misunderstood by their colleagues and managers but felt that the managers got a deeper understanding of their situation during the dialogue. This is important for the RTW, as previous studies of persons with various diagnoses have also found that colleagues and managers' attitudes toward the person influence the ability to RTW [26,39].

In the present study, participants brought up that it was easier to continue discussions regarding work adaptations when they were back at work because of the shared communication in the DAP dialogue. This has also been identified in previous projects focusing on DAP in occupational health care. These projects identified that DAP was easy to use, enabled a fast initiation of rehabilitation measures at the workplace, and concretized suggestions of work adaptations [40]. According to the DAP, a plan for forthcoming measures and work adaptations is compiled at the end of the dialogue. From the findings in the present study, the facilitator was a great help in providing suggestions for work adaptations based on the dialogue and information that emerged during the rehabilitation. The participants experienced that the facilitator had a key role in the dialogue, partly because of his or her knowledge of factors that affect the ability to work. In previous studies using the DAP method [40], the facilitator has been linked to occupational healthcare. In this study, the context was in medical rehabilitation, where the facilitator was a rehabilitation staff who saw and observed the patient for a few weeks, and thus gained a pre-understanding of the problems. Even though there are different pre-requisites in occupational healthcare and medical rehabilitation it seems that patients/employees in both contexts experience adequate action plans and suggestions for adaptations [40].

The participants thought it was important to have good timing for a DAP dialogue and that it was beneficial to conduct the initial part of the rehabilitation that focused on increased awareness, knowledge about chronic pain, and behavior change before having the dialogue with their managers. This initial phase of rehabilitation gave the participants new insights regarding their functional ability, and how both home-related and work-related activities reciprocally influenced each other. Previous studies support these findings. For example, in a recently published study [41] among women and men on sick leave for mental illness, it was found that both home-related demands and resources affected the RTW and that it is thus important to take home-related factors into account, in addition to work-related factors. These findings can also be theoretically understood by the use of the work ability house model, which is a holistic model explaining work ability created by Ilmarinen [42]. In this model, work ability is understood as a multifaceted concept that is achieved by taking into account the person's individual function as well as contextual factors such as the work environment, societal structures, social networks, as well as other home-related factors. The individual's abilities are always seen in relation to the work, and related factors should be considered, as well as the environment outside the work. In other words, this model emphasizes the need to view the individual from a holistic perspective in order to achieve work ability, which is also seen in the present study.

Methodological considerations

All patients who participated in a DAP dialogue agreed to participate in the study. It is, however, important to acknowledge that some patients who were eligible for a DAP dialogue during the rehabilitation period may actively have chosen not to include their employer in the rehabilitation and thus declined participation in the DAP dialogue. Still, without having full control, the clinical occupational therapists report that all patients that were offered the DAP consented to include their employer. However, one employer declined to participate because he/she felt that the patient and the employer could solve issues at the workplace without such a meeting. Even though, this might create a selection bias, which is important to take into account [43] when interpreting the findings. One might consider that the findings are not representative of all patients participating in IPRP. Still, the findings highlight important aspects that are experienced by this particular sample of patients with pain who wanted to participate in a three-party meeting with their employer; moreover, the results are similar to other studies.

In order for the planned work adaptations which came up during the DAP dialogue to have a chance to be implemented, data collection was conducted about 1–5 months after the DAP dialogue took place. To reduce the risk of possible memory bias, the interview guide was designed with open-ended questions and

several optional follow-up questions targeting the DAP dialogue. There might be a potential risk of misinterpretation of interview material in qualitative studies, so-called confirmation bias [44]. In this study, the potential risk was handled by triangulation between the authors. The first interview was also analyzed by two authors in order to identify potential conformation bias. These actions strengthen the validity of the study [43]. Something that also should be noted is that eight research interviews were conducted face to face; due to the prevailing Covid-19 pandemic, ten research interviews were conducted *via* video call. To implement digital interviews was seen as a good solution to increase the opportunity to include study participants. The literature brings up both pros and cons with digital interviews. It is for example known that it might be more difficult to see body language in digital interviews and thus risk to miss important cues in the dialogue. However, it is also seen that it might be easier for the respondent to bring up sensitive issues during a digital interview compared to face to face [45]. In our study, we found that the interviews that were conducted digitally did not differ in duration or in quality, and the essence of the content was consistent with the interviews conducted face to face.

Conclusion

Our study identified the DAP dialogue as a supportive measure for RTW, where the employer naturally participates in the IPRP. The structure of the dialogue was described as valuable and provided concrete planning for workplace adaptations. The DAP dialogue also provided important information to clarify the demands and tasks of the work, which in many cases were not clearly communicated prior to this meeting. Findings show that the patients experienced DAP as a useful and valuable feature in the IPRP as it contributed to an increased holistic view. Furthermore, the dialogue enabled a connection between rehabilitation and the activity of work in everyday life. The results of the study reinforce the importance of including efforts close to the workplace in IPRP in order to facilitate positive rehabilitation outcomes related to RTW.

