



# Perspectives on rehabilitation

Students' views on rehabilitation  
theories and services

Merja Sallinen (ed.)

# **Perspectives on rehabilitation**

Merja Sallinen (Editor)

Satakunta University of Applied Sciences

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## FOREWORD

This publication is a result of students' written assignments on a course titled **Theories of rehabilitation and implementation of rehabilitation services** (10 ECTS credits) offered for the first year Master students at Satakunta university of applied sciences (SAMK) during the academic year 2018-19. The course aimed at expanding the students' understanding of different rehabilitation approaches, models and theoretical concepts, as well as at gaining knowledge about rehabilitation service systems in different countries.

The academic writing process as such was anticipated to be a learning experience, from which the students would benefit in their studies and work in the future. During the writing process, the students first submitted an outline or idea paper for their article, which, after approval, was expanded to a 5-6-page article. During the writing process, the students got feedback both from their fellow students and from the teacher, and they revised their text accordingly before submitting the final version.

This publication comprises eleven articles with different perspectives on rehabilitation, nine articles are written by the students and two by the teachers. The first article outlines the recent development of theory-building in rehabilitation. The next two articles take a client perspective: Marianne Kukkasniemi and Kirsi Varonen focus on person-centeredness, whereas Danmei He and Pandagiota Domestichou write about the importance of motivation and goal setting in rehabilitation.

The rehabilitation service system in different countries is in the core of three articles. Niina Tammi and Piritta Jokinen describe the possibilities for vocational rehabilitation for mental health rehabilitees in Finland. Sybil Szedressy-Frauricher and Innocent Anunobi compare the health services in Switzerland and Finland. Binita Thapa and James Mbaimba in turn, introduce community-based rehabilitation services in Nepal and Cameroon.

Three articles take occupational health as the starting point. In her article, Sanna Saikko writes about occupational stress and how to prevent it. Taina Jyräkoski and Kirsi Suomi discuss the use of technology and robotics for the benefit of physiotherapists' ergonomics. Tarmo Marjamäki describes in his article, how clinical supervision could be used as a method to support the wellbeing of professional helpers. Ethical issues in rehabilitation and research are in the core of two articles. Paula Müller describes the ethical dilemmas the rehabilitation workers might encounter in their daily work. The article by Anne Kärki, PhD, Principal Lecturer, reminds us of the importance of ethics when doing and reporting research.

As the editor of the publication, I wish to address my warmest thanks to all the authors for their commitment and contribution. I sincerely hope that this exiting experiment of 'doing it a bit differently' has served its purpose as a learning experience. I also wish to thank Anne Sankari, Editor-in-Chief in SAMK, for the encouragement and practical help during the process. Moreover, Tytti Reinikka-Wasén, M.A, is kindly acknowledged for the language editing of this publication

In Pori, November 2019

Merja Sallinen, Editor

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# 1 Rehabilitation theory – does it exist?

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Merja Sallinen, PhD, Principal lecturer

In 2017, World Health Organization (WHO) published a policy statement titled *Rehabilitation 2030 - call for action*. In this document, WHO pointed out that the need for rehabilitation is increasing globally. This is not only due to demographic changes such as ageing populations, but also due to the rapid increase in people living with non-communicable diseases and consequences of injuries. In addition, a dramatic increase in the absolute number of years lived with disability has led to a demand for rehabilitation that is largely going unmet, especially in middle- and low-income countries. (WHO, 2017.) Several scholars over the years have emphasized that it is essential to develop the theoretical and philosophical background of rehabilitation in addition to specific rehabilitation interventions in order to meet the global challenges (McPherson et al., 2015; Whyte, 2008; Siegert et al., 2005; Worrall, 2005).

It is often said that there is nothing more practical than a good theory. Siegert et al. (2005) referred to writings of Thomas Kuhn (1962) when stating that a good theory is accurate, internally and externally consistent, simple, and fruitful in terms of stimulating new research and theoretical debate. Whyte (2008) underlined that the development of science depends on elaboration of theories, models, taxonomies and hypothesis and pointed out that these aspects are rarely discussed in rehabilitation research. Moreover, the basic assumptions that are underpinning rehabilitation research are slowly changing. It has been suggested that in rehabilitation practice, 'objective findings' that represent a positivistic approach can hardly capture the whole predicament experienced by the rehabilitation client. Therefore, in rehabilitation research, understanding the clients' experiences and meaning making processes have come to the foreground together with constructivist and interpretative philosophical approaches. (Järvikoski et al., 2015.)

The aim of this article is to discuss the paradigm shift in rehabilitation and to elucidate the current theories underpinning rehabilitation science and practice.

## Definitions of core concepts

**A theory** can be defined as "a plausible or scientifically acceptable general principle or body of principles offered to explain phenomena." ([www.merriam-webster.com/dictionary/theory](http://www.merriam-webster.com/dictionary/theory)) Siegert et al. (2005) referred to Kerlinger and Lee who defined theory as a set of interrelated constructs (concepts), definitions and propositions that present a systematic view of phenomena by specifying relations among variables to explain and predict the phenomena. Reinhardt (2010) in turn, defined a theory as a set of sentences about the world that comprises definitions, axioms, and hypotheses.

Siegert et al. (2015) remarked that scientific theories of human behaviour should address two fundamental goals: understanding and prediction. Lynham (2002) underlined that the purpose of a good theory is to describe and explain how things actually work and hence, help us to improve our actions in the world. Further, she remarked that every time we encounter a new issue we try to observe and understand how this issue presents itself and works, i.e. we try to create a personal theory-in-use. These theories-in-use help us act in the world better and in more informed ways. However, the theories-in-use are not precise enough for scientific purposes and therefore, systematic and purposeful theory-building is required. (Lynham, 2002.)

Lynham (2002) defined that **theory-building** is “a purposeful process by which coherent descriptions, explanations and representations of observed or experienced phenomena are generated, verified and refined”. Thus, theory, research and practice are in constant interaction, and developing one area reinforces the development of the other two (see figure 1).

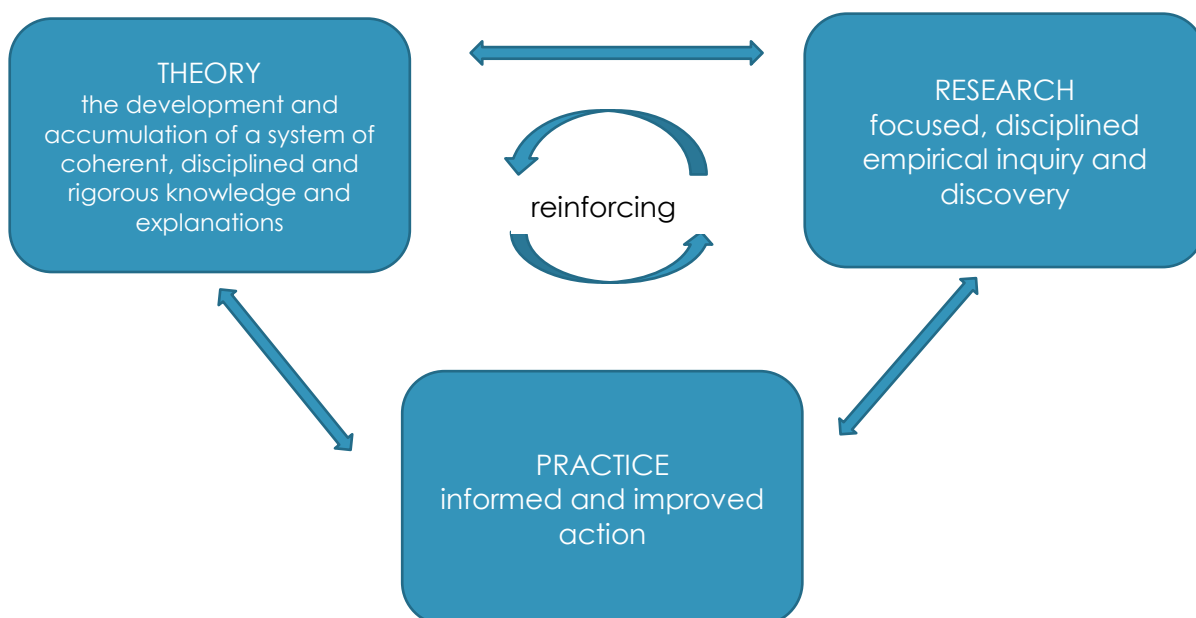


Figure 1. Interplay of theory, research and practice in theory building (applied from Lynham 2002)

According to Whyte (2008), **a theoretical model** is an analogy used to help visualize something that cannot be directly observed; it simplifies the phenomena and ignores the causal factors in order to maintain conceptual clarity and comprehensiveness. **A taxonomy**, in turn, can be defined as study of general principles of scientific classification. Thus, a taxonomy groups the concepts into categories that are objective, mutually exclusive and useful in scientific inquiry. In terms of rehabilitation, International classification of functioning (ICF) is a taxonomy of domains of human functioning. (Whyte, 2008.)

According to Thomas Kuhn (1962), **a paradigm**, can be defined as "universally recognized scientific achievements that provide model problems and solutions for a community of

practitioners". This means that within the scientific community, there is a shared understanding of for example what is to be observed regarding the phenomenon, what kind of questions that are supposed to be asked, what methods can be used to answer the questions and how the results of scientific investigations should be interpreted (Siegert et al., 2005). It is to be noted, however, that there can be multiple paradigms in a scientific discipline at the same time, and that it may take a considerable time before the prevailing dominant paradigm in the given field begins to crack and different perspectives take hold (Reinhardt, 2010; Siegert et al., 2005).

## **Paradigm shift in rehabilitation**

In rehabilitation, we have witnessed a significant paradigm shift from expert-centered, biomedically oriented approaches towards person-centered approaches that hold a wider bio-psycho-social perspective. McPherson et al. (2015) remarked that in the past two-three decades, the focus in rehabilitation has shifted from treating diseases or pathologies towards reducing the consequences of limitations in functioning, and to maximizing independence and participation of the individuals.

As pointed out by Siegert et al. (2005), the first question to be answered in theory-building in rehabilitation is the phenomena of interest: What is rehabilitation? How can rehabilitation be defined? According to Järvikoski et al. (2015), rehabilitation can be approached on several levels: as a field of science, as part of national and international welfare and health politics, or as a service system that helps individuals to achieve their life goals despite the limitations they might have in their daily functioning.

In their definition, Siegert et al. (2005) were focused in the medical perspective of rehabilitation: "*phenomena of most interest in rehabilitation is the recovery and adaptation of individuals after a traumatic injury or the onset of a chronic illness*". Worrall (2005) in turn, underlined that rehabilitation should not only address the needs of an individual but also the environment in which he or she lives. More recent definitions take even wider perspectives. WHO (2011) defined rehabilitation as follows: "*Rehabilitation is a set of measures that assist individuals, who experience or are likely to experience disability, to achieve and maintain optimum functioning in interaction with their environments.*" Hence, also the risk of disability is included in the present definition of rehabilitation.

Today, it is widely accepted that functioning of an individual is mediated or moderated through contextual factors, such as physical environment, services, that are available or unavailable, or attitudes of the persons' close family or friends (Kontos et al., 2015; Järvikoski et al., 2015; Whyte 2014). For example, two persons with a seemingly similar disability might have different level of functioning depending on the environment where they live and work, or on the support and encouragement they get from their proxies, colleagues and authorities.

It is also noteworthy that rehabilitation is interdisciplinary and cross-sectorial and can be carried out by health professionals in conjunction with specialists in education, employment or social welfare, or with other authorities, voluntary organizations and communities of lay people (WHO, 2011; Järvikoski et al., 2015). However, the understanding of what services, treatments or policies are included in the concept 'rehabilitation' seems to vary in different countries. In Finland, for example, vocational rehabilitation and activities in social rehabilitation are perceived as rehabilitation services, whereas in some other countries, rehabilitation can be understood



merely as a synonym to medical rehabilitation or therapies that follow the treatment of an illness or disability.

Karen Hammel pointed out in her excellent article "*Rethinking rehabilitation's assumptions*" (2015) that we should reconsider the goals of rehabilitation from the vantage point of the client. She remarked that the rehabilitation professionals are used to creating and explicating their own norms and goals that aim at 'normality' – whatever that may mean – although such goals do not necessarily serve the best interests of a client, but rather reinforces professional power. Similarly, physical functioning, quality of life or independence are assumed to be universally valued goals of rehabilitation, although this assumption lacks evidence and reflects specific 'ableist' values, and that demeans those who are dependent, or who value interdependence over independence. Hammel underlined the need for shifting the emphasis in rehabilitation from illness management to recovery: a process of changing one's attitudes values and goals, and of living a satisfying, meaningful life within the limitations caused by ones' illness or disability. In other words: living *with* and *despite* the disability. According to Hammel (2015), we should seek for factors that are identified by research as important to people across cultures and adjust the rehabilitation goals accordingly. These factors are summarized in table 1.

Table 1. Important values across cultures (applied from Hammel, 2015)

- |  |
|--|
| <ul style="list-style-type: none"><li>✓ experiencing meaning and purpose of life through engagement in personally valued roles</li><li>✓ having positive sense of self-worth</li><li>✓ having the ability and opportunity to make choices concerning one's own life</li><li>✓ having ability and opportunity to belong and contribute within reciprocal relationships</li><li>✓ envisioning continuity within "disrupted biographies" (i.e. prevailing and fostering hope)</li></ul> |
|--|

### Three levels of theories in rehabilitation research

McPherson et al. (2015) discussed rehabilitation theories on three different levels; as science philosophical approach at macrolevel, as theories about biological, social, behavioral and environmental components at midlevel and as theories associated with specific investigations at microlevel. They emphasized that theory can do more than frame empirical research by helping us question and understand better what we are doing and why. They stated further that the continuity between the epistemological approach (macrolevel) and selected methods and interventions (microlevel) should be explored and more clearly explicated in rehabilitation research, regardless of the preferred research paradigm. (See Figure 2)

As an example of theory-building at macrolevel, Martinez-Pernia et al. (2016) discussed the development of philosophical and scientific principles that underpin physical rehabilitation (e.g. physiotherapy or occupational therapy) and how these theories have evolved over time. They demonstrated how the theories have developed from mechanistical background assumptions of human impairment toward the current understanding of connectionism that has emerged as a result of development in neurosciences and understanding of complex cognitive processes. This change in the macrolevel and midlevel theories has had a huge impact on the therapeutic interventions: the body is no longer seen as a machine that can be repaired, but rather, as a

complex and connected system where activation of the brain and symbolic processes need to be integrated in the therapy interventions. (Martinez-Pernia et al., 2016.)

