Contradictions and conflicts in brain injury rehabilitation. A systematic inquiry into models of rehabilitation

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ABSTRACT
The approach of addressing biology as the sole process to recovery after a brain injury has been criticized since the 1980s. Based on the bio-psycho-social model (BPSM), new national guidelines stipulate that brain injury rehabilitation should be based on dynamic approaches and interactive principles. Proceeding from a Systematic Inquiry into Models for Rehabilitation (SIMREB) and Institutional Ethnography approach, we identify possible contradictions, barriers and conflicts hampering the implementation of the BPSM with reference to basic discourse conflicts within the field of acquired brain injury rehabilitation. We find four main barriers within practice that may hamper the implementation of the new paradigm: institutional premises that sustain biological discourses, difficulty of predicting recovery, lack of interdisciplinary collaboration and a general ignorance regarding the life-world of people with ABI. The analysis is based on fieldwork in a Danish Neuro-Rehabilitation Centre.

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Introduction
This article examines the degree to which the bio-psycho-social model (BPSM) is being implemented in rehabilitation practices by using the Systematic Inquiry into Models for Rehabilitation (SIMREB) model (Høgsbro 2010) as an investigative tool. In brief, the SIMREB model emphasises four levels of a rehabilitation programme: the episteme and its discursive references to international theories and frames of reference, professional practice, the users’ experience of the professional practice and the life-world they refer to when understanding their own problems and future perspectives. The purpose of this article is to identify possible contradictions, barriers and conflicts hampering the implementation of the BPSM. Furthermore, we examine how these contradictions, barriers and conflicts relate to basic discursive conflicts within the field of acquired brain injury (ABI) rehabilitation.

Even though the BPSM has existed for more than 30 years (Engel 1977) and has been further recommended and prioritized in rehabilitation practice by the World Health Organisation in 2001, it has still not been fully implemented. We seek to explore possible barriers to the implementation of the BPSM in Danish neurorehabilitation practice.

Methods
Data were gathered from a two-week (7–18 January 2013) participatory fieldwork (Spradley 1979; Wadel 1991) event at the Regional Neuro-Rehabilitation Centre in Northern Denmark for individuals...
with moderate or severe ABI. The Neuro-Rehabilitation Centre also offers rehabilitation to outpatients with ABI as part of the community rehabilitation offer.

In order to get in-depth information about the rehabilitation practice at the Centre, the researcher participated in everyday activities for individuals with ABI that included interactions with professionals, for example, neuropsychological testing, physical training, speech and language therapy, meetings, etc. The experiences of individuals with ABI have rarely been seen as reliable or as important sources of information (e.g. Gracey et al. 2008). Thus, most studies regarding ABI have approached the topic from a medical or neurological point of view and mainly from a professional perspective. To rectify this omission, in addition to observations, the researcher also had conversations with the individuals with ABI during the fieldwork at the centre.

The project was approved by the Danish Data Protection Agency (Datatilsynet). All names used in this paper are fictitious.

In this study we employ Institutional Ethnography (IE) as an approach to study everyday life situations and make connections between individuals with ABI, professional practice and policy-making. IE relies on people’s experience as the point of entry into inquiry, exploring connections among the local settings of people’s everyday lives, institutional processes and translocal ruling relations (Schmidt 2005). This article has a more limited scope. It focuses on the relation between institutional practices and the discourses of national strategies. The focal question remains how and why professionals at the institutions are influenced by other institutional practices within the broader setting of ABI rehabilitation. The goal is, as Dorothy Smith puts it, ‘to go beyond what people know to find out how what they are doing is connected with others’ doings in ways they cannot see’ (Schmidt 2005). Additional questions will be addressed in other studies.

**Participants/observations**

The researcher observed various interactive situations, including meetings, training and mealtimes, and had conversations with 12–15 patients regarding issues such as identity, information and the rehabilitation centre.

There was a fairly equal distribution of men and woman. Older people (not yet at retirement age) who had suffered strokes and haemorrhages were the main group at the Neuro-Rehabilitation Centre. The majority were in ordinary jobs prior to injury.

The data analysis and interpretation presented in the article are based on observations from several meetings, training sessions and conversations with individuals with ABI. However, in this article, only a few representative observations are included due to limitations of space: specifically, a meeting with Peter, a training session with Kenneth and conversations with Martin, Eric, Gitte and Simon.

Quotations from conversations between patients and the researcher are selected in order to represent the general attitudes and predominant concerns among the patients with ABI. The examples presented in this article illustrate typical issues or situations at the Neuro-Rehabilitation Centre.