Acknowledgments

The authors gratefully acknowledge the individuals who participated in the study and the occupational therapists at the IPRP who recruited eligible participants.

Disclosure statement

The authors report no conflicts of interest in this work.

Funding

This research was supported by AFA Insurance [grant number 190071].

ORCID

Magnus Svartengren http://orcid.org/0000-0002-8165-7236
Therese Hellman http://orcid.org/0000-0002-4328-220X

Data availability statement

Data are available upon reasonable request.

References

[1] Harker J, Reid KJ, Bekkering GE, et al. Epidemiology of chronic pain in Denmark and Sweden. Pain Res Treat. 2012;2012:371248.
[2] Breivik H, Collett B, Ventafridda V, et al. Survey of chronic pain in Europe: prevalence, impact on daily life, and treatment. Eur J Pain. 2006;10(4):287–333.
[3] Pietila-Holmner E, Enthoven P, Gerdle B, et al. Long-term outcomes of multimodal rehabilitation in primary care for patients with chronic pain. J Rehabil Med. 2020;52(2):jrm00023.
[4] Persson E, Lexell J, Rivano-Fischer M, et al. Everyday occupational problems perceived by participants in a pain rehabilitation programme. Scand J Occup Ther. 2013;20(4):306–314.
[5] Wynne-Jones G, Buck R, Porteous C, et al. What happens to work if you're unwell? Beliefs and attitudes of managers and employees with musculoskeletal pain in a public sector setting. J Occup Rehabil. 2011;21(1):31–42.
[6] Lidwall U. Sick leave diagnoses and return to work: a swedish register study. Disabil Rehabil. 2015;37(5):396–410.
[7] Waddell G, Burton A. Is work good for your health and well-being? London: TSO; 2006.
[8] Taylor R. Kielhofner's model of human occupation: theory and application. 5th ed. Philadelphia: Wolters Kluwer; 2017.
[9] Hellman T, Jensen I, Bergstrom G, et al. Returning to work - a long-term process reaching beyond the time frames of multimodal non-specific back pain rehabilitation. Disabil Rehabil. 2015;37(6):499–505.
[10] Toye F, Seers K, Allcock N, et al. A synthesis of qualitative research exploring the barriers to staying in work with chronic musculoskeletal l pain. Disabil Rehabil. 2016;38(6):566–572.
[11] Franche RL, Baril R, Shaw W, et al. Workplace-based return-to-work interventions: optimizing the role of stakeholders in implementation and research. J Occup Rehabil. 2005;15(4):525–542.
[12] Young AE, Roessler RT, Wasiak R, et al. A developmental conceptualization of return to work. J Occup Rehabil. 2005;15(4):557–568.
[13] Corbiere M, Mazaniello-Chezol M, Bastien MF, et al. Stakeholders' role and actions in the return-to-Work process of workers on Sick-Leave due to common mental disorders: a scoping review. J Occup Rehabil. 2020;30(3):381–419.
[14] Stahl C, Svensson T, Ekberg K. From cooperation to conflict? Swedish rehabilitation professionals' experiences of interorganizational cooperation. J Occup Rehabil. 2011;21(3):441–448.
[15] Carroll C, Rick J, Pilgrim H, et al. Workplace involvement improves return to work rates among employees with back pain on long-term sick leave: a systematic review of the effectiveness and cost-effectiveness of interventions. Disabil Rehabil. 2010;32(8):607–621.
[16] Durand MJ, Corbiere M, Coutu MF, et al. A review of best work-absence management and return-to-work practices for workers with musculoskeletal or common mental disorders. Work. 2014;48(4):579–589.
[17] Oakman J, Neupane S, Proper KI, et al. Workplace interventions to improve work ability: a systematic review and Meta-analysis of their effectiveness. Scand J Work Environ Health. 2018;44(2):134–146.