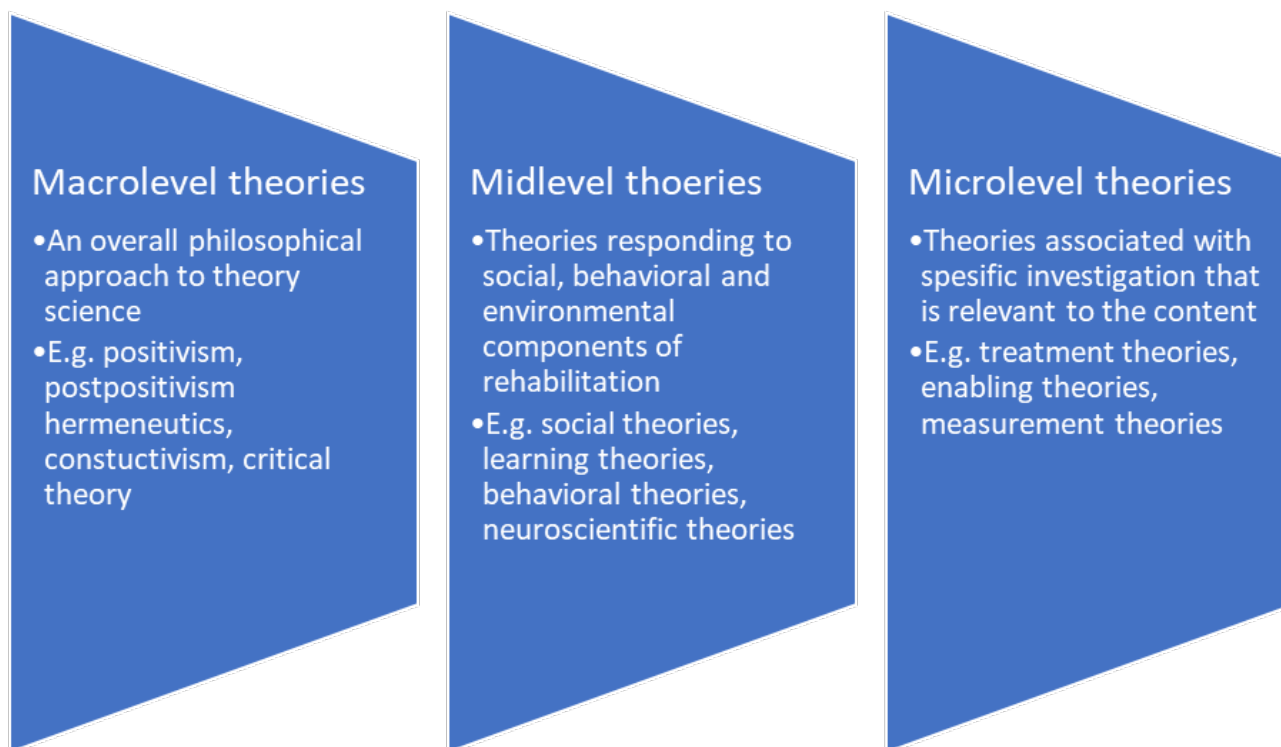


Figure 2. Three levels of theories in rehabilitation (applied from McPherson et al., 2015).

Whyte (2014) stated that two broad classes of microlevel theories are particularly relevant to rehabilitation: treatment theory and enablement theory. By treatment theory he means “conceptual system that predicts the effects of specific forms of treatment on their targets”. Whyte remarked that a treatment theory specifies which changes can be made in the treatment without undermining the mechanism of action. Hence, each therapy or intervention has its logic of setting the targets and finding the best ways to reach the best possible outcome. He underlined that a relevant treatment theory is critical to the rigorous design of clinical research as it guides the selection of inclusion and exclusion criteria and choice of appropriate outcome measures in research. Moreover, it is assumed that understanding what the relevant treatment theories are in a given situation helps clinicians to match the treatment to those patients who are likely to benefit from it. (Whyte, 2014.)

Järvikoski et al. (2015) challenged the idea of a treatment theory by remarking that there is always a ‘black box’ problem within rehabilitation research: often we can see that the intervention has a positive impact on the functioning of the client, but we do not know what is the element that causes that impact. Is it the dose, intensity and length of the intervention or interaction with in-between the client and the therapist or is it possibly something else that is essential for a good outcome? Are there some unknown factors that have a role in this play? A treatment theory can lead to a too limited view in complex problems that we often encounter in rehabilitation and therefore, developing enablement theories could be useful. (Järvikoski et al., 2015.)

Whyte (2014) defined enablement theory as “conceptual system that specifies how change in one aspect of functioning will translate into changes in another aspect”. Whether the ultimate goal of rehabilitation is reached or not, is often dependent both on the individual outcome of interventions and other aspects in the environment that either facilitate or cause barriers for functioning (Järvikoski et al., 2015). For example, returning to work after a serious injury or long-term illness can require considerable adjustments in the built environment at the workplace and this might hamper reaching the goals, even if the individual's treatment and therapy interventions were successful as such.

Worrel (2005) pointed out that people with disabilities perceive that their problem is a disabling society rather than their own disability as such. Therefore, rehabilitation needs to focus not only on the individual with disability but also the environment where she lives and acts. In accordance with this view, Hammel (2015) remarked that in rehabilitation, we should modify the environment and politics instead of trying to modify people, because ability is of little use without opportunity to use it. In his book 'Understanding disability' (1996), Michael Oliver expressed this even more clearly: *“The aim should not be to make the legless ‘normal’ – whatever that may mean – but to create a social environment where to be legless is irrelevant”*. Thus, removing barriers and improving accessibility are in the very core of rehabilitation, and rigorous theory-building is required also in enabling theories (Worrel 2005).

## Concluding remarks

In conclusion, it seems to be safe to say that we do not have one, unified theory of rehabilitation. Rather, there are several theories on different levels that need to be considered in rehabilitation research and practice. In their practical rehabilitation work, the professionals use many kinds of theories, frameworks and models from several fields of science: medical, biomechanical, motor control, cognitive-behavioral, psychodynamic, pedagogical, social and holistic theories, to mention some (Salminen et al., 2016). This variety in theories reflects the interdisciplinary and multiprofessional nature of rehabilitation theory and practice.

As Whyte (2008) and Järvikoski et al. (2015) reminded, a theory of rehabilitation should address change because rehabilitation seeks to enhance human functioning, not only to explain and predict it. That is why for example the International classification of functioning (ICF) cannot be perceived as a theory but a taxonomy (or at its best, a model): it neither demonstrates causal relations nor predicts future functioning of an individual. However, ICF provides a framework of concepts that allows us to enhance theoretical research in rehabilitation science in its own right.

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## 2 Person-centeredness – way to better rehabilitation outcomes?

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*Marianne Kukkasniemi and Kirsi Varonen*

### **Introduction**

Patient-centeredness has been widely studied in the field of health care during the three last decades. In this article we choose to use the term person-centeredness (PC) to promote the “personhood” of the patients. PC is acknowledged to be a core element of high-quality healthcare and a way to respond to the needs of people with long term conditions. (Greenfield et al. 2014, 2.) It also increases their role as an active agent in their treatment (Greenfield et al. 2014, 2), leading to better treatment outcomes (McMillan et al. 2013, 586-587). In this article we focus on person-centeredness, addressing the topic through rehabilitation of two very common long-term conditions: diabetes and chronic low back pain. The purpose of this article is to explain, what PC is, why it is important and how it affects.

Diabetes is one of the leading causes of mortality worldwide (World Health Organisation 2010, 27-28) and the number of diabetics is rapidly increasing. Now there are 425 million people with diabetes, and it has been estimated that in 2045 there will be 629 million people with diabetes in the world. Diabetes is a chronic disease and, if not treated properly, it can lead to serious health problems and disability, such as reduced vision or blindness, kidney failure and a painful peripheral nervous system disease. Successful self-care is a key factor in delaying or preventing these complications. (International Diabetes Federation 2019.)

Musculoskeletal conditions, like low back pain, are the major cause of work absence and incapacity. They also increase the costs of healthcare and social support. Even if low back pain is not lethal, like untreated diabetes can be, it can lead to severe long-term pain, loss of function and psychological and social consequences, decreasing the quality of life of those with the condition and people closest to them. (EUMUSC.net.)

Both diabetes and musculoskeletal conditions can be influenced by behavioural factors, such as insufficient physical activity, tobacco use, unhealthy diet and overuse of alcohol. Controlling these factors is the base of the self-management of these long-term conditions (World Health Organisation 2010, 27-28; EUMUSC.net). In this article we introduce suggestions for the role of PC for a successful care of long-term conditions.

## **Material and methods**

The articles were searched from Finna and Andor databases using search terms like patient/person-centeredness, rehabilitation, long-term conditions, diabetes and low back pain. We then selected articles maximum 10 years old, which described the models of PC from both a patient and professional point of view, and articles concerning the benefits and implementation of PC. These articles were chosen to be able to answer our research questions.

## **Results**

### **PC from different perspectives**

Several different models about dimensions and elements of the patient-centeredness have been created over time and two of them are introduced in this article. The model of Greenfield et al. (2014) was chosen because it is one of the few models created from the patients' perspective, and a model created from the professionals' perspective by Zill et al. (2015) was chosen because of its ability to summarize the whole concept of PC.

In their qualitative research, Greenfield et al. (2014) interviewed patients with diabetes in primary care context about their conceptions of patient-centered care to create a model of PC from the patient perspective. According to Greenfield et al. (2014, 4-9), the definition of PC can be summarized as seeing the patient as an active subject in the center of health and social services and acknowledging the individual preferences, needs and values of the patient. In their study, they identified six elements of PC: holism, naming, heed, compassion, continuity of care and agency and empowerment. The elements overlap each other and separating them is difficult in real life. Therefore researchers created an overarching figurative theme: emotional and physical space, to describe how all six elements interlace each other. The definitions of these elements can be seen in Table 1. (Greenfield et al. 2014, 4-9.)

The professional perspective model of PC was created by Zill et al. (2015). They executed a Delphi survey, which is a structured group discussion technique, where a group of clinicians, researchers, quality managers and patient representatives had the aim to create a concise definition of PC. As a base of the study, they used 15 dimensions of PC, which were collected earlier in a systematic literature review about concepts and dimensions of PC. These dimensions were: essential characteristics of the clinician, clinician-patient relationship, clinician-patient communication, patient as a unique person, biopsychosocial perspective, patient information, patient involvement in care, involvement of family and friends, patient empowerment, physical support, emotional support, access to care, integration of medical and non-medical care, coordination and continuity of care, and teamwork and teambuilding. The professional group rated the TOP 5 dimensions to be: patient as a unique person, patient involvement in care, patient information, clinician-patient communication and patient empowerment (table 1). (Zill et al. 2015, 3-5.)

Table 1. Dimensions of PC and their definitions

<b>PC according to Greenfield et al. 2014, 4-8</b>		
Holism	To be seen as a whole person (medical and psychological needs)	Emotional and physical space is overarching all themes
Naming	To be treated with respect, dignity and to be taken seriously	
Heed	Full attention to both clinical and personal needs	
Compassion	Equal relationship with the professional, empathy, warmth	
Continuity of care	Seeing the same physician every time, not having to explain everything every time, is the base for an understanding and trusting relationship.	
Agency and empowerment	Involved in decision-making as co-operators, asked and listened to.	
<b>PC according to Zill et al. 2015, 4</b>		
Patient as a unique person	Recognition of patient's uniqueness (individual needs, preferences, values, feelings, beliefs, concerns and ideas and expectations)	
Patient involvement in care	Shared decision-making regarding decisions related to the patient's health while considering the patient's preference for involvement	
Patient information	Provision of tailored information, acknowledging the patient's information needs and preferences	
Clinician-patient communication	Verbal and non-verbal communication skills	
Patient empowerment	Recognition and active support of the patient's ability, responsibility to self-manage his or her disease	

### **Importance of PC in rehabilitation of persons with long-term conditions**

PC is acknowledged to be one of the important factors in the care of long-term conditions, (Greenfield et al. 2014, 3, 9) such as diabetes and chronic low back pain. One good example of the importance of PC is presented by Young-Hyman et al. (2016). In their study they focused on the psychosocial care of a person with diabetes and presented six phases of perspectives on the course of life and disease : diagnosis, learning self-management, maintenance of self-management and coping skills, life transitions impacting disease self-management, disease progression and complications, aging and its impact on disease and self-management. Improved self-management and treatment outcomes are results of ability to self-manage diabetes. The needs of the patients vary in different phases. For example, in the learning self-management phase people can have issues regarding autonomy, independence and empowerment. The life transitions phase includes such things as moving, marriage or divorce, occupational changes or experiencing loss of something, which can have an effect on self-

management. These phases can be helped with supportive and training of skills. (Young-Hyman et al. 2016, 2127-2128, 2132.)

Medical management in diabetes care requires that the patient follows and implements the treatment regimen. Successful person-centered care models have recognized cultural and personal influences, family and community sources (e.g. support), core values and individual lifestyles, which all influence care planning. It has been acknowledged that it is important for the identification, prevention and resolution of psychological problems to enlist the social support network surrounding the patient. (Young-Hyman et.al. 2016, 2128, 2132.)

Another good example of the importance of PC can be seen in the study of Holopainen et al. (2018), focusing on patients with chronic or episodic low back pain in public and private health care services. They explored the conceptions of the patients of their encounters with various health care professionals (HCPs). As a result, they pictured a 4-phase rehabilitation process, where the patient turns from a passive object to an active agent (figure 1), and the success of the process relies on the HCPs obeying the principles of PC. (Holopainen et al. 2018 270-274.)

In the first, "non-encounters" phase, the patients were searching for a diagnosis or information to explain their low back pain. In the second, "seeking support" phase, the patients started to understand their low back pain and the treatment process. In the third, "empowering co-operation"-phase, they started to understand the meaning of their pain and take an active role in alliance with the HCP. In the final, "autonomic agency" phase, the patients were adopting a new way of living and took the responsibility for rehabilitation themselves. (Holopainen et al. 2018, 271-274.)