**Data analysis**

Fieldwork at the Neuro-Rehabilitation Centre is reported as observations and themes. The coding was performed in a manner inspired by grounded theory (Glaser and Strauss 1967). This means that theory is constructed based on data analysis and not the other way round. However, this analysis made use of both an inductive and deductive approach. The analysis was based on Thematic Content Analysis (Braun and Clarke 2006). Field notes were carefully read and condensed for meaning. In this process central themes and patterns were identified. In addition, analytic questions were generated to examine data, for example, what were the individual with ABI’s assumptions about good rehabilitation? What helps or hinders good outcomes? Themes that emerged regularly were selected as head themes.
Theory

The SIMREB model (Høgsbro 2010), employed as a theoretical framework to conduct the examination, consists of four different levels (A, B, C and D) and three different aspects (1, 2 and 3) (Figure 1).

The upper levels of the model, Level A and B, represent the professional system and the lower levels, Level C and D, represent the perspective of individuals with ABI.

Aspect 1 refers to the problem (its understanding), aspect 2 refers to the practice to solve the problem and aspect 3 to the expected effect/results of such practice.

**Level A** comprises the general episteme of the studied model for the rehabilitation programme, and the theoretical knowledge and ethical concerns that inform the rehabilitation practice. The

![Figure 1. The SIMREB model.](image-url)
episteme refers to an international consensus or divergence of positions based on research findings within the field (biological, psychological and social) as well as internationally recognized ethical premises concerning disability rights.

**Level B** refers to the professional practice at the specific rehabilitation centre. The SIMREB model aims at analysing the levels of consistency/inconsistency between scientific and theoretical knowledge, politics, national guidelines and the professional practice with respect to the definition of the disability (B1), the relevant rehabilitation plan (B2) and the expected outcome (B3).

**Level C and D** reflect levels A and B as seen from an individual perspective.

Level C represents the individual understanding of the personal problem (C1), the experience with the professional practice (C2) and the expectation for the future (C3). Level C refers to level D which comprises the life-world of the individual, referring to specific cultural premises, knowledge and presumptions about disabilities, rehabilitation and rights, daily life, and the family and peers of the individual with a disability.

The SIMREB model is a meta-design focussing on the interaction between professionals and individuals with ABI, and it is seen as part of a wider tradition of IE (Høgsbro 2010; Schmidt 2005). People in the roles of patients, clients and users of institutional services are regarded as linked to a life-world perspective limited by a certain horizon which makes it impossible to fully understand the conditions and dynamics of a professional system (Habermas 1981; Schmidt 2005; Schutz and Luckmann 1989). The professionals, on the other hand, are limited by social dynamics outside their own part of the system and routines within their job that they take for granted (DeVault and McCoy 2006). The aim of an IE is to clarify the ‘trans-local’ dynamics of discourses and formal regulations that influence the interaction between professionals and clients, in this case individuals with ABI. The SIMREB model is seen as a more limited part of an ideal IE as it mainly focusses on discourses and epistemologies that influence local practice, and less on formal regulations and institutional practices that influence practice at the ‘trans-local’ level. Nor does it focus on alternative discourses and rehabilitation models that could be held as alternative approaches to practice if these discourses are not referred to in the local practice.

In the following section, we use the SIMREB model to evaluate the current rehabilitation practice at a rehabilitation centre in order to locate possible conflicts and contradictions between the different levels A, B, C and D in implementing rehabilitation based on the BPSM.

**Results**

Over the last 30 years, the BPSM of health and disability, along with recent research in neuroscience, has shifted the focus in brain injury rehabilitation.

Already in 1977, the American psychiatrist George L. Engel was arguing for the need for a new medical model on the basis of the new research findings (Engel 1977). The philosophy behind the BPSM model is that workings of the body can affect the mind, and vice versa. The understanding of disability promoted by the BPSM is that health is best understood as a combination of biological, psychological and social factors rather than as a purely biological factor.

According to the biological model (predominant until the 1980s), disabilities are seen as personal tragedies and therefore problems are seen at an individual level (Barnes and Mercer 2003). The social model, by contrast, is of a relational character, emphasizing the social situation of a person and the interaction with, for instance, a staff member while identities and coping strategies are being constructed (Barnes and Mercer 2003). The BPSM focuses on both the individual and the society as well as on the relation between them.

Within the last 30 years, new brain injury research has challenged the traditional view that a damaged brain could not develop new neurons and yielded the conclusion that our brain is capable of rewiring and altering new functions to improve the ability to meet the demands of our environment. Views like ‘Reversible disturbances of function can be explained through proper treatment (rehabilitation) efforts, including psychotherapy and psychopharmacology, as well as heavy
emphasis on brain reorganisation’ (Boseck, McCormick, and Nogge 2013, 29) mirror this shift and transform the idea of addressing biology as a sole process to recovery.