[18] van Vilsteren M, van Oostrom SH, de Vet HC, et al. Workplace interventions to prevent work disability in workers on sick leave. Cochrane Database Syst Rev. 2015;(10):CD006955.
[19] Cullen KL, Irvin E, Collie A, et al. Effectiveness of workplace interventions in return-to-Work for musculoskeletal, Pain-Related and mental health conditions: an update of the evidence and messages for practitioners. J Occup Rehabil. 2018;28(1):1–15.
[20] Wegrzynek PA, Wainwright E, Ravalier J. Return to work interventions for chronic pain: a systematic review. Occup Med. 2020;70(4):268–277.
[21] Grant M, OB-E J, Froud R, et al. The work of return to work. Challenges of returning to work when you have chronic pain: a Meta-ethnography. BMJ Open. 2019;9(6):e025743.
[22] Liedberg GM, Bjork M, Dragioti E, et al. Qualitative evidence from studies of interventions aimed at return to work and staying at work for persons with chronic musculoskeletal pain. JCM. 2021;10(6):1247.
[23] Dol M, Varatharajan S, Neiterman E, et al. Systematic review of the impact on return to work of return-to-Work coordinators. J Occup Rehabil. 2021;31(4):675–698.
[24] Eskilsson T, Norlund S, Lehti A, et al. Enhanced capacity to act: managers' perspectives when participating in a dialogue-based workplace intervention for employee return to work . J Occup Rehabil. 2021;31(2):263–274.
[25] Ost Nilsson A, Eriksson G, Asaba E, et al. Being a co-worker or a manager of a colleague returning to work after stroke: a challenge facilitated by cooperation and flexibility. Scand J Occup Ther. 2020;27(3):213–222.
[26] Svanholm F, Liedberg GM, Lofgren M, et al. Factors of importance for return to work, experienced by patients with chronic pain that have completed a multimodal rehabilitation program - a focus group study. Disabil Rehabil. 2022;44(5):736–744.
[27] Holmlund L, Hellman T, Engblom M, et al. Coordination of return-to-work for employees on sick leave due to common mental disorders: facilitators and barriers. Disabil Rehabil. 2020;5:1–9.
[28] Keus van de Poll M, Nybergh L, Lornudd C, et al. Preventing sickness absence among employees with common mental disorders or stress-related symptoms at work: a cluster randomised controlled trial of a problem-solving-based intervention conducted by the occupational health services. Occup Environ Med. 2020;77(7):454–461.
[29] Pii KH, Hybholt L, Poulsen RM, et al. Shared decision making in an integrated mental health and vocational rehabilitation intervention: stakeholder practices and experiences. Int J Integr Care. 2020;20(4):18.
[30] Stromback M, Fjellman-Wiklund A, Keisu S, et al. Restoring confidence in return to work: a qualitative study of the experiences of persons with exhaustion disorder after a dialogue-based workplace intervention. PLoS One. 2020;15(7):e0234897.
[31] Sennehed CP, Holmberg S, Axen I, et al. Early workplace dialogue in physiotherapy practice improved work ability at 1-year follow-up-WorkUp, a randomised controlled trial in primary care. Pain. 2018;159(8):1456–1464.
[32] Engbers M, Furulund P. Funksjonsvurdering på arbeidsplassen, et hjelpemiddel ved spesialvurdering i regi av bedriftshelsetjenesten. Test av krav og funksjonsskjema i praxis. Slutrapport till NHO arbetsmiljöfondet projekt S-2387. Oslo. 2006.
[33] Polit D, Beck C. Nursing research: generating and assessing evidence for nursing practice. 9 ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2012.
[34] International Association for the Study of Pain (IASP). 2017 [cited 2020 Oct 13]. Available from: www.iasp.org
[35] Kvale S, Brinkmann S. Interviews: Learning the craft of qualitative research interviewing. 3rd ed. Thousand Oaks: Sage Publications; 2015.
[36] Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101.
[37] Ohman A. Qualitative methodology for rehabilitation research. J Rehabil Med. 2005;37(5):273–280.
[38] Hellman T, Jonsson H, Johansson U, et al. Connecting rehabilitation and everyday life-the lived experiences among women with stress-related ill health . Disabil Rehabil. 2013;35(21):1790–1797.
[39] Ost Nilsson A, Eriksson G, Johansson U, et al. Experiences of the return to work process after stroke while participating in a person-centred rehabilitation programme. Scand J Occup Ther. 2017;24(5):349–356.
[40] Liethof W. Utvärdering av" krav och funktionsschema", en ny metod för bedömning av arbetsförmåga för företagshälsovården. [demand and ability protocol – a new method for work ability assessment in occupational health services]. Uppsala: Uppsala Universitet; 2011.
[41] Nybergh L, Bergstrom G, Hellman T. Do work- and home-related demands and resources differ between women and men during return-to-work? A focus group study among employees with common mental disorders. BMC Public Health. 2020;20(1):1914.
[42] Ilmarinen J. From work ability research to implementation. Int J Environ Res Public Health. 2019;16(16):2882.
[43] Carter R, Lubinsky J. Rehabilitation research: principles and applications. St. Louis (MO): Elsevier; 2016.
[44] Nickerson R. Confirmation bias: a ubiquitous phenomenon in many guises. Rev Gen Psychol. 1998;2(2):175–200.
[45] Thunberg S, Arnell L. Pioneering the use of technologies in qualitative research – a research review of the use of digital interviews. Int J Soc Res Method. 2021. DOI:10.1080/13645579.2021.1935565