The needs of the patients vary through the journey, as described in figure 1. A need for a clear plan and clear goals remained through the path. The need to be heard, understood, taken seriously and treated as a unique person, were important especially in the first two phases, enabling the trust to be built between the patient and the HCP. The type of needed information changed between phases, and information was important to be given in a language the patients could understand and in a written form to remember later. (Holopainen et al. 2018, 271-274.)

The need for support was crucial in the beginning, when the patient needed to be supported to take the first steps of the rehabilitation journey. Help was also essential for the patients to "reinvent" themselves, e.g. to understand the connection between mind and body, and to find ways to improve their situation themselves. Later, the support was needed to achieve one's own activity and to keep it up, especially when difficulties occurred. The need for support moved from the HCPs more to the family, but the need for an opportunity to contact the HCP still existed. (Holopainen et al. 2018, 271-274.)



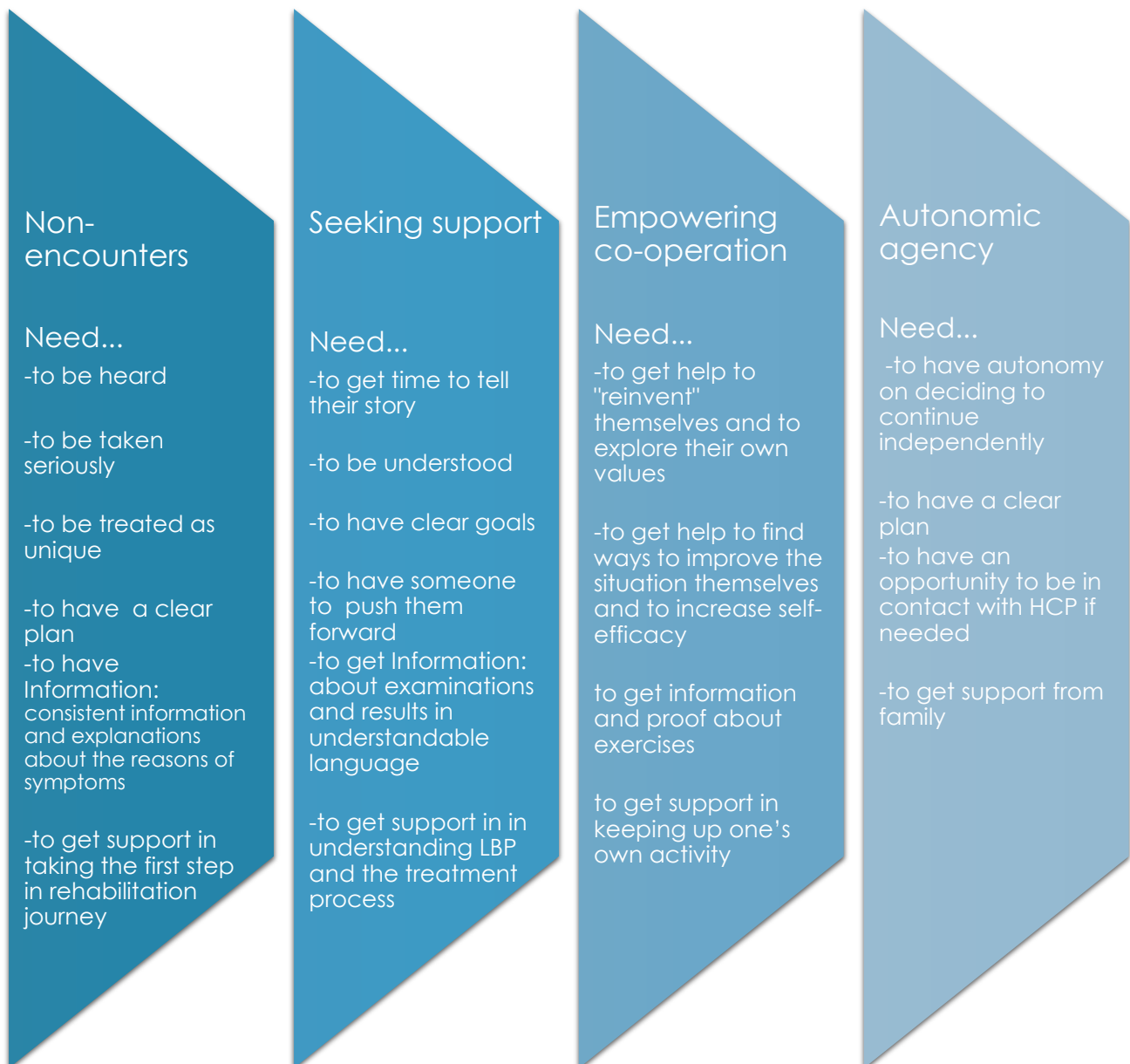


Figure 1. Rehabilitation process in low back pain and changing needs in different phases. (Holopainen et al. 2017)

According to Holopainen et al. (2018, 274), PC has a major role in enabling a successful rehabilitation process. The changing needs of the patients need to be identified and met by the HCPs to enable the patient to move forward in the process. The most critical step was from the first to the second phase. Patients often felt that they were not encountered at all by the HCP and were bounced between different healthcare units without a clear plan, and this made them feel unable to participate in their treatment, leaving them unsupported to take the first steps in the path of rehabilitation. Failure in taking the first steps may lead the patient either to feel abandoned and to continue searching for answers by suggesting unnecessary examinations or even surgeries, or the patient gives up on hope and accepts the pain to be a lifelong company, lowering the quality of life. (Holopainen et al. 2018, 271,274.)

Despite the differences in ways to describe the processes, there are similarities in these two examples of PC in the care and rehabilitation of diabetes and low back pain. In both, the needs

of the patient vary through the process and this is important for the HCP to identify to enable a successful process. Although these examples concern the diagnosis of diabetes and low back pain, it could be possible to apply them to other long-term conditions.

### **Effects of patient-centered interventions in care of chronic conditions**

As seen in the previous examples, a successful communication and patients' empowerment and engagement in their treatment are vital for good overall outcomes. Person-centered interventions addressing these issues can increase the experienced quality of care (McMillan et al. 2013, 586,591). As discovered in McMillan et al. (2013) review, the patients felt that a trusting relationship, better communication and focusing on the patient's needs led to a higher quality of care. One conclusion was that from the professionals' perspective, empowering interventions contributed to patients' engagement in health care and this way improved the overall health status. The person-centered care as a model seemed to improve emotional well-being but had little impact on clinical outcomes (e.g. measurements, like blood sugar or blood pressure) and functional outcomes (e.g. activities in daily life). The outcomes achieved by person-centered care interventions may not be sustained over time, at least not without ongoing support. (McMillan et al. 2013, 586, 588, 591-592.) It still must be remembered that evaluating long-term outcomes of one person-centered intervention is hard, because there are so many factors that can affect well-being, health and function over time.

Both patients and professionals saw that communication skills training for the HCP promotes co-operation between the patients and HCP. The patients' desire to take part in the decision-making process offers an opportunity for professionals to discuss and give the needed information and it is the most potential form to improve patient satisfaction and engagement (McMillan et al. 2013, 591-592; Wildevuur & Simonse 2015). An opportunity to learn and ask questions can increase a patient's willingness to know more about his/her condition (McMillan et al. 2013, 591-592).

One way to increase the health-related quality of life and promote self-management in long-term conditions is through person-centered information and communication technology (ICT). Person-centered ICT interventions enabling personal information sharing, shared decision making and setting up a care plan, are relatively new, and the mostly used ICT interventions are related to self-measuring, such as blood glucose level and blood pressure monitoring. By enabling communication through ICT interventions, such as monitoring apps and video phone visits, the patients can make a difference to their self-care and the perceived quality of life can increase. Technology, like wearable smart technologies and virtual rehabilitation clinics, are becoming even more available in the future and, in most cases, can promote clinical outcomes in a cost-effective way. (Wildevuur & Simonse 2015.)

## **Conclusions**

Patients with long term conditions can have multiple issues and it is important to get full attention to them as a whole. Managing the condition should not just be separate encounters with the

HCP and occasional acts that a person performs, but a continuous journey for the patient to reach control of the condition (Greenfield et al. 2014; Holopainen et al 2017).

What really is important in PC, can be seen differently by the patients and HCPs. For patients, the acknowledgement of needs to be heard, compassion and continuity of care are important (Greenfield 2014). Experts emphasize more the patient information and leave out the emotional and physical support, coordination and continuity of care and access to care from their model of PC (Zill et al. 2015). However, it must be noted that dimensions of a biopsychological perspective, access to care, and teamwork and teambuilding were seen very relevant also by the experts in Zill et al. (2015) study, but were left out from the final model because the professionals found the concepts to be too unclear.

Both models of the PC (Greenfield et al. 2014; Zill et al. 2015) and other studies observed here, acknowledged the uniqueness of the person and active participation in decision making to be an important part of PC. Also, empowerment of patients was perceived important. Empowerment can enhance an active participation in decision making, a better engagement in care and can improve self-efficacy.

It is natural that professionals see success in treatment through clinical outcomes, e.g. lowered blood pressure, but we should remember that there is much more in a human that can't be measured. Only meeting the medical needs isn't enough to support self-care of the patients (Greenfield et al. 2014, 6-7). As we can see in Holopainen et al. (2018) and Greenfield et al. (2014) study, the non-measurable factors, such as being heard, understood and supported, are actually very important when it comes to achieving good long-term outcomes concerning the overall situation. It is also important that the HCPs understand that the needs of the patients change over time and the recognition of these needs is crucial for the HCPs to be able to offer the right kind of support and information.

ICT interventions can promote a patient's interest in taking part in care and lowers the boundary of keeping in touch with professionals. ICT interventions, like monitoring apps, can be the answer to a better communication (Wildevuur & Simonse 2016), and supporting the self-care skills and psychological aspects are in the core of person-centered approaches (Young-Hyman et al. 2016).

McMillan et al. (2013) pointed out that maintaining the outcomes achieved by person-centered care interventions can be difficult without ongoing support. Young-Hyman et al. (2016) and Holopainen et al. (2018) studies pointed out that people need different kind of support in different situations in life with a long-term condition. It might be impossible to maintain outcomes by doing only one person-centered intervention. Person-centeredness should be the way of doing things and should be integrated in care and rehabilitation of long-term conditions (Greenfield et al. 2014, 9).

## **Discussion**

The different perceptions of PC set a great challenge to professionals. When the aim is to achieve good overall outcomes in the treatment and rehabilitation of long-term conditions and enable the patient to function in his/her best, it is important that the HCPs really meet the patient

as a unique person and see things also from the patient's perspective. As a patient, it is easy to get tired with different interventions regarding one's life but planning them together with professionals can ease the journey. Identifying and meeting the changing needs of the patient, giving the right type of information and support and empowering the patient, while still maintaining the professional perspective to e.g. clinical issues, is not an easy job to do. Still, it is necessary to enable the rehabilitation process to be successful.

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# 3 Motivation as a starting point and goal in rehabilitation

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*Danmei He and Panagiota Domestichou*

## **Introduction**

Goal setting and motivation are crucial parts in the rehabilitation process, since these can enhance the behavioral changes in individuals (Bovend'Eerd, Botell and Wade, 2009, 352). A significant number of theories, methods and approaches have been displayed over the years, presenting the context and necessity of goal-setting in the rehabilitation process. The most important of them are briefly described in this article. These theories cannot be applied in every case, since rehabilitation is a complex process requiring the combination of many actions. In goal-setting it is important to have the client's active participation in cooperation with not only their families but also the rehabilitation team, since it can help the clients to set goals and propose ways to achieve them (Bovend'Eerd et al. 2009, 353; Dreeben 2010,5).

Motivation can be described as the individual's willingness or readiness to take the necessary actions in order to achieve the individual's goal (Mabin & Randaal 2014, 8). Motivation is an important predictor of adherence in health care, depending on the client's condition and the treatment recommendations (Martin et al. 2005). Such factors as internal motivation of the individual, key stakeholders, social support and personal beliefs can influence motivation (Mabin & Randaal 2014, 11). The aim of this article is to describe the importance of goal setting and its motivational impact in the rehabilitation process. The article also explores aspects that could increase a client's participation in rehabilitation.

## **Materials and methods**

In order to find information about our subject, we chose words "motivation" and "goal-setting in rehabilitation" as search terms in FINNA database. The provided material covered a variety of subjects regarding goal-setting in several cases, such as recovery from a serious injury, illness, stroke or surgery. We included articles that were published within 20 years and were available in full-text form. The provided choices were eliminated by selecting articles which offer a more spherical picture of our subject.

## **Theoretical approaches of goal setting**

There is a considerable amount of literature regarding the theoretical approaches of goal setting in rehabilitation. The first document of goal-setting can be dated back to the late 1960s

when Kiresuk and Sherman created the Goal Attainment Scale (GAS). Later, Kings (1971) introduced the goal attainment theory, which denotes the importance of goal setting and achieving them in a clinical context (Siegert & Levack 2015, 4).

In recent years, a range of significant approaches has been developed, some of them include the following: The Goal Setting Theory by Latham and Lock, which underpins goal setting in the rehabilitation context of industrial psychology. According to this theory, the achievement of an ambitious goal triggers the patient to put more effort than he otherwise would, in order to pursue an easier one (Playford et al. 2009, 336). Through this theory, a goal-related behavior, which can lead to behavioral change, is boosted (Scobbie et al. 2009, 3).