Under the BPSM of health and disability, the rehabilitation of an individual with an ABI is understood as a complex task requiring coordination of service providers across sectors, family members, employees and other relevant people involved in the rehabilitation process. Coherent and holistic rehabilitation requires services provided by multiple healthcare disciplines. This cross-speciality collaboration is encoded in an interdisciplinary team model that ‘places a premium on sharing assessment findings, development of communal goals, negotiation of responsibilities and interdisciplinary collaboration while maintaining one’s unique disciplinary identity’ (Butt and Caplan 2010, 452). Rehabilitation consists of different rehabilitation chains, that is, a set of efforts/services delivered by different care providers (Lund and Tamm 2001).

The term ABI encompasses both strokes/haemorrhages and traumatic brain injuries and is defined by the WHO as ‘Damage to the brain, which occurs after birth and is not related to a congenital or a degenerative disease. These impairments may be temporary or permanent and cause partial or functional disability or psychosocial maladjustment’ (http://braininjurysociety.com/information/acquired-brain-injury/what-is-abi/).

Due to improvements in neurosurgical medicine, more and more people survive an ABI. Moreover, an increasing proportion of people with ABI require rehabilitation.

The Danish Board of Health (2011) estimated that around 13,500 were in need of hospital-based neuro-rehabilitation in 2010.

The epistemology of ABI rehabilitation in Denmark draws primarily on the developments within brain injury science since the 1980s, in which the functions of the brain are no longer seen as linked to specialized modules but as a complex collaboration between different centres with a plasticity and a capacity for change and relocation of functions (Goldberg 2001; Stringer, Cooley, and Christensen 2002). Based on this knowledge and development, in 2011 the Danish Board of Health formulated new guidelines for ABI rehabilitation, termed the Health Technology Assessment (HTA).

The purpose of HTA was to provide professionals involved in brain injury rehabilitation with advice on how to organize the rehabilitation across the municipalities, administrative regions and the state (administrative boundaries) as well as across professions (interdisciplinary) in order to achieve uniform high quality and coherent rehabilitation based on the BPSM for people with ABI (Danish Board of Health 2011).

Furthermore, the Convention on the Rights of Persons with Disabilities was adopted in Denmark in 2009, aiming to change attitudes and approaches towards persons with disabilities.

It takes to a new height the movement from viewing persons with disabilities as ‘objects’ of charity, medical treatment and social protection towards viewing persons with disabilities as ‘subjects’ with rights, who are capable of claiming those rights and making decisions for their lives based on their free and informed consent as well as being active members of society. (UN 2006)

These two guidelines serve as recommendations to be followed by practitioners.

The specific case

The Neuro-Rehabilitation Centre in Northern Denmark receives patients from all over the Region of North Jutland. There is room for 37 patients, 29 beds for patients with apoplexies and 8 beds for patients with traumatic brain injury and related disorders. Out of the 37 beds at the Centre, 15 are ‘5-day’ beds for individuals with less-severe ABI who are only at the hospital during weekdays, and go home at the weekend.

During the year the fieldwork was conducted, the Neuro-Rehabilitation Centre was awarded the Patients’ Prize by the Health User Council. The main reasons, according to the Chairman of the Health User Council, Henning Olsen, were the grounded way the Neuro-Rehabilitation Center handled
training, focusing on the patient as an individual and incorporating substantial involvement of their relatives (https://fysio.dk/Regioner/nordjylland/Regionalt-nyt/Bronderslev-Neurorehabiliteringscenter-vinder-flot-pris/#.Vb-UnU0cQeF). The fact that the Centre had received the Patients’ Prize, being a part of the local hospital where one could expect it to be influenced by the medical paradigm, makes it an especially interesting case to analyse.

The general episteme

The organizational practice

This Centre is divided into a training unit and a ward. The staff at the ward includes a head of unit, 22 nurses, 20 socio-educational assistants and 1 secretary. The training unit consists of 1 leading therapist, 1 development consultant, 8 occupational therapists, 8 physiotherapists, 2 socio-educational assistants, 1 neuropsychologist, 2 speech and language therapists, and 1 social worker. In some settings, chaplains as well as psychologists address psychosocial needs. However, no chaplains were connected to this hospital-based rehabilitation.

The occupational therapists, physiotherapists, speech and language therapists, social worker, neuropsychologist, leading therapist, development consultant and secretary only worked during daytime and not night shifts. Only nurses and socio-educational assistants worked night shifts. The neuropsychologist is employed primarily to handle patients with traumatic brain injuries and not patients with apoplexies. However, he did see some individuals with ABI arising from strokes and haemorrhages, although this was not his official responsibility. Furthermore, the neuropsychologist is not employed full time on this Rehabilitation Centre, since he is also employed at the neurological ward at the acute hospital.

The analysis revealed six predominant themes in this professional rehabilitation practice:

The architecture. The Regional Neuro-Rehabilitation Centre is affiliated to the Hospital in the Northern Region of Denmark. Therefore, not only the building architecture (e.g. long hallways) but also the interior design resembled a hospital: medical devices, an antiseptic smell, metal flower vases on small tables on the hallway, and white and sterile rooms without personal objects or pictures on the wall, only a whiteboard. At the end of the hall, there was a dining room, where individuals with ABI ate their meals daily. Some of the toilets were labelled ‘staff toilet’. Even though they were not locked, it still represented a divide between staff and individuals with ABI. Nearly all staff wore a white coat. The researcher was also offered one and dressed like them the first day.

The Neuro-Rehabilitation Centre does however offer various activities like the woodworking, kitchen and garden workshop that a regular hospital would not have.

A hierarchy and division between the staff. The physiotherapist and occupational therapist determine the rehabilitation goals, make individual training plans for the week and fill in the rehabilitation plan based on objective assessments, for example, the Functional Independence Measure (FIM), the Assessment of Motor and Process Skills (AMPS) and the Timed Up and Go test (TUG). Consequently, the physiotherapists and occupational therapists appear to be the main and leading profession at the training centre.

Moreover, the staff did not eat lunch together. Not only was there a division between the training unit and the ward in this respect, but there was also a division within the training unit. There was a lunchroom for therapists, whereas the social worker, the neuropsychologist, and the speech and language therapist had lunch together in an office further down the hall. The staff at the ward (nurses and socio-educational assistants) had their lunch in a lunchroom in the ward section.

In sum, the architecture and interior design resembled a hospital rather than a Neuro-Rehabilitation Centre and the hierarchy and divisions among the staff show a lack of interdisciplinarity. The different professionals were simultaneously present at the centre, but they did not really interleave their efforts and collaborate across professions.
Symbolic interaction between professionals and people with ABI. The interaction between professionals and users does not indicate accordance with the general episteme of the national guidelines. The following observation of a meeting shows some of the inconsistency between the general paradigm of ABI rehabilitation and the local practice. These meetings are held frequently in order to evaluate the current situation and prepare to the next transition: from inpatient to home. Nine persons were present at this meeting: Peter (the person with ABI), his adult son, his brother and sister-in-law, the primary occupational therapist from the training centre, a socio-educational assistant from the ward, the neuropsychologist, a speech and language therapist, and the first author as an observer.

The primary therapist takes the lead and asks Peter what he thinks about the current situation. He replies briefly that he feels improvement. Following this, the primary therapist describes what they (the staff) had observed at the Centre. Several times she mentions: ‘we have observed you – that is what we do’. Sitting there the observer was wondering why they did not ask him instead of just observing him. The occupational therapist goes on with the various problems they experience with Peter’s physical condition and with activities. For instance, according to Peter’s week plan, he was supposed to attend the wood workshop, but he only showed up once. Furthermore, the occupational therapist explained to Peter that they found that he made excuses when confronted with not attending this activity. Peter just replied with ‘okay’, and the researcher’s experience is that he becomes quieter. Next the occupational therapist asks the relatives what they think. Peter’s son said that he did not think his dad would be able to manage everyday life like he used to. He continues, ‘it also relates to the fact that he has not been so kind to himself’. The socio-educational assistant supplements with: ‘you mean with the alcohol’ to which the son says ‘yes’. The neuropsychologist suggests sessions with a psychologist, which is quickly answered by a nod from all relatives. Peter then says that he had spoken with his current workplace, and they had asked him when he would return to work. Peter had answered ‘as soon as possible’. The occupational therapist quickly replies to this with: ‘You are not going to work right now. And when you are, it will probably be part time’. The speech and language therapist continues from here and begins to talk about Peter’s problems with pronunciation. While she is talking, Peter starts to cry and leaves the room. While Peter is away, there is a talk about the various things that Peter is dealing with at the moment besides his brain injury, e.g., divorce and moving to another place. However, these things are not mentioned while Peter is present. When Peter gets back, the socio-educational assistant says: ‘you have a lot going on right now’. Peter admits the problem presented by the speech and language therapist and expresses sorrow and pain about this. He says: ‘I would like it to be like it was before’. Again, the occupational therapist quickly answers by saying: ‘We cannot promise you that’.

Finally Peter is presented with the different services available for him when discharged. Peter expresses concern about the long distance to the physical training facilities, since he does not have a driver’s license at the moment because of the ABI. The socio-educational assistant, who lives in the same area, opines that it is not that far, and believes he would be able to bike or walk.

The occupational therapist ends the meeting and concludes that Peter will need to be at the Centre for another three weeks, and that everything he does these next three weeks will be observed. Then a new appointment will be made.

This example illustrates how an individual with ABI is being evaluated and how he evaluates himself. In this case there are potentially two conflicting epistemologies, the biological and the social. In the neurological and biological discourse represented by the professionals in this case, Peter is evaluated and observed closely with reference to his brain injury and to biological and/or psychological ‘abnormalities’.