Another significant theory is self-regulation. This theory connects the goal-orientated human behavior with the emotional consequences of goal achievement and if one fails to achieve the goals. Such theory is successfully applied to patients with emotional, behavioral and cognitive problems. (Playford et al. 2009, 337)

Bandura's Self-Efficacy Theory is based on goal setting and task accomplishment, which aims at a goal-related behavioral activation. An important aspect of this theory is the use of encouraging strategies to enhance the patient's self-esteem. Health Action Process Approach, developed by Swarzer, demands detailed pre-action planning for the achievement of the goal and for the strategies of overcoming potential difficulties. (Scobbie et al. 2009, 2-7)

Deci's and Ryan's Self-Determination Theory suggests that the coverage of the three basic needs (autonomy, competence and interpersonal relatedness) is crucial and determining for human actions. Individuals can decide over their goal setting independently, according to their own needs. (Siegert & Taylor 2004, 11)

Emmon's Subjective Goals and Well-Being denotes the connection between personal striving and well-being. Goal setting can be something trivial but valuable for the individual's well-being, while Karniol and Ross' Temporal Influences on Goal-Setting point out the significance of time in goal setting. Past experiences and memories can affect the goal setting in the present. (Siegert & Taylor 2004, 13)

## **The importance of goal setting and GAS in rehabilitation**

Goal-setting is an important part of the rehabilitation process since it promotes behavioral change among individuals. It is important that goals should be future-orientated and formulated in detail, in cooperation with the rehabilitation team, in consultation with the patient's wishes, ambitions, and needs. (Wade 2009, 291-293)

Patients should obtain the main role in goal-setting and decision-making, since rehabilitation is considered to be patient-centered, aiming at the empowerment of a person's autonomy (Wressle 2002, 9-10). According to Wade (2009, 292), the participation of patients in goal setting affects their attitude positively by boosting their motivation in the rehabilitation process, since patients are those who acquire the main role for the decision of their personal well-being. Patients should assess what is beneficial for them, how they can manage obstacles and hazards,

what are their key priorities and how they want to be involved in the process (Wressle 2002, 9-10).

Rehabilitation professionals also possess a significant role in the goal-setting process, since their collaboration in combination with the patient embraces a better teamwork, emphasizing the improvement of the patient's health (Playford et al. 2009, 335). In general, rehabilitation goals are determined by the patient's functional and mental abilities, limitations and expected roles, in combination with the participation of individuals important for the patient, such as relatives, colleagues and friends (Siegert & Levack 2015, 13).

Goals should be common not only for the patient and the team members but also for the patient's family, aiming at the same results, allowing the modification of unproductive and inefficient activities (Wade 2009, 293). In cases where the patient's goal-formulating and participation abilities are limited, the rehabilitation team obtains a wider role, bearing in mind to preserve the client-centered approach no matter the challenges (Playford et al. 2009, 335; Scobbie et al. 2009, 14).

It has been highlighted in the clinical research that goal setting as an intervention can eliminate the patients' distractions from the therapy and can have an educational, supportive and adaptive role for them and their family. Goal pursuit can have a beneficial impact on the patients' well-being and functional abilities, but that does not imply that the goals will be finally achieved (Levack et al. 2015, 2). According to the causal modelling, the provisions of feedback on the patient's progress is an important point in rehabilitation, in addition to goal identification, goal setting and planning the actions. (Scobbie et al. 2009, 9).

A good goal is specific, measurable, achievable, realistic/relevant and timed (SMART) (Bovend'Eerd et al. 2009, 2). In order to build up SMART goals, the following four steps are needed: 1. Specifying the target behaviors; 2. Specifying the support needed (people, physical aids and cognitive language or others); 3. Quantifying performance and 4. Timing (Bovend'Eerd et al. 2009, 2). In practical, setting three to five goals is viable due to the time-consuming of goal setting (Tunner-Stokes 2009, 7).

In the 1960s, the GAS (Goal Attainment Scaling) was first introduced by Kiresuk and Sherman and then it has been modified and applied to many fields, such as cognitive rehabilitation, amputee rehabilitation and chronic pain. (Bovend'Eerd et al. 2009, 3; Tunner-Stokes 2009, 2). It is a method of scoring, which is used to quantify the achievement of the patients' individual goals. It produces an average overall outcome score, which is calculated by related weighting (importance\* difficulty) assigned of goals, varying number of goals and expected correlation of the goal (Playford et al. 2009, 7; Tunner-Stokes 2009, 4).

However, Turner-Stokes (2009) indicated that it is difficult to apply the original methods to clinical practice. Thus, a simplified version of GAS, which is robust enough for everyday practice, was developed. The outcomes are evaluated by a 5-point scale ranging from -2 to +2. Scoring 0 presents that the expected goals are achieved; values above zero (+1, +2) reflect better outcomes than expected and values below zero (-1, -2) indicate less achievement than expected. (Figure 1.)

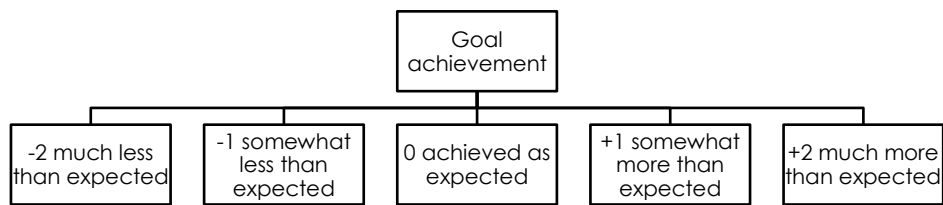


Figure 1. Goal attainment scaling (Tunner-Stokes 2009).

## Motivation as predictor of adherence in health care

As Siegert and Taylor. (2004) indicated, the study of motivation is the study of action. It is related to beliefs, values and goals with action. Motivation is typically viewed as an important concept in the rehabilitation field; it is a widespread belief that the more motivated patients have more positive outcomes. It is one of the important factors associated with adherence.

For the most medical conditions, a correct diagnosis and effective medical treatment are essential to a patient's survival and quality of life (Martin et al. 2005, 1). However, the patient's nonadherence is indicated as a remarkable obstacle to effective treatment. Misunderstanding, forgetting and ignoring the advice from the health professionals often occurs. Patients fail to adhere to recommended treatments account for a large proportion when the treatment regimen is complicated. And it is difficult for them to follow recommendations, which involve lifestyle-changing. Only a small number of patients are fully adhered. Nonadherence means a waste of time, higher medical care expenses and poor outcomes. (Martin et al. 2005, 3-4)

In the self-determination model, intrinsic motivation is defined as 'for which the rewards are internal to person' (Deci & Ryan 2000). It is different from the extrinsic motivation behaviors. The purpose of which is to get external rewards. In practice it means that the health professionals need to understand and gather the views from the patient's perspective based on their current situation, which would motivate the patients from an intrinsic aspect. (Siegert & Taylor 2004, 10).

Presently, there are numerous quantitative studies suggesting that motivation can be a good predictor of outcomes in rehabilitation (Siegert & Taylor 2004,10). However, it is influenced by a number of factors which will address the outcomes differently. In work-related rehabilitation, the stakeholders can be any person or organization which influence return-to-work outcomes. Patients are more likely to participate if they are able to see the benefits (Mabin & Randall 2014, 9). A lower level social integration is related to a low motivation level. And pushing the patient too hard in order to get better outcomes would be counterproductive. A stimulating ward environment would give a positive impact on motivation (Maclean et al, 2000, 3). Besides, it would be beneficial to take the patient's individual cultural background into account while making the goal setting plan (Martin et al. 2005, 7). Particularly, the internal motivation is regarded as the major factor having influence on motivation. It shows that the patients have the willingness and readiness to change in order to reach the set goals.



## Discussion

In this article, there are several limitations existing. Firstly, owing to space constraints, our study cannot fully explain the goal setting process which includes five steps. In this study, we focused on step three, scaling the goal by a simplified version. However, as Bovend'Eerd et al. (2008) indicated, it is necessary to build up criteria for the outcome evaluation before the intervention starts. Knowing enough of the individual's wishes and expectations before defining the expected goals is essential. In addition, Turner-Stokes (2009) pointed out the significance of documenting the importance and difficulty of key goals. It would give reflection to the rehabilitation teams, which would help to produce a more accurate prediction of goal attainment.

Secondly, this article only listed some major elements which have an impact on motivation. Depending on the needs of rehabilitation, the influence factors are varied. It could be the factors mentioned above, or it can be other ones, such as the qualities of the rehabilitation staff and clinical factors. Pound (2002) pointed out that the professionals, as one of the primary participants in the rehabilitation process, can take a continually positive and encouraging attitude towards the patients, which could improve the patient motivation. Moreover, according to Maclean et al. (2002), it is considered that aging relates to lower motivation; youngsters have a greater motivation to leave the hospital.

Furthermore, the setting of insignificance for the clients' goals, no matter how easy or achievable, can affect negatively the clients' motivation providing limited outcomes (Wresle 2002, 11). That is why not only a detailed planning but also good communication with the rehabilitation team is of great importance.

Even though there are some limitations existing, it is worth compiling this article. First of all, client participation which enhances a patient-centered approach is considered beneficial for the goal setting process. The client obtains a dominant and more responsible role participating actively by formulating personal goals autonomously. Also, in this article GAS tool and SMART criteria are presented and both of them have a positive impact, strongly connected to goal formulation. Both of them, especially GAS, can be a very meaningful tool in the rehabilitation process, since it can be used to assess the accomplishment of the importance of goals for the client. Other characteristics are that they are also flexible, easy to be used in most cases and not time consuming (Bovend'Eerd et al. 2009).

Moreover, the client's motivation can be boosted when the goal setting and key theories are applied wisely and properly according to individual needs. The maintenance of these principles can lead to the patients' education and improvement of their adherence by achieving better outcomes, interventions and satisfaction by the client (Dreeben 2010, 35).

In this article, we state a lot concerning the goal and goal setting, which is a *sine qua non* of rehabilitation practice. On the other hand, motivation as a related concept to rehabilitation is difficult to measure objectively and is prone to value judgment. Moreover, it is a widespread belief that the more 'motivated' patients have more positive outcomes, which are evaluated by the professionals (Siegert et al. 2004 5&9). Thus, we believe that building the motivation through goal and goal setting is an essential and important way, which will give better outcomes and adherence. Furthermore, it is worth to be mentioned, that the patients' asymptomatic type

and limited functional capacity in severe conditions can lead to a decreased motivation at the beginning of a rehabilitation program. This problem can also be observed among older patients. Another common problem among them is the lack of understanding of medical information and the significance of adherence during the rehabilitation process (Dreeben 2010, 42; Martin et al. 2005).

## Conclusion

This article provides a slight insight into the goal setting and its motivational impact on the rehabilitation process. As an effective way of achieving behavioral changes, goal setting is a collaborative process which involves the patient, patient's family and rehabilitation professionals. Our study emphasizes the importance of goal setting and the patients' adherence. It describes how to evaluate the achievement of individual goals in clinical practice, which is by using the simplified version of GAS. It identifies various factors which have influences on motivation to adherence, of which the most important is the intrinsic motivation.

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# 4 Ways and possibilities within public services to increase mental health rehabilitees' work ability

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Piritta Jalonen & Niina Tammi

Our article is about the ways and possibilities within the public services in Finland to increase mental health rehabilitees' work ability. This subject is important and topical, because according to many studies and reports, for example Kelasto (2019), mental health illnesses are one of the biggest reasons for disability pensions in the 21st century. Kelasto is a statistical database that contains key statistical information about the social security schemes administered by Kela, the Social Insurance Institution of Finland (Kela web page 2019). At the same time, the dependency ratio is increasing and in political and societal discussions professionals are trying to find ways to get people work longer and ways to get people with partial work ability into working life. Our perspective was to study and find out how and what kind of services the Finnish public services can provide for mental health rehabilitees to increase their work ability. We also reviewed recent development projects, especially in Satakunta region, which have had an aim to increase the work ability of mental health rehabilitees.

## **Ways to support mental health rehabilitees' work ability**

We present the most common ways and services that are statutory, which means that they should be available for everyone in need of those services.

### **Rehabilitative work experience**

Rehabilitative work experience is a social service meant to prevent negative effects caused by being unemployed. The aim is also to promote and support the participants' everyday skills and to increase their work ability and performance. Rehabilitative work experience aims at preventing exclusion and at giving the participants a chance to participate in the society in a meaningful way. Rehabilitative work experience is organized by the municipality and can be organized in various ways, such as workshops, groups etc. It can thus be very close to an open market work, when the participant has almost the same duties as the staff, but with a support. Also, because the aim is to rehabilitate, the work hours are limited (Kuntouttavan työtoiminnan käsikirja web page 2019). One can participate from one to four days per week and from four to eight hours per day, and every participant must have a personalized plan for the rehabilitative work experience. (Laki kuntouttavasta työtoiminnasta 189/2001, 13§)

Rehabilitative work experience is not especially designed for mental health rehabilitees, but it is a relevant option for the rehabilitees who are on their way towards working life.

### **Social rehabilitation**

Social rehabilitation is also a statutory service which is provided by the municipality's social work. Social rehabilitation aims especially at the rehabilitees' social welfare and participation (Sosiaalihuoltolaki 1301/2014, 17§). For mental health rehabilitees, social rehabilitation is often the first step on their way to recover from the illness towards the control of everyday life, which is very important before working life. Like the rehabilitative work experience, social rehabilitation is always individually planned with the participant and can include various ways to support one's social welfare. Social rehabilitation can be, for example, a professional support person, regular meetings with a social worker or a social counsellor, or different groups. (Sosiaalihuoltolaki 1301/2014, 17§)

### **Vocational rehabilitation for mental health rehabilitees**

The Social Insurance Institution of Finland, Kela, provides vocational rehabilitation for mental health rehabilitees. Most of the services are for rehabilitants who already have a diagnosis and have had some medical care earlier. For young people, there are ways to get vocational rehabilitation without previous medical care. The provision of vocational rehabilitation for those who are currently working or have a more extensive working history (about five years or longer) is the responsibility of the earnings-related pension providers. Next, we will tell you more about those ways that are provided by Kela.

### **Vocational rehabilitation**

Vocational rehabilitation can help one find and keep a place in the working life and to return to work despite an illness or disability that one may have. Kela can provide access to vocational rehabilitation if one is unemployed, a student, has a short history of employment, or is about to switch occupations. For those with longer employment histories, Kela can offer access to KILLA rehabilitation (Kela web page 2019).

Vocational rehabilitation provided by Kela can be education or training, work try-out, vocational rehabilitation courses, assistive devices etc. Common for these vocational rehabilitative actions is that one needs a medical statement to apply. For young people, between the ages of 16-29, there is a possibility to apply for vocational rehabilitation straight from Kela without a medical statement, if one feels that his/her study or working ability is being compromised by mental health problems (Kela web page 2019).