There is a conflict between Peter’s life-world (Level D) and the approach at the Rehabilitation Centre (Level B). For instance, there are two sets of goals: Peter’s goal of making his life ‘like it was before’ and the Neuro-Rehabilitation Centre’s goals: ‘go to the wood workshop’ and ‘live with your disability’. Why is Peter not attending the wood workshop? From a neurological/medical point of view, it could be because of the brain injury (damaged executive functions) or even because of alcohol damage. From a holistic point of view, when Peter’s life-world is taken into consideration, it could also be due to the crisis he is in (divorce, coping with his injury, etc.) or because the wood workshop does not motivate him. The emotional crisis Peter seems to be in is not addressed at this meeting. Only the neuropsychologist mentions it briefly and recommends that Peter is offered psychological treatment. Peter’s need to make excuses could be interpreted in different ways. It conjures the image of a little child in front of a grown up, in other words a subject–object relationship,
where one individual has authority over the other. The way that Peter is spoken to during this meeting could indicate an objectification of Peter – they are observing him, confronting him with his failure to go to the wood workshop as planned, and telling him what is realistic. For instance, in response to his wish ‘that it would be like it was before’, the answer was ‘We cannot promise you that’ and to his wish to return to work ‘as soon as possible’, the answer was ‘You are not going to work right now. And when you do it will probably be part time.’ According to a medical model, being disabled by a stroke is part of a chain of natural events, in other words causal relations, which is expected to lead to the individual being disabled and having to live with this disability (Barnes and Mercer 2003).

In another example, the researcher was invited to join in with Kenneth’s physical training. Before actually meeting Kenneth, the researcher was quickly briefed about him by the physiotherapist, Grete. Grete tells the researcher that Kenneth was a head of department and a history guide prior to his injury. Furthermore, she tells me that he lacks insight into his current situation and that he is very resistant to cooperate with the staff.

During the training, e.g. he tells Grete: ‘you keep repeating yourself’ in an angry tone and ‘you are a slave driver’. Despite those comments, Grete continues to approach him in a warm and acknowledging manner and with a twist of humour. During the training he starts to elaborate about the researcher’s name and the resonance of it. He knows that her name is of French origin, and that it is the name of a city in the Danish West Indies. He continues to talk about slaves referring both to Grete as he again calls her a slave driver, but also connecting it to the aforementioned Danish West Indies and how slavery originated from there. His wife confirms this statement by saying: ‘it is true’ followed by a shy smile. At first she looks at the researcher, while saying this, then at Grete repeating: ‘it is true, it is not nonsense, what he says’. A few moments later, Kenneth is throwing a ball to Grete. At some point, he looks at the ball, which is labelled ‘Basket’, and says, ‘Is it a basket case?’ Grete replies a little confused ‘What is that?’ And he continues; ‘someone who is going to pieces’. A little later, he repeats the word ‘basket case’ once again.

From an outside perspective, and explained in biological and neurological terms, Kenneth is resistant and lacks insight in his situation, because of his brain injury. If we take Kenneth’s life-world into consideration, as well as this little extract of text, do we then find alternative explanations? Before his injury, he was a leader and a historical guide. When disabled, there is a sudden transition in Kenneth’s position and identity. He is now dependent on others and it is him who needs to be guided. Apparently, he is not in a powerful position at the moment, and he has no control of the situation. His resistance and lack of insight could also be explained as a protective identity factor. Furthermore, the resistance in his relationship with the staff could also have something to do with the staff’s attitude towards him. How much of his life-world is taken into consideration? In this piece of text, it is seen that his historical knowledge about slaves and the researcher’s name is not acknowledged. Maybe it is seen and interpreted as diversionary or as a resistance towards the training? The fact that his wife needs to support his statement by saying several times that it is true might indicate that she expects scepticism from the professional when he says things like this or that she thinks he might need the support right now. His association with the word ‘basket’, on the ball, could be interpreted as a fear he has of falling to pieces if he does not protect himself.

In this case we again see that the rehabilitation practice (Level B2) is mostly based on biological/neurological understandings of the individual with ABI (Level B1). The rehabilitation primarily focusses on these individuals’ external life-world, for example, the physical body, activities and participation. The internal life-world, including coping with identity dilemmas and emotional issues which can lead to severe psychosocial consequences, is thereby excluded.

The discourses of key concepts. Terms like rehabilitation potential, lack of insight and resistance (against rehabilitation and collaborating with the staff) were often used in the rehabilitation centre, both internally and in status or discharge meetings at the centre in which the municipality participated. Prior to status meetings or discharge meetings, the professionals from the municipality
wished to know about the individual’s rehabilitation potential. These words reflect the way the professionals understand the problem (Level B1) and originate from the old medical paradigm, in which professionals tried to establish a person’s prognosis based on injury type and severity. This paradigm entails the risk of creating a self-fulfilling prophecy or a kind of autopoiesis (Luhmann 1984). That is, the lack of motivation, insight and initiative can be seen both as a neurological and a pedagogical issue and the reference to, for instance, a ‘frontal lobe trauma’ might protect the professionals from a critique of the rehabilitation programme they can offer the individuals with ABI (Høgsbro 2002, 2010). In a social paradigm, we cannot predict who has the potential to recover because it is not only determined by the injury itself, but also very much connected to the social support as well as personal factors.

**No psychosocial rehabilitation.** Observations from consultations with the neuropsychologist indicate that individuals with ABI experience emotional distress. Individuals with ABI were asked how they were doing by the neuropsychologist, and many answered that they experienced improvement in physical functions, but not emotionally. They said to the neuropsychologist that they did not feel well, for example, they were afraid (of new incidences of strokes), depressed about the current situation, etc. (Level C). However, given the lack of time and the fact that more psychotherapeutic interventions were not part of the rehabilitation programme, these issues were not handled at the rehabilitation centre. The neuropsychologist’s main focus was to offer neuropsychological testing (Level B), and even though he articulated it as being important to express the development you see, and thereby to promote hope, the restricted time with individuals with ABI made it very challenging for this neuropsychologist to offer adequate psychotherapy. Concordantly, it seems as if just the physical problems were in focus, and psychological and social issues were ignored.

**Organization and professional discourses.** Observations from the meetings and the training show how professionals at the centre determine the implementation of any actions without listening to the input from the patients. Professionals are regarded as having the expertise and the understanding of rehabilitation services that individuals with ABI need, and the patient’s insight into his/her life-world is ignored. For the individual to be involved in the process, it is necessary that the professionals emphasize this need and that the general episteme regards it as an important element in the rehabilitation.

From the body of literature in recovery research (Anthony 1993; Topor 2002), we know that recovery is not only about fixing deficits, but as Anthony identifies, recovery is

>a deeply personal, unique process of changing one’s attitudes, values, feelings, goals, skills and/or roles. It is a way of living a satisfying, hopeful, and contributing life even with limitations caused by the illness. Recovery involves the development of new meaning and purpose in one’s life as one grows beyond the catastrophic effects of mental illness.’ (Anthony 1993, 17)

Some clinical research groups have identified recovery as the alleviation of symptoms and a return to premorbid functioning (Young and Ensing 1999). Working definitions by several groups (Davidson and Strauss 1995; Liberman et al. 2002) have operationalized variables such as symptom remission, vocational functioning, independent living and peer relationships. Consumer literature, however, does not hold the view that either symptom remission or a return to premorbid functioning is necessary for recovery to occur (Anthony et al. 2002; Deegan 1996).

Expressions such as ‘it is not realistic’ and the tendency to evaluate rehabilitation potential based on observations challenge the importance of keeping hope of recovery as a kind of motivation. Statements from participants indicate that a false hope is better than false hopelessness. Maintaining hope means remembering, as research has shown, that recovery can be a long-term process with many setbacks and plateaus. Professionals do no better than random chance in predicting success; however, some staff may believe it is unrealistic to expect their individuals with ABI to recover because they are ‘too sick’ or ‘too disabled.’ If staff lack hope themselves, they cannot promote
hope for their individuals with ABI. Services need to be able to facilitate the goals and wishes of individuals with ABI, even though it might not be realistic at that point in time.

The organizational and financial framework plays a vital role in creating opportunities for citizen participation (Angel et al. 2011). Professionals are confronted with a lot of requirements such as documentation, good interpersonal skills, knowledge-based praxis, interdisciplinarity, etc. Interdisciplinary collaboration requires that the concerned professionals allocate time to meet in order to plan and evaluate actions. Christensen, Morgensen, and Praestegaard (2011) point out that the professional’s desire ‘to do good’ and not to harm the citizen may come under time pressure and hence the professional may not be able to meet their own or the stipulated ethical standards, guidelines and values.

In sum, the emerging themes from the fieldwork indicate with reference to SIMREB a conflict between levels A, B and D. In both cases presented, the staff have knowledge about Peter and Kenneth’s life-worlds, but do not take this knowledge into consideration during the meeting or the training situation. When taken to a trans-local level (Schmidt 2005) this conflict mirrors the paradigmatic conflict between biological and social models as well as the influence of organizational and financial frameworks that might reflect and support the biological model.

The life-world of individuals with ABI

The following analysis is based on conversations with individuals with ABI during this fieldwork at the Neuro-Rehabilitation Centre. The analysis of these conversations revealed three predominant themes.

Being invisible. Several of the informants talked about the identity transition from being well to suddenly becoming brain injured. Martin (ID 124) did not receive psychological support at the Neuro-Rehabilitation Centre, but instead spent a lot of time dealing with his own grief in various ways, with his family helping him in this process.