## **Rehabilitative psychotherapy**

The purpose of rehabilitative psychotherapy is to improve the rehabilitants' ability to work and study and to help them progress in their studies, remain economically active, or enter or return to working life. Rehabilitative psychotherapy is meant for rehabilitants between the ages of 16–67. To apply for the rehabilitation, one must have at least three months of appropriate therapy after a diagnosis. Based on a psychiatrist's statement, it can be determined that rehabilitative psychotherapy is necessary to improve or support one's ability to work or study (Kela web page 2019).

## **Rehabilitation and adaptation training courses**

Kela provides access to rehabilitation and adaptation training courses for children, adolescents and adults as well as their families and others close to them. The courses help the rehabilitants and their families adjust to the changes brought by an illness or disability and to achieve the rehabilitation goals. During the courses, one will get information about their diagnosis, peer support, and help with how to manage daily activities.

The courses are arranged as group rehabilitation. The courses for children are arranged as family courses, which allows parents and siblings to participate as well. For mental health rehabilitees there are group-based adaptation training courses, for example Nuppu and Silmu. The aim of these adaptation training courses is to increase the rehabilitees' work ability or studying ability and to support their performance in everyday tasks and social participation (Kela web page 2019).

## **Other ways and development projects**

There have been many development projects, that have focused on increasing the work ability of those who have some limitations. The Finnish government had a key-project; Career opportunities for persons with partial work ability (2018). The aim of the key-project was to develop and find out new ways and possibilities for people with limitations to find work or to be able to continue in working life. The key-project had several regional development projects, of which many had the aim to increase the mental health rehabilitees' work ability and possibilities to work. In Satakunta regional area there was the SATAOSAA project, which had one development aim: to increase the mental health rehabilitees' possibilities for working life. They used the Individual Placement and Support (IPS) method and the results were encouraging. They managed to integrate job training into the mental health rehabilitees' rehabilitation so that the aim of rehabilitation was also to find and / or keep the rehabilitees in working life. (SATAOSAA final report 2019)

IPS is a method to find work possibilities for different rehabilitant groups from the open work market. It was developed in North–America in the 70's to help and support mental health rehabilitees to find work. There are studies that show the IPS –model being an efficient way to increase mental health rehabilitees' work ability and placement into open work market (Burns, T. et.al. 2008, 949-958; Harkko J., Lehto S., Pitkänen S., Ala-Kauhaluoma M. 2018. 3). The core idea

of the IPS -model is that a job training is integrated with psychiatric and mental health care. The IPS -model has eight principles which are:

1. Open to anyone who wants to work
2. Focus on competitive employment
3. Rapid job search
4. Targeted job development
5. Client preferences guide decisions
6. Individualized long-term supports
7. Integrated with treatment
8. Benefits counselling included (The IPS Employment Centre web page 2019).

Commonly the services towards working life are started after one has had medical care for some time. In the IPS –model, medical care and labour services are integrated, and the aim is to support one's working ability right from the start, the condition the condition allows it.

## Summary

Mental health illnesses are becoming more and more common. Working life is turning into more challenging and many people in their best working age suffer from mental health problems. At the same time, the working life is becoming more challenging than ever before. For the society, every disability pension is a cost which, in many cases, could be prevented. From the individual point of view, it is often a tragedy not to be able to participate in working life and support oneself financially (Joensuu H. 2017). Those are more than adequate reasons for the society and public services to support mental health rehabilitees' work ability.

As we pointed out earlier, there are many ways to help those people and increase mental health rehabilitees' work ability. The Finnish public services can already offer many efficient ways to increase mental health rehabilitees' work ability.

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# 5 Systems of rehabilitation in Europe: Switzerland vs Finland

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*Sibyl Frauricher Szedressy and Innocent Anunobi*

## Introduction

Depending on their history, the European countries developed different health systems. Three main categories exist (Arcis, 2010). In many countries, such as the United-Kingdom, Spain, Italy, Norway, Ireland and Finland, the health care system is based on a Beveridgean system. Created in England in 1942 by Lord Beveridge, this system proposes a public health monopoly. This system is intended to be a generalized and standardized system of social benefits and guarantees free health care extended to the entire population. This system is financed by taxes and directly involving public finances. It is therefore a universal system of social protection not related to employment; all permanent citizens have to be covered by the system, regardless of the risks. The Beveridgean system aims at the 3U rule: universality (all the population must be covered), unity (only one national insurance managed by the state), uniformity (equivalent rights, of the same amount for all). This free health care is provided by public hospitals or practitioners (paid by government). To be dispensed with these cares free of charge, usually implies the respect of a supervised course, sometimes linked with the geographical area: the patients consult their general practitioner, who then directs them to a relevant setting or another professional. A private care's offer may develop on the margins of the public offering, but patients who wish to use it must take full responsibility for the costs of the care of these providers. (Arcis, 2010)

The Bismarckian system was introduced in Germany at the end of the 19th century by Chancellor Bismarck (1883). This system uses a compulsory insurance coverage managed by public law funds. This model concerns many countries, such as France, Germany, Greece, Poland, Austria and Belgium. An insurance fund reimburses the health expenses within the limit of a basic amount defined by the public authorities. Protection is linked with work and financed by social contributions by employees and employers. The State finances directly or via ad hoc devices the health expenditure of certain populations far from the labour market or at the risk of exclusion, in order to guarantee the universality of the coverage. (Arcis, 2010)

Finally, some European countries, such as Switzerland and the Netherlands, have set up a compulsory health insurance system for all residents and have entrusted the management to private insurers. The State intervenes strongly in order to remedy market failures: It defines the care panel, which allows to ensure a minimum coverage to all residents, to make the offer more readable and to promote competition on the price contracts. (Arcis,2010) Each of these models include flaws: either cost control is ensured at the expense of quality of care, or the quality of care is at the expense of balanced budgets. (Website Swiss info.) (see table 1)

The purpose of this article is to compare two different health systems, the Swiss system and the Finnish system (Beveridgean).

Table 1. Comparison of different systems

	BISMARCK	BEVERIDGE / FINLAND	SWITZERLAND
Principle	Insurance	Solidarity	Insurances
Beneficiaries	Workers (who contribute)	Entire population	Entire population
Benefits	Contributory benefits, proportional to contributions paid	non-contributory, flat-rate and identical for all	non-contributory, flat-rate and identical for all
Funding	Contributions	Taxes	Contributions
Management	Socio-professional funds	State	Private insurances

Source: <https://harzouzlaurencoursst2s.skyrock.com/3293994814-Chapitre-5-3-Les-fondements-et-techniques-de-protection-sociale.html> 30/07/2017

## Swiss model

In Switzerland, three major insurances cover health and re-empowerment needs. The first, **Basic Health Insurance** can be supplemented by an additional insurance to broaden the range of offered care. The health insurance or supplements are paid by everyone. If the person does not have enough income to pay for his/her basic insurance, then the state grants a subsidy for the health insurance. Any person resident on Swiss territory must be insured by the Basic Health Insurance. (Website of the Swiss Federal Office of Public Health) More than 60 private insurances exist in Switzerland. The basic panel of care reimbursed by every insurance is: doctors, psychotherapists, chiropractors, occupational therapy, nurse care, speech therapists, physiotherapists, pregnancy care, hospital fees and medicines. (Website of Swiss social Insurances)

Private insurances were created after the enactment of the Swiss Health Insurance Act, in 1994. Everyone pays a monthly premium. Depending on the nature of the contract with the health insurance company, adults have to pay a deductible. When the deductible is paid, then the insurance covers 90% of the medical bills and patients pay the remaining 10%. The patient's share is due up to reach 700CHF (616€) per year and then the bills are fully paid by insurances. (Website of the Swiss online authorities, 2013.) In Switzerland, the insurance premiums depend solely on the place of residence, sex and age class of the insured (child, young adult, adult). For the convent to be universal, the State finally imposes limits on the selection of risks so that insurers cannot refuse a subscriber because of their state of health, and that all residents can have access to health insurance. A risk-recovery fund collects a part of the insurance premiums and redistributes it to the insurers who have the most "bad risks",

with the aim of limiting incentives to the selection of "good risks". (Website of the Swiss Federal Office of Public Health)

Then there is the **Accident Insurance**, which is paid on one hand by the employers and on the other by the employees. Accident insurance is also a private insurance that grants the benefits which the employers have purchased for their employees. Unemployed, students or independent persons must provide their basic insurance to cover the costs of accident cases. This insurance can cover a social reintegration, with professional retraining. Accident insurance covers the costs of treatment in the event of professional accidents and non-professional accidents, namely during leisure time. Accident insurance also pays one benefits, such as daily allowances and annuities. The maximum amount an insured can gain is 148'200 CHF (130.462 €) per annum. This insurance reimburses 100% of the costs without a deductible, but may, if the duration of the pardon is too long, return the file to the health insurance. (Website of the Swiss Federal Office of Public Health)

Finally, the **Disability Insurance** is a state body financed by workers' contributions, governments, and the Swiss confederation. The Disability Insurance (DI) is a compulsory insurance covering all Swiss territory. It aims to guarantee the livelihoods of the insured persons who have become disabled, whether through benefits in kind (rehabilitation measures) or cash benefits (pensions or allowances). All persons domiciled in Switzerland and all persons engaged in gainful activity must be insured with the DI. In the first place, the disability insurance aims to promote the reintegration of persons with disabilities, so that they can meet all or part of their own needs and thus lead as independent a life as possible. This insurance covers anyone with an inability to function normally. It reimburses medical and therapeutic benefits (depending on the diagnosis or the problem) for a period of time that can be renewed (but maximum to retiring age) but can also fund professional reorientation. It also grants annuities to replace or supplement a salary when the person cannot work. (Website of Swiss social Insurances)

Patient care pathway for any issues (illness, accident, disability) is first to consult a general practitioner, who will then send the patient to see the appropriate specialists and ask for the necessary health examinations. He/She will provide medical treatment and oversee the entire situation. Each health professional will work so that the person can reintegrate quickly and correctly. All health professionals, who are reimbursed by the basic health insurance, accident insurance and disability insurance, must comply with a tariff agreement signed by the providers and by the health insurance companies. The invoices are then sent to the patient's cash desk, which pays them directly to the providers

According to the OECD/WHO (2011), the population of Switzerland lives longer than almost anywhere else in the world, thanks to a high level of economic development and a responsive health system. Swiss residents benefit from the proximity to health services, a wide range of providers and services. The Swiss health system, flexible and innovative, is among the best in the OECD zone.

## Finnish model

Finland is divided into about 450 municipalities. Each of these municipalities is obligatorily responsible for providing adequate health care services for its residents. In Finland, the health system consists of municipal, private and occupational health services. The local government authorities, hospital districts and different municipalities in Finland are solely responsible for the primary health care services of the citizens. This is also complemented by private and occupational health care services, which provide outpatient care for patients. The Finnish health system provides preventive health care, specialized medical care, environmental health care, mental health care, rehabilitation and primary health care services for the public. Everyone can access the Finnish health care system as long as a proof of residency is ascertained. The health system in Finland is financed by different means and channels, and the statutory National Health Insurance (NHI) scheme covers all residents in Finland. This is managed by the Social Insurance Institution (SII) through about 260 local offices located all around the country. The SII is supervised under the authority of the Parliament. Obviously, the financial decision-making relies mainly on dependable information on the costs and effectiveness of services. Every municipality in Finland calculates their expenditure annually. This will allow comparison of a local authority's expenditure with the national average and with similar expenditure in other municipalities (National Institute of Health and Welfare, 2015)

Due to some difficulties concerning queues and, to some extent, the quality of public primary care, it has been observed that many patients often go to private care. From the inception of the 1991–1993 economic crisis, a large and increasing number of people appreciate now more the Finnish system of occupational health services. It is highly subsidized by the Social Insurance Institution of Finland or 'Kela' (60% for prevention; 50% for clinical services), has no patient copayments, and currently provides up to 40% of all primary care visits in some urban areas (Jakobowski et al; 2013)

The foundation of the health services is laid down in the constitution of Finland: "Everyone shall be guaranteed by an act the right to basic subsistence in the event of unemployment, illness, and disability and during old age as well as at the birth of a child or the loss of a provider. The public authorities shall guarantee for everyone, as provided in more detail by an act, adequate social, health and medical services and promote the health of the population." (National Institute of Health and Welfare, 2015)

The patient care pathway follows the following order: Primary health care and Secondary health care. The Primary health care is organized at the level of a health centre, usually on the grounds of one's place of residence. If the patient needs Secondary health services, the patient is referred to secondary care in the hospital district. After the specialist level care is received, the referring physician receives a discharge summary from the hospital district and is responsible for further follow-up. If needed, the patient is admitted to the health centre hospital. Suitable home care or other institutional long-term care is given if needed. (National Institute of Health and Welfare, 2015.)

Legislation sets maximum user fees and an annual ceiling for the health care charges of municipal services. There is an annual ceiling for public health care charges of 679 €, which also covers bed-day care for family members under 18 years of age. (2015). However,

outpatient drugs are not covered by the municipal health care system, but by the NHI (KELA). In extreme situations, social assistance is available (KELA, 2018).

The Finnish health care system is undergoing a reform process which includes: Service packages adjusted to residents' needs, a correct and timely care, services given by a skilled personnel; freedom of choice which focuses on supporting client-oriented approach, self-determination and utilization of competition; curbing the increase of costs by reducing the costs with EUR 3 billion by the end of 2029, and timely services and best practices application in treatments and service delivery. And including digitalization, which hopes to make everyday life digitalized through information flows, and thereby making data systems compatible and effective for management (National Institute of Health and Welfare, 2015).

## Costs

In Finland, health care services for which local authorities are responsible, account for the majority of health care spending. The State controls by legislation Finland's policy for client charges in social welfare as well as health care services. It also subsidizes services by means of central government transfers to local governments. The aim of these is for client charges to be reasonable and not too high preventing people from seeking help (OECD, 2010). (Table 2)

Table 2. comparison of costs (Source: OECD, 2019)

	FINLAND	SWITZERLAND	OECD average
GDP allocated to health spending 2017	9.2%	12.3 %	8.9%
	4173 USD per capita	8009 USD per capita	4069 USD per capita
Public sources accounted	73.8%	62.8%	71%

In 2016 in Switzerland, the households financed 65% of health expenditure. The household premiums covered 30% of health spending. The State's share in the health expenditure was 29%. (Swiss Confederation, Federal Statistical Office.)

## Conclusion

The two systems are fundamentally different, and each has its advantages and disadvantages. It should be noted that the Swiss system is functional but expensive, and that the Finnish system is rather cost-effective, but complex and the processing times can be long.

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# 6 Community-based rehabilitation programs: Perspectives of developing countries

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*Binita Thapa and James Mbaimba*

## **Aim of the article**

The aim of the article is to sum up programs run by different organizations and NGOs (Non-governmental organizations) participating actively in Community-based rehabilitation (CBR) programs in Nepal and give a realistic picture of the current situation of the CBR centre in Cameroon. What is needed and what issues are important in the CBR programs in the context of developing countries like Cameroon and Nepal will be prioritized.

This information could be useful for someone who is interested in knowing about the current CBR programs in Nepal and the situation of the CBR centre in Cameroon. This Information could be useful for doing further in-depth research of the CBR in developing countries and interested donors, who want to provide charity for people with limitations, can track the organizations easily from this article.

## **Materials and methods**

The first half of the article is completely based on literature found online. The authors used 'CBR programs' and 'in Nepal' as search terms from samk.finna.fi and from Google. Information is put together to make a review of the CBR programs in Nepal, and the second half of the article is based on the author's own experience about the current situation of the rehabilitation program during his field visit to Cameroon.

To make the article more connected, some of the pictures taken by one of the authors and available materials found online, are added. The authors' personal experience is given space and importance to understand the real-life situation of the CBR programs in developing countries.

## **Literature review**

Disability will increase in the future because of an increase in a trend of non-communicable diseases, changes in the age structure and an increase in life expectancy. These issues related

with disability are different in developed and developing countries. The disability issues are needed to be targeted according to the needs of the disabled with community participation. Accessibility, availability, and utilization of rehabilitation services and its cost-effectiveness are the major issues that are needed to be considered. (Kumar et al. 2012).

According to the World Health Organization (WHO), over 650 million people live with disabilities worldwide, or 1 in 10 of the world's population. Out of this figure, 80% live in low-income countries with little access to health and rehabilitation services. Rehabilitation of those affected by physical and mental disability is neglected in the developing countries, often as a result of corruption, poor management of financial resources and lack of natural resources. People with disability are left alone by their governments and most of the institutions supporting people with a disability or handicap are being run by non- governmental organizations (NGO) (Pechak & Thompson 2007, 5).

Understanding the concept of disability is one of the major challenges in developing countries and there is a struggle in the acceptance of the CBR as a valid intervention. Rehabilitation services that are provided by hospitals in the city area benefit only a few disabled people, whereas the CBR can have a bigger impact and it can reach out to a bigger population. (Kumar et al. 2012).

Disability is a global issue and therefore there is a need to understand people's perception about these minority groups. Interestingly, understanding the concept of disability differs from one culture to another (Harley et al. 2018). Cultural differences among societies in Africa have a major impact on how disabilities are perceived (Stöpler, 2007). The importance of understanding disability and its perception lies in the fact that societies address the disability issue based on the way they conceptualize it. It is important to understand the persons with disabilities before setting goals for intervention, and in order to design a meaningful policy for persons with disabilities, there is a need for policy-makers to develop a thorough understanding of this minority group in order to have impact on their lives (Drame & kamploff, 2014).

Attitudes towards persons with a disability in developing countries are based on fear and misunderstanding. For example, some communities in Nigeria attribute disability as a curse from the gods as a result of disobedience, violation of societal norms, breaking of laws, disobeying the gods of the land, adultery, witchcrafts and others (Eskay et al, 2012.). According to Drame & Kamploff (2014) in Somalia, a person with a disability is seen as a punishment from Allah to parents who are capable of committing offences like adultery. In other words, lack of understanding may have a negative impact towards people with a disability.

Community-based rehabilitation (CBR) was initiated by the World Health Organization (WHO,) following the declaration of the Alma-Ata in 1978 and the aim was to enhance the quality of



life for the people with a disability and their families, to meet their basic needs, and ensure their inclusion and participation. While initially a strategy to increase access to rehabilitation services in resource-constrained settings, the CBR is now a multi-sectorial approach, working to improve the equalization of opportunities and social inclusion of people with disabilities, while combating the perpetual cycle of poverty. The CBR is implemented through the combined efforts of people with disabilities, their families and communities and relevant government and non-governmental health services, education, vocational, social and other services (WHO, 2014-2021.)

Community-based rehabilitation programs have been adopted in many developing countries, although there have been many critics of its successes. Different rehabilitation programs that were conducted and a current running rehabilitation program are reviewed positively in developing countries. Various difficult issues at community level still need to be addressed in the developing countries, for example: lack of funding, which is one of the major problems, mismanagement, very old equipment in the rehabilitation centers with no funding to replace it, lack of support by the government or other organizations and their inability to provide the resources needed for the CBR programs, lack of awareness at the community level and so on.

## **Community-based programs in Nepal**

In the Nepalese society a large number of children with disabilities is put into institutional care and the main aim of the community-based rehabilitation model has to be developed to prevent institutionalization. For this, a national CBR program which comprises direct services, advocacy and social inclusion was suggested. The Ministry of women, children and social welfare in Nepal is coordinating the CBR program by providing financial support. More than 50 NGOs are implemented across the country, of which 12 NGOs get direct financial support from the government. (Mendis & Gurung 2007,15.)

According to Melvin et al. (2018), the concept mapping that enables a view of the most critical legal, policy and programmatic factors, which must be addressed when assessing a country's efforts to reform, upscale and improve rehabilitation services. The main finding of the study done by Mendis & Gurung (2007, 16), states a positive outcome for its CBR programs in Nepal. A holistic approach has met with multiple needs by individuals with a disability, despite the age and type of disability. Early childhood care and development and disability arising from mental illness are found to be rarely included. Lack of community empowerment is a major weakness that needs more attention from the organizations and program managers.

There are various organizations, NGOs, working together for CBR. According to International Nepal Fellowship (INF) 2019, 1% of people are living with a disability in Nepal. 46 schools were made accessible for students with disabilities in 2013-14, 729 clients received rehabilitation therapy and counselling, and 513 clients received home-based support and therapy. The main

aim of the INF program is to make people with disabilities empowered and take an active participation in society. This is done by creating public awareness in communities of how to accept and value people with a disability and, if needed, assisting people with a disability. (INF, 2019.) (picture1)



Picture 1. Disabilities are often treated as objects of pity in Nepal and hidden away from society in shame (INF, 2019)

There are active NGOs that are currently working for the betterment of people with disabilities in Nepal. They are as follows;

**Nepal Association for the welfare of the Blind (NAWB):** This organization is running its CBR program in 14 districts in Nepal. The program conducted ensures that the people with blindness and visual impairment are rehabilitated in the environment of their own community. The programs will identify, screen and then categorize the groups into two groups; curable and incurable. Curable are referred to a hospital and eye camps for further treatment. Incurable are registered the CBR programs according to the age groups they belong to and suitable programs, such as early intervention, education, orientation, mobility and vocational training. They are treated by appropriately trained personnel. (NAWB, 2015.)



Picture 2. Physically challenged people making jewellery (OXFAM, 2019)

**Community-based rehabilitation Service (CBRS):** This organization was established in 1995 as a non-profit organization. This organization basically focuses on empowerment and the rights of disabled people, by providing rehabilitation services and mobility devices and education to support the opportunities of disabled people to earn one's living (picture 2.)

**The leprosy mission Nepal:** Nepal is counted as the seventh highest country with a diagnosed case of leprosy each year. This organization gives physical, social and psychological help for leprosy and it focuses on maintaining dignity of individual living with leprosy, and the main vision is to defeat leprosy and transform the life of those suffering from it. (The Leprosy Mission Nepal, 2015.)

**International Nepal fellowship:** This organization is working to rehabilitate the impacts of the 2015 earthquakes. It has worked for some disaster response and resilience. They have their used Green pastures hospital which has a center of excellence in rehabilitation. (INF, 2019.)

**Patan community-based rehabilitation organization:** This organization is also another non-profit and non-political organization that uses the CBR approach for children with disabilities. The services they provide are day care, education, skills development training for the youth with disabilities, physiotherapy and counselling to children and parents and so on. (Patan community-based rehabilitation organization, 2019.)

## **Family Centre for the Handicapped, Batouri, Cameroon**

Batouri is a town in the eastern province of Cameroon. It is the second largest municipality in the province after the provincial capital Bertoua. It is located along the main road connecting

Bertoua with the Central African Republic and the Cameroon town of Yokadouma. This Family Centre is located close to the district hospital in Bertouri. Most of the disabled in this Centre are refugees displaced by an armed conflict in the Central African Republic.

The Family Centre for the Handicapped is a 26-year-old small centre operated by the catholic mission in Bertouri. It was founded by a Belgium priest for people with disabilities in that community. It is headed by a catholic nun who oversees the day to day running of the Centre. This Centre consists of 20 clients, mostly women and children between the ages of 7-40 years (Picture 3). There is an administrative building for the workers, residence for the clients, office for the manufacture of local prosthetic legs, and a guest house for the catholic mission. According to what the author was told by the head of the Centre during his visit, there were 26 workers, mainly physiotherapists, nurses and social workers. It is not a government-sponsored organization. According to the Head, one of their donors was from Italy, but they stopped due to mismanagement.



Picture 3. James Mbaimba and a child joining the CBR program in Cameroon in 2018.

When asked about some of the challenges they are facing in the centre, the Head further went on to say that the equipment in the centre is very old and they cannot afford to replace it since they are not funded by the government or other organizations. Also, training of the staff is another issue, as there are no specialized professionals to deal with a specific type of disabilities. In picture 4 there is a physiotherapy session that the author witnessed.



Picture 4. Physiotherapy session (2018) in Cameroon

The workers' salaries were not paid for months. Some workers are dishonest and thereby ask clients for money. Another big challenge is that the centre cannot afford resources or materials for the manufacturing of prosthetic legs. Lack of electricity and water supply is another issue in the community. There is no constant supply of electricity and as a result, people tend to use candles or lamps as an alternative for electricity. Services provided in this centre are mainly basic physiotherapy and the production of local prosthetic legs for the disabled. The sessions take place in the morning from 9 am to 12 am from Monday to Thursday.

There have been some achievements as reported by the Head that they were able to acquire a loan from the Lilian Foundation in Cameroon. She went on to say that clients paid some amount of money for the services at the Centre. There are also some other organizations working with people with disability in Cameroon, for example ICDR Cameroon, the International Centre of Disability and Rehabilitation in North West of Cameroon. This organization deals more with health promotion interventions, including occupational therapy, speech therapy, physical therapy and related fields.

From the author's own personal observation during his visit to this Centre, funding is one of the major obstacles in running this Centre. There is no government assistance to this Centre and as a result, the services are inadequate to meet the needs of the disabled living in this Centre. This Centre is purely dependent on donors and due to donor fatigue or pull out, the Centre has collapsed or deteriorated. Most of the clients in this Centre are from low-income families and cannot even afford to pay for the services. Though many governments in Africa have ratified the treaty on rights of people with a disability, little has been done to address this issue. Most of the organizations working with people with disabilities are foreign sponsored. As a matter of fact, immediately when they withdraw their support, the organization fails or comes to a standstill.

## Conclusions

Finally, it is a fact that disability issues have not been adequately addressed by governments in developing countries. There are many organizations working for disability, but most of them are running on charity, international support and funding. Even though there is governmental participation in disability issues, its involvement is limited. More issues related to disability and more rural communities need to be heard and their problems need to be considered. Governments, communities, individuals, societies, social movement groups, disabled organizations, institutions working with disability etc., should come together in addressing this issue in a meaningful way that will have an impact on the lives of people with a disability.

All in all, this article is based on materials available online and by a field visit by one of the authors in only one rehabilitation centre, so the information collected may not exactly describe the real situation of people with limitations in Nepal and Cameroon, but this article could be taken as an example to reflect the current situation for further research.

## Recommendations

In-depth research could be done to get the root causes of mismanagement of funding in the CBR programs. Field visits and reporting could be done more often to illustrate the situation and address the issues of people with limitations in developing countries, like Cameroon and Nepal. Reports could be forwarded to the management team at the community level or to the authorized individuals to reflect on the weaknesses and also the strengths to motivate them for further development. Community level empowerment and awareness are needed for further inclusion and acceptance of people with limitations.

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# 7 Occupational stress – increasing concern at working life. How to prevent it?

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Sanna Saikko

## Introduction

Already in 2011 it was noticed that up to 25-28% of European union labour force experience occupational stress. Therefore, wellbeing policies and actions at workplaces are important to disseminate general means to decrease occupational stress. (Eurofound and EU-OSHA 2014, 6; Wells et. al. 2011, 1, 3.) Zoni et. al. (2012, 1) stated that occupational stress is a common cause of work-related illness and it has affected more than 40 million employees in the European Union (EU). Even if understanding of occupational stress has advanced, there are still gaps in effective practical translation of the knowledge at workplaces . Raising awareness of occupational stress at workplaces is an important topic of our time, as it is a prevalent and costly problem for employer organisations. (Mustafa et.al. 2015, 3). Occupational stress can be defined as a change in employees' physical or mental state in response to stressors and situations at workplace. Stressors cause physiological or psychosocial responses which occur in multiple forms of stress reactions. (Mustafa et. al. 2015, 1; Kinnunen-Amoroso 2016, 17; Wells et. al. 2011, 3; World Health Organization 2007, 4; Zoni & Lucchini 2012, 2.)

## Aim of the article and materials and methods used

The aim of this article is to discuss ways to prevent occupational stress. This article comprises information from research articles and other professional publications. For article search, I used EBSCOhost database, via SAMK library online, and NCBI database. I used search terms "occupational stress", "work-related stress", and "prevention". I included interesting adequate articles about the topic that were available in full text form and were published preferably no longer than 10 years ago. I also searched information about the topic from the Internet by using Google Scholar search and the same search terms as in the article search. In the reference material, both concepts occupational stress and work-related stress have been used signifying the same topic. In this article I decided to use the term occupational stress consistently throughout the text.



## Defining topic

Several physical and psychological health issues have been identified as a result of occupational stress. Physical symptoms may actualize as headaches, back pain, jaw pain, fatigue, rapid heart rate, increased blood pressure, or chronic pain. More adverse physical health effects include cardiovascular disease, diabetes, gastrointestinal disease, hypertension and impaired immune system. (Mustafa et. al. 2015, 1). Musculoskeletal disorders are one detrimental consequence of occupational stress, which doesn't appear immediately and might take even years of exposure before affecting an employee (World Health Organization 2010, 27).

When stressful working conditions become recurring and unresolved, the body remains in a state of stimulation. This leads one to be more prone to illness. Besides employees' physical health and wellbeing, exposure to risk factors at workplaces may have a substantial negative impact on mental health. Occupational stress is a reason behind several emotional, cognitive and behavioural effects. Stress-related emotional changes are anxiety, irritability, mood swings, excess worrying, defensiveness, feeling of worthlessness and depression. Employees may experience cognitive impairments as an inability to concentrate, less efficient thinking and problem solving, becoming more forgetful and struggling with learning. They may also express various behavioural changes, such as reduced productivity, impulsive behaviour, withdrawal, trouble in sleeping and rest, and increased alcohol consumption. (Overview of work-related stress 2017, 2; World Health Organization 2007, 21; World Health Organization 2010, 26).

As constant occupational stress can affect body and mind of the employees and lead to physical and mental health problems and illnesses, it should be everyone's interest to prevent it. Occupational stress may also have damaging consequences to finances of organisations. (Campbell & Henderson 2016, 6.; Health and Safety Authority HSA n.d., 12.) The risk of occupational stress may be present at any workplace. Employers should eliminate and minimize risks that impact on workers' health and safety, and strongly aim at exposure of causes of occupational stress. Unfortunately, it's not obvious that practice always meets duties in prevention of occupational stress. (Campbell & Henderson 2016, 8; Overview of work-related stress 2017, 3.) Employees' individual efforts and actions are also an important aspect in prevention of occupational stress (Campbell & Henderson 2016, 5-6).

## Prevention of occupational stress

Occupational stress prevention can be put into practice by organisational level actions and individual level actions. Organisational level actions are: strengthening management and leadership skills, influencing the psychosocial work environment, providing personal health resources at workplace, influencing the physical work environment and controlling organisational changes. Individual level actions are: stress management, maintaining work-life balance and paying attention to one's personal health and life habits. (Brookes et.al. 2013, 2; Campbell & Henderson 2016, 5-6; Eurofound and EU-OSHA 2014, 66-67, 70, 75; Kinnunen-Amoroso 2016, 31, 34; Mustafa et.al. 2018, 8; World Health Organization 2010, 30-31, 84-87.) When scrutinizing the topic, using both organisational and individual level interventions - implemented together or separately as needed – seems to have a positive effect on the outcome. The need

for interventions and outcomes seems to depend on circumstances in organisations and individual needs, and experiences of the employees.

In general, the interventions have commonly focused on individuals, rather than on the working conditions, where the risk factors of occupational stress have been identified. Individual interventions have seemed to be effective, when there has been a goal to change an individual's thinking to improve stress management skills. (Kinnunen-Amoroso 2016, 34.) Organisational interventions focus on changing and improving the working environment, working conditions and social aspects at work by preventive and curative actions (Brookes et. al. 2013, 2; Kinnunen-Amoroso 2016, 31, 34). Campbell & Henderson (2016, 8, 5) noted that organisational and work environment prevention are the priority in managing occupational stress. They pointed out that the organisational level should be the starting point for prevention of occupational stress. When an organisation aims at addressing the stressors and change the working environment more than the responsibilities of law and standards set, it could be seen as an investment in the future. Because occupational stress has different impacts on individuals, it is important to take individual differences into account in prevention of occupational stress. Organisational prevention and protection are not necessarily sufficient enough for all employees, and in these cases individual preventive stress management is needed.

### **Strengthening management and leadership skills**

At the organisational level, the role of a supervisor or manager is an important factor concerning minimising occupational stress at workplace. The manager's behaviour and positive leadership are important especially when managing psychosocial risks. The behaviour of management may enhance a positive atmosphere, which could minimize occupational stress and promote wellbeing at workplace. It is also notable that a supervisor or manager can be the source of occupational stress among the employees they manage. So, organisational leadership has a potential effect on both positive and negative outcomes of the employees' health and safety. Strengthening leadership skills may be important when occupational stress occurs, and leadership and management training should have growing recognition regarding interventions at organisational level. (Eurofound and EU-OSHA 2014, 75.)

As leadership skills are a priority in prevention of occupational stress at workplaces, supervisors and managers should have the necessary information about occupational stressors and their effects on the employees' health and wellbeing. Managers' good listening and conflict handling skills supposedly reduce employees' perceptions of occupational stress. Reduction of psychological stress could lead to better communication at workplace. (Kinnunen-Amoroso 2016, 34.) Management has an essential role in developing the working culture to grow respect for individuals inside the working teams, and inside the organisation in general. Managerial duties involve assessing how things are done, what is done and by whom. Sometimes this might lead into organisation-wide changes at workplace. A good management practice ensures that the employees are adequately trained for the job, noticing general aspects of health and safety at work. The management also needs to secure that the employees are up-to-date with technical aspects of working life. (Health and Safety Authority HSA n.d., 14; Health and Safety Executive HSE 2017, 42-44.)

## **Influencing psychosocial work environment**

Psychosocial occupational stress seems to be a growing concern at present and therefore it is important to address psychosocial hazards at workplace. Psychosocial hazards can be identified by surveys, interviews and checklists. Including employees' views on risk assessment of psychosocial risk factors is essential. (Eurofound and EU-OSHA 2014, 70.) Elimination or modification of the noticed sources of psychosocial risk factors by the employer is consequential. Adequate workplace conditions and resources, as well as supervisory and collegial support, are the basis for employees' psychosocial wellbeing. Work reallocation to reduce workload and enforcing zero tolerance of discrimination and harassment are eliminative and modificative actions. Reducing the impact of psychosocial occupational stressors on the employee can be achieved, for example, by flexible timing and location of work and by honest communication between the employees and management. To prevent occupational stress, demands for physical, emotional and mental work performance should be appropriate and the work should meet the capabilities of the employees. Perceived independency at work/tasks, exposed support, clarity in roles, high level of recognition and reward and justice in organisational policies and actions are preventive actions against occupational stress. The employer may also offer the employees training on stress management techniques as one way to lessen psychosocial occupational stress. (Health and Safety Authority HSA n.d., 8, 11; Health and Safety Executive HSE 2017, 47-48; Overview of work-related stress 2017, 4; World Health Organization 2010, 85-86; Zoni & Lucchini 2012, 2.) Furthermore, the employer should assess risks of physical violence and guide the employees on how to deal with difficult situations, such as aggressive customers and difficult phone calls, to reduce occupational stress. (Health and Safety Executive HSE 2017, 47-48.)

## **Providing personal health resources**

The employer may provide personal health resources at workplace to support the employees to maintain a better working ability. In practice, this could be training opportunities and facilities at workplace or a possibility to train within working schedules. Also, financial support for health and activity services may encourage and enable the employees to build and continue a healthy lifestyle. Implementing promotional fun and encouraging physical activities in the working community, may support personal health for some employees. Nowadays, numerous working communities have non-smoking policies for health promotion. Medical services, including guidance, examinations and surveillance (e.g. blood lead levels), are of course relevant to be organized by the employer. (World Health Organization 2010, 86-87.)

## **Influencing physical work environment**

Physical work environment is a clearly recognized division of occupational health and safety. Prevention of exposure to hazards must be recognized and controlled at workplace. (World Health Organization 2010, 84). Employers should ensure that needed resources are available for employees to do their work and that the equipment, working spaces and privacy, when needed, are adequate. Illumination and noise are relevant environmental issues to be considered. Designing e.g. office spaces to be less crowded and open might be beneficial.

Employers should also pay attention to the workload and timetables. Fast and continuous technological development is an additional risk for occupational stress and the employer should consider how the adverse effects could be prevented. (Health and Safety Authority HSA n.d., 15; Health and Safety Executive HSE 2017, 47-48; Mustafa et.al., 2015, 3; World Health Organization 2010, 31-32.)

### **Controlling organisational changes**

Organisational changes are one intrinsic cause of occupational stress and it's important to pay attention to controlling the change processes. The management should explain the employees what the organisation is aiming at, and why the changes are needed to take place. Employees should be consulted at an early stage, and throughout the change process, of planning of organisational changes, to understand how their work fits in the change process. The employees should be reported about the timelines and impacts of changes on their working environments and tasks. (Health and Safety Executive HSE 2017, 54-55.) Consideration of employees' thoughts and needs about their work during the change process would lessen occupational stress and enable a more successful end result for the process.

### **Stress management**

As an employee, it's important to raise issues of concern at workplace and actively take part in the assessing and preventing processes. At an individual level, creating positive relationships is beneficial for supporting stress management. Also, positivity is a good tool. When the employee's positive feelings outweigh the negative ones, there is a better opportunity to obtain good outcomes. Regulation of stress-related energy, emotions and physical fitness are important in prevention. Fitness programs and relaxation methods may act as an antidote to perceived stress. Improving time management and decision making, problem solving and priority setting skills may enhance coping with stress. Individual counselling interventions and treatment therapies are also to be considered when prolonged occupational stress occurs. (Campbell & Henderson 2016, 5-6; Health and Safety Executive HSE 2017, 42-44; Kinnunen-Amoroso, 2016, 34; Mustafa et.al. 2015, 8.) The employee can ask for support from the management and from occupational health care, when undergoing challenges with experiencing and coping with occupational stress.

### **Maintaining working life balance and personal health and life habits**

Maintaining working life balance could be thought to be primarily the employees' own aim, but it's important to express the needs of the employer, when there is recognition of the need for balance between the demands of work, family and personal life (World Health Organization 2010, 30-31). Of course, it would also be thoughtful of the employer to ask the employee, if there are signs perceived about possible imbalance in the person's life. It's notable that the employees' experience of health is not necessarily directly or exclusively related to working environment. The health is influenced by an individual's personal health and life habits. Nutrition,

quality of sleep, amount of exercise, alcohol use and smoking have a significant impact on health. Work or working environment do not necessarily directly have influence on these factors. (World Health Organization 2010, 27-28.) I think that the employees' own choices and life habits affect the holistic wellbeing and along that strength, vitality, performance and attitudes. However, it is important to recognize that also people who invest in their wellbeing and follow healthy life-habits may experience consequential occupational stress, despite feeling well and balanced outside the working environment. It is also important to realize that sometimes the influence of work and working environment on one's health can lead to challenges with the daily performance, e.g. sleep, nutrition, exercise etc. as a result of exhaustion . All in all, it seems relevant to observe the whole picture and segregate different factors, when evaluating the employees' managing at work and individual experiences of occupational stress.

## **Discussion and conclusions**

Campbell & Henderson (2016, 6) brought up important thoughts about individuals' quest for happiness and meaningfulness these days, even though there might be challenges to achieve those due to stress at work and home. These aspects can be read about frequently in the media these days. Eurofound and EU-OSHA program (2014, 10) presented the agenda of Europe 2020 strategy to increase the participation of employees in the labour market. A far-reaching purpose is to contribute to a healthier, longer and more productive working life by good health and wellbeing of the employees to secure sustainable work throughout the employee's working life. Influence of working conditions and employees' remaining productivity are important factors to be considered at present, and growingly in the future.

Psychosocial risks are an extensive concern for managers, especially in the field of health and social work. A quarter of European workers have experienced occupational stress continuously or most of their working time in 2014 and the experienced negative effect on the employees' health was similar subpopulation at that time. Preventing occupational stress at workplaces contributes to a healthier workforce, better performance and higher labour market participation. Ultimately, a healthier workforce supports financial sustainability of organizations. (Eurofound and EU-OSHA 2014, 39, 86.) Since demands and challenges of working life seem to be growing continuously, it seems all the more important for organizations and management to be aware of the topic of occupational stress and the alleged consequences of it. It is significant for employer organizations to understand the importance of wellbeing and health issues at work from the perspective of productivity. Prevention of occupational stress and encouraging learning and personal development of the employees build health and wellbeing at working community and affect organisational performance in a good way. (National Working Life Development Strategy to (2020) 2012, 15; Overview of work-related stress 2017, 2; World Health Organization 2010, 2, 16.)

Present expectations at working life include requirement of strong performance and multi-talent. Employees need to have an increasingly wide knowledge besides their professional substance tasks. Also, working life with continuous changes and fast development inevitably challenges the employees' optimal performance and strength. Moreover, there seems to be quite many expectations also for the performance at leisure time. Demands and challenges of present time require one's active seeking of balance in life. I am convinced that a continuously

growing awareness of risk factors threatening wellbeing and health will support and advance prevention of occupational stress – by ways of both organisational and individual level actions. For my part, I wanted to support consciousness and positive development of the topic by writing this article and bringing up information about it in a condensed form.

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# 8 Advanced technology – one answer to increase physiotherapists' occupational health

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*Taina Jyräkoski and Kirsi Suomi*

## **Introduction**

In recent years, the technological development in rehabilitation has reached an important phase. Robotic devices have reached the rehabilitation market to enhance rehabilitation outcomes and provide more efficient physiotherapy by reducing the physical workload of the therapists. (Mikolajczyk et al. 2018, 3) In our article, the definition of advanced technological devices is cutting-edge robotic devices developed for rehabilitation purposes, such as exoskeletons. The purpose of this article was to provide an overview of how advanced technological devices in rehabilitation have influenced the physiotherapists' workload.

Muaidi and Shanb (2016, 56) report that physiotherapists (PT) have experienced high levels of work stress. One of the three main risk factors is work-related musculoskeletal disorders (WMSD) (Rahimi et. al. 2018, 503). Rahimi et. al. (2018, 503) state that the two other risk factors are repetitive movements and inappropriate physical conditions. In physiotherapy, the therapist is required to perform physical work that includes frequent lifting, bending, poor postures and twisting, and all these movements are reported to be risk factors for low-back pain (LBP) (Alghadir et. al. 2017, 337). Recent studies (Alghadir et. al. 2017, 339-343, Alghadir & Iqbal 2015, 460-464, Liao, et. al. 2016, 1) have found that also the speciality of PT correlates to the WMSD and neurological PT is at the top of the list. Specifically, young female therapists in neurology are at a maximum risk of developing pain. The more pain the therapist experiences, the more it affects the patient's care (Alghadir & Iqbal 2015).

Earlier the rehabilitation, especially gait training, has required a considerable effort by the therapist while assisting the patient manually. Advanced technology can provide long specific therapy in a consistent and precise way . The advantage of using advanced technology is not only to stimulate simple movement patterns but also to provide more complex multisensory stimulation and get extrinsic feedback during training while facilitating the achievement of the goal movements. The target of using new technology is to exploit the expertise and time of physiotherapists and improve the efficacy of the rehabilitation program. (Masiero et al. 2014, 187-189.)



## Materials and methods

We used terms robotic, robot-assisted or advanced technology, rehabilitation and gait rehabilitation as search terms for advanced technology. For an ergonomic view, we used search terms: physiotherapist, workload, work ability, work stress and work-related musculoskeletal disorders (WMSD), occupational health. The searches were conducted in the database of SAMK's library. Some articles were found searching for references of previously found articles. We included articles that were published within 5 years and were available in full text form and in English or Finnish. One older article was included, because studies of physiotherapists' occupational health were found to be very few. The articles for advanced technology were selected in order to give a broad overview of the present technology.

## Results

### Physiotherapy work

The demands for a PT's work are very physical. The work includes repetitive tasks, various manual techniques, and awkward positions of joints and muscles during therapy. These aspects of the therapists' work can lead to work-related musculoskeletal diseases and physical disability, and as a continuum, they decrease work performance and increase absenteeism. (Muaidi & Shanb, 2016, 57.) According to Alghadir et. al. (2017, 343), previous international studies regarding PTs' work-related low back pain (LBP) report incidence between 29% and 68%. Iqbal & Alghadir (2015, 460) report that considering all health care workers, the PTs are the second after nurses to experience work-related low back pain. Other main areas of WMSD are upper back region, neck, shoulders, hands, wrists and knees (Rahimi et. al. 2018, 504-506). It has been suggested that age, subspecialty, gender, professional characteristics, BMI (Body Mass Index), and workplace have an impact on WMSDs (Iqbal & Alghadir 2015, 460-465). Alghadir et.al. (2017, 339) found in their study that the more a PT has patients per day, the more severe LBP he/she has. Private clinics and general hospitals have higher work demands due to an increase in the number of patients, possible lack of technical assistive facilities and hours of work (Muaidi & Shanb 2016, 61 and Liao et. al. 2016, 2-3).

Physiotherapists have reported moderate psychological and physical work demands, high levels of job control and moderate level of burnout. Job control includes a decision-making authority, skills direction, co-work support and supervisor support. In order to perform their jobs properly and adequately, physiotherapists sometimes require exertion of maximal levels of control. Job stress is reported to take place when there is a shortage of resources and an excessive workload at the physical therapy practice. Psychological work demands are pressure during work and working fast. Psychological risk factors may have a negative impact on physical health. The effect of physical and psychological risk factors is a major problem for the PTs' occupational health, but they also have negative consequences on patient care. (Muaidi & Shanb, 2016, 57-61.) Prevention of these physical, psychological and work organisational risk factors need to be seen as a high priority (Yazdani & Wells, 2018, 122).

Physiotherapy profession is influenced by an ever-growing evidence-base and this sets requirements for the therapist. To be an expert in physiotherapy, you must constantly develop your expertise. Continuing professional development (CPD) is mandatory in health professions. (Leahy et.al.2017,1.)

### **Advanced Technology in Neurological Rehabilitation**

In recent studies, the specialty field of neurology has demonstrated to have a high incidence in WMSD. The reason for this is that the patients with neurological disorders are less independent and need help with e.g. transfer, lifting and repositioning. In addition to LBP, the specialists in neurology have reported pain in the buttocks, thighs and legs. (Iqbal & Alghadir 2015, 464-467, Alghadir et. al 2017, 339-343.) Also, the therapy itself has high physical demands. Especially gait training has required considerable efforts from the PT because, beside supporting the balance and posture, the PT has assisted the stepping manually (Masiero et al. 2014, 187-189). Body-weight-supported treadmill training has many advantages, but remains still exhausting for physiotherapists, due to heavy assisting with lower limbs movements (Mikolajczyk 2018, 3.)

The requirement of intensive and effective neurological rehabilitation, which is supposed to be early, intensive, task-specific and with multisensory stimulation, meets the restrictions of budget and problems in organization of time. That has raised a demand of new modalities and technologies to improve efficacy and effectiveness of neurological rehabilitation. (Masiero et al. 2014, 187-189.)

Robotic devices in rehabilitation can be divided into two main categories, upper and lower, based on the treated extremity. The devices for upper extremity can be classified according to the part of the upper limb on which the therapy is focused on, according to mechanical characteristics and according to the control strategy – whether the robot system is in charge of the movement or only assisting the patient's own execution. (Masiero et al. 2014, 189-191.) The devices for lower limb rehabilitation are developed for gait training and can be defined as exoskeletons and end-effector devices. Robot-driven exoskeleton orthotic devices can be used with or without body-weight support on a treadmill or as a mobile device in freely translatable way. End-effector devices consist of two foot-plates, which stimulate the stance and swing phases. (Mehrzholz et al. 2017, 7.) (See the picture 1 of lower extremity exoskeleton)

Assistive robot devices can ease or perform tasks that a single physiotherapist cannot do alone. When the physiotherapist needs no longer set the paretic limbs or assist with trunk movement, the robotic devices can reduce the physical effort. As an adjunctive training among the whole neurological rehabilitation, the robots can perform intensive and task-oriented motor training of a patient's extremities, while the therapist is doing the evaluation and supervision. Robots enhance the specifically provided therapy consistently and precisely for long periods without fatigue, contrary to a human therapist. Robots and robot-assistive therapy are adjunctive tools, but the multilevel interactions between a patient and an experienced physiotherapist with manual ability can't be replaced. (Masiero et al. 2014, 188-189, 195.)



Picture 1. The Indego® exoskeleton, Parker Hannifin Corporation (Website of Exoskeleton Report 2019)

Based on researches in a recent Cochrane review, people might improve their activities of daily living, arm function and arm muscle strength after a stroke by receiving electromechanical and robot-assisted arm training. The main advantage might be the increase in repetitions of arm training and the increase in motivation for rehabilitation. The patient can execute more repetitions with robot-assisted devices in the same time compared to conventional therapy. (Mehrholtz et al. 2018, 23.) Masiero et al. (2014) criticise the robot-assisted therapy to fail to transfer improvements to the activity level but mention the brain computer interface (BCI) and virtual reality (VR) devices to increase the positive effects.

According to another recent Cochrane review, people receiving electromechanical-assisted gait training combined with physiotherapy are more likely to achieve independent walking after a stroke than people training gait without these devices (Mehrholtz et al. 2017). In a systematic review of powered robotic exoskeletons after a spinal cord injury (SCI), gait speed with mobile exoskeletons was studied. Participants (n=92) gained speed of 0,031 m/s – 0,7 m/s with an assistive device (crutches or walkers). Some required no assistance from the therapist and some required minimal to moderate assistance. (Louie et al. 2015.) A speed of 0,44 m/s is found to be a plausible threshold for limited community ambulation after incomplete SCI (Forrest et al. 2014). According to the overview of Mikolajczyk et al. (2018), the results in robotic gait rehabilitation can be enhanced with functional electrical stimulation (FES).

## Discussion

Searching the articles for advanced technology in physiotherapists' work, we found that the influence in workload or stress has not been studied. We decided to give an overview of both advanced technology and therapists' occupational health but could not find any study that has combined these two elements as a research. Mikolajczyk et al. (2018) and Masiero et al. (2014) both state that using advanced technology for gait rehabilitation reduces the effort and workload of the physiotherapists, but no studies have been carried out about it. There is also a lack of articles discussing the physiotherapists' cognitive ergonomics and the influence of implementing new technologies in general.

According to Muaidi & Shanb (2016, 57) the repetitiveness of tasks, awkward positions of joints and muscles play a remarkable role in the physical load of a PT's work. These kind of work tasks are repeated constantly in neurological physiotherapy causing it to be a very physically loading field of physiotherapy (Iqbal & Alghadir 2015, 466-467, Alghadir et. al 2017, 339-343). While an assistive robotic device moves the patient's limbs, facilitates the posture and weight shift (Masiero et al. 2014, 188-189), many of those physically demanding tasks will be less loading for the therapist. This could lead us to a conclusion of robotic devices to be at least one of the answers to increasing the physiotherapists' occupational health. As an adjunctive tool, devices can't replace the PTs' work because of the interaction and the therapist's manual skills (Masiero 2014, 195). Also, the evaluation of a patient's functional ability, fitting and setting the parameters of the device individually, evaluating the progress in rehabilitation and conducting the therapy as a whole, remain the PT's responsibility and can't be done by a robot.

It can be assumed that robotic devices help the physiotherapists to perform their work more efficiently and with less physical effort, but the PTs also need resources to learn the operation of the robots and safety protocols regarding the devices. Enough resources are important so that the implementation of the new devices does not cause unnecessary work-related stress. The support from the management level is important when implementing changes to work (Yazdani & Wells, 2018, 133). It has been studied that physiotherapists feel better at work when the management supports them in their work and the atmosphere is open (Heikkilä, 2012, 19).

In studies referred to earlier (Alghadir et.al. 2017, 344; Iqbal & Alghadir 2015, 467; and Muaidi & Shanb 2016, 61,) researchers recommend that ergonomic measures should take place in basic training and/or in working life to avoid excessive stress and work demands on physiotherapists. This is true, but a post-graduate physiotherapist today should have the competence in ergonomics or, at least, in physical ergonomics. Ergonomics and the use of assistive tools is a very important aspect in a physiotherapist's work. At some point, the physical abilities of a physiotherapist reach their limit. It is worth consideration, whether the PTs could use a light exoskeleton to enhance and support their strength and stamina, like in industrial work.

## **Conclusions**

Based on this overview of technical devices in rehabilitation and their impact on the occupational health of physiotherapists, we recommend that there should be more studies in the future conducted on the general occupational health of physiotherapists. In addition, more studies are to be made on how the new technological devices support the efficacy of physiotherapy and support the occupational health of physiotherapists.

In conclusion, the work of the PTs, especially in neurological field, is physically demanding and causes WMSD and LBP. The advanced technology in neurological rehabilitation could ease this problem. Particularly, in gait rehabilitation the assistive robotics can perform the heaviest tasks on behalf of the PT. However, while physical workload decreases, the demands in handling devices and programming robots increases. In our opinion that requires constant learning and open-mindedness from the PTs but will broaden the way of working, while providing a more intensive and effective therapy to neurological patients.

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# 9 Clinical supervision helps to prevent stress

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*Tarmo Marjamäki*

## **Introduction**

The American Psychological Association (APA) points out that people working in the helping occupations are at risk for burnout, compassion fatigue and vicarious trauma. Professional helpers report higher levels of stress than workers across all other industries. (Glenn et. al. 2015, 29).

In the care professions, clinical supervision or counselling is one method to decrease or overcome work-related stress. The supervision history is more than 100 years old and is in the middle of a constant changing process. (Watkins 2014, 251). Counsellors are expected to have certain personal attributes and professional skills to be effective in their work. Personal wellness is viewed as a significant contributor to counsellor effectiveness and is included in the expectations of instructors, advisors, supervisors, and employers. (Glenn et. al. 2015, 29).

## **Aim of the article**

The aim of this article is to discuss the role of clinical supervision in rehabilitation and its role in helping to decrease occupational stress. This article consists of information from research articles and other professional publications about the topic.

## **Materials and methods**

For article search, I used EBSCOhost database, via SAMK library online. Used search terms: "clinical supervision", "rehabilitation" and "work-related stress". I included adequate interesting articles about the topic available in full text form and published preferably no longer than 10 years ago. By using Google Scholar search I looked for the same search terms. It was quite hard to find relevant articles and researches about the topic. In the reference material, supervision, clinical supervision and counselling have been used signifying the same topic. In this I article I choose to use clinical supervision.

## Clinical supervision

Multiple definitions of clinical supervision have been proposed (Falender & Shafranske, 2004; Milne, 2009), reflecting differing viewpoints and increasing the complexity of studying, learning, and practising clinical supervision.

Falender and Shafranske defined clinical supervision as a distinct professional activity, in which education and training, aimed at developing science-informed practice, are facilitated through a collaborative interpersonal process. It involves observation, evaluation, feedback, facilitation of self-assessment, and acquisition of knowledge and skills by instruction, modelling, and mutual problem-solving. (Falender and Shafranske, 2004, 3).

Effective supervision is defined as a practice that encourages the supervisee's development and autonomy, facilitates the supervisory relationship, protects the client, and enhances both client and supervisee outcomes.

The American Counselling Association defines counselling as "a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals". (Glenn et. al. 2015, 29).

Austin quotes Stebnicki qualifying clinical supervision as a discrete intervention of professional practice that occurs within a strong supervisor- counsellor supervisory alliance where various supervisory roles are used to facilitate the supervisee's counselling, skills effectiveness, self-efficacy and professional development. (Austin 2012, 25).

Bernard and Goodyear defined supervision as follows: An intervention that is provided to a junior member of that same profession. This relationship is evaluative, extends over time, and has simultaneous purposes of enhancing the professional functioning of the junior member(s), monitoring the quality of professional services offered to clients, and serving as a gatekeeper for those who are to enter that particular profession. (Bernard & Goodyear, 1992, 4)

Definitions have emphasized different aspects of supervision, including the nature of the relationship (hierarchical vs. collaborative). Critical factors involved learning, the nature of the knowledge, skills and attitudes/values necessary for competence, approaches to assessment and feedback, and the necessity for a reflective approach for both the supervisor and supervisee. Other definitions have emphasized the functions of supervision, including the need to ensure protection of the public, monitoring the quality of professional services, and gatekeeping, as well as its role in enhancing life-long professional functioning. Milne (2009) pointed out that current definitions are problematic because they lack specificity, do not account for interprofessional practice (i.e., practice across multiple mental health and medical disciplines), may not emphasize the critical nature of the supervisory relationship, and generally undermine efforts to systematically study supervision. An existing challenge is to facilitate a consensus about supervision (involving a precise, inclusive definition) while accommodating the different perspectives and varieties of supervision that are blooming. (Falender & Shafranske, 2014, 1030-1031).

Supervision is a vital aspect of work of both new and experienced