Three informants mentioned that they were offered antidepressants (Level B2) by a doctor at the Neuro-Rehabilitation Centre to prevent depression (Level B1). Martin rejected this offer: ‘I said no to antidepressants. I need to deal with my sorrow, because it is a sorrow. I lost something’ (Level C1). Five informants directly addressed the need for a psychologist: ‘I was offered antidepressants, it was a psychologist I needed’ (Eric, ID 105). Here, we can see a conflict between how the professionals and the individuals with ABI understand the problem (level B1 and C1) and how they want to deal with it (Levels B2 and C2).

Gitte (ID 116) also mentions the identity crisis at different levels in relation to her spouse and children. She describes how the transition from the Neuro-Rehabilitation Centre to home at weekends was difficult: ‘I was someone else – another role – let me get back (to the rehabilitation centre).’ She explains that, despite feeling that her family supported her a lot, she felt different. At the end of the conversation she mentioned that what she had missed the most was a whole person perspective: ‘Who sees me and who I am besides being brain injured.’ She had expected that nurses would be the profession that would see her as a person, but she did not find this perspective in any professional group.

Intense physical training. Almost all participants described their stay at the Neuro-Rehabilitation Centre as exceptionally good because of the intense training. Therefore, many also felt it was a challenging transition to go home after this intense stay. Several participants mentioned that the professionals were strict but had a good sense of humour. Individuals with ABI experienced a good tone among professionals and there was no sense of limbo in decision-making: the professionals were very decisive. Participants also referred positively to the weekly plan they received at the centre.

Generational challenges. Some generational issues were observed. Predominantly older people are hospitalized at the Neuro-Rehabilitation Centre, since about three-quarters of the patients had acquired apoplexy which is more common among older people. The young patients found it difficult
to be among mostly older people at the rehabilitation centre. They did not spend that much time together and some compared the Neuro-Rehabilitation Centre with a nursing home. Furthermore, the younger individuals with ABI were also the ones most challenged by the strict approach from the professionals. One hypothesis can be that older people may retain a greater tolerance for authoritarianism and expect the professionals to be experts. Some might even have difficulties with new approaches encompassing greater user involvement because they do not see themselves as experts and contributors in the rehabilitation process.

According to Jensen, Petersen, and Stokholm (2013), some individuals with ABI still expect health care to be rooted in an expert perspective while professionals have to learn to navigate between legislation, frameworks, requirements and the recognition of the citizen’s responsibility for their own lives.

The attitudinal movement from a dominant professional expert perspective to a perspective in which the citizens’ knowledge is respected and becomes a part of a common position on the required and desired actions in rehabilitation requires in practice habituation and acceptance from both citizens and occupational professionals (Jensen, Petersen, and Stokholm 2013, p.227).

Discussion

When looking at our findings from the perspective of the SIMREB model (Figure 2), we identify several contradictions (illustrated by the circles) between the general episteme of ABI and the practice of the specific rehabilitation centre.

In this study, we see that it is still physiotherapists and occupational therapists who represent the major professions in ABI rehabilitation and consequently there is a continuous focus on the physical and practical aspects of ABI. Furthermore, there is a conflict between levels B and C where the expectations of individuals with ABI, based on their life-worlds, meet with the professional practice. The life-world perspectives, (life) stories and values of individuals with ABI are often not taken into consideration. Individuals with ABI are primarily met and discussed as objects of professional intervention and their problems are primarily conceptualized in neurological terms. An evaluation of a Danish rehabilitation centre, back in 2002 (Høgsbro 2002) came to some of the same conclusions, even though the social paradigm seemed to be much more strongly represented in the rehabilitation plan at this centre.

Our findings also resonate with a previous study on concussion by Collins et al. (2014). Collins et al. concluded that the heterogeneity of the injury calls for an individualized approach from an interdisciplinary team of experts. However, the current rehabilitation practice sees brain injuries as homogenous and therefore provides a ‘one size fits all’ framework within which professionals conceptualize and treat brain injuries. There is a need of a more comprehensive, interdisciplinary approach for assessing specific clinical trajectories following brain injuries.

The paradigmatic change in brain injury rehabilitation, which has been going on since the late 1980s, includes a change which moves brain injury rehabilitation from only focussing on the physical aspects of ABI to also including the psychosocial consequences. Rehabilitation based on a holistic approach requires interdisciplinary collaboration and coordination between professionals and the individual concerning which physical, psychological or social efforts are to be put into action (MarselisborgCentret 2004).

However, as seen in this study, the interdisciplinary collaboration still seems to present a challenge. Physiotherapists and occupational therapists are still at the top of the professional hierarchy when it comes to brain injury rehabilitation and psychological support as well as social services seems to be given a lower priority. It seems important to develop a new kind of professionalism, which does not exclusively look at biological factors, but also includes the perspective and life-world of the individual. At the governmental level, there has been a change in the approach from a dominant professional expert perspective towards an approach that includes, and respects, the wishes and goals of the individuals with ABI and their relatives. Furthermore, there has been a widespread acceptance of a recovery
Figure 2. Data merged into the SIMREB model.

approach in rehabilitation politics where focus is on hope, the person (rather than the diagnosis), user participation and self-determination. Nevertheless, these elements seem to be absent in the present study. These changes may require a habituation and acceptance both from individuals with ABI and from professionals which presupposes a longer period of change in cultural premises as well as in skills and training, plus the development of norms and routines in cross-disciplinary collaboration (Jensen, Petersen, and Stokholm 2013). Christoffersen (2011) mentions how, even in environments that have a tradition for interdisciplinarity, the field is often dominated by a particular perspective. In the present study, we see that the objectification of individuals with ABI is still happening and when individuals with ABI are seen as objects, unable to take responsibility because of their biological impairments, the professionals become those who have knowledge and know best and, thereby, those who need to do something to/for/with the individual.

In this objectification, there is a causal relationship as to why professionals must take responsibility for individuals with ABI, make decisions on their behalf, etc., in a number of situations. Therefore, it might also be relevant to look more closely into the therapeutic working alliance between individuals with ABI and professionals. Bordin (1979) defines the working alliance as a combination of (1) the agreement between client and therapist on goals, (2) their agreement on how to achieve these goals (common work on tasks), and (3) the development of a personal bond between client and therapist. From the perspective of the SIMREB model, this would mean a consistency between the professional level and the level of the individual with ABI. Even though it is well known, it is easily
forgotten that ‘The basis of successful work is that the patients experience a good working relationship, including a good emotional bond, with their therapist’ (Schönberger, Humle, and Teasdale 2006, 453).

Only a few studies in brain injury rehabilitation (including Schönberger, Humle, and Teasdale 2006) have addressed the importance of this therapeutic alliance. However, the studies found indicate a relationship between the therapeutic alliance and outcomes. Unfortunately, in most of these studies the emotional aspects of the therapeutic alliance were not examined, and nor was the perspective of the individuals with ABI on this alliance.

In sum, a person’s behaviour and motivation cannot only be seen through a pathological lens but also has to involve this person’s pre-morbid personality, life-world, the present situation, and the working alliance between the individuals with ABI and professionals. In this new type of professionalism, we take on a more didactic approach. In this approach, the professional becomes a ‘teacher’ which ‘entails systematic considerations in designing and creating conditions that promote the patient’s ability to participate and learn, taking the altered abilities into consideration’ (Aadal and Kirkevold 2011, 3).

In this way, we could talk about a paradigmatic change in the rehabilitation approach. A paradigmatic change (starting with changing the episteme at Level A) is not easily implemented in practice (Levels B and C), which this inquiry also illustrates. A shift in practice, which builds on equal partnerships, promoting hope and facilitating self-determination, requires a transformation of services, practices and the paradigm within which they are delivered. However, human systems are not easily transformed: it takes time and organizational commitment. Moreover, the educational level also has to adapt to these new approaches, as we see it has begun to do, and educate professionals in new ways.

**Conclusion**

The present study contributes to the identification of epistemological and paradigmatic challenges in the implementation of ABI rehabilitation guidelines in practice. We have examined possible contradictions, barriers and conflicts with references to basic discursive conflicts with regard to enhancing a coherent and holistic contemporary ABI rehabilitation. Although it is a case study with limited generalizability to rehabilitation programmes in general, it highlights some important issues of the implementation of national guidelines into local practice.

Despite an increased national focus on a holistic and coordinated rehabilitation process, it seems as if the interdisciplinary team model still represents a challenge in contemporary rehabilitation practice. Within the BPSM, the psychosocial factors in particular seem to have little influence on practice.

In practice, we find a dominant biological discourse among occupational therapists and physiotherapists who are seen as the main and leading professionals at this specific Neuro-Rehabilitation Centre. Furthermore, observations from meetings between professionals and the individuals with ABI showed how these therapists avoid giving ‘false expectations’ about recovery by not supporting but mainly discouraging hope. In opposition to this, the individuals with ABI insist on a discussion of personal future perspectives, dilemmas and changes in their life-world. This request is not taken seriously or is directly ignored. The mismatch between the general national episteme and the local practice can be explained by a kind of inertia in the professional discourses or by institutional pressure on the professionals.

According to Angel et al. (2011), there is a special paradox of recent governance. There is on the one hand a requirement to transfer some of the power to the individual and on the other an obligation to take up more power to ensure success in citizen involvement (Angel et al. 2011).

The use of SIMREB and combined ethnographic methods involving qualitative interviews and observations has contributed to clarifying these elements in the working of modern institutions.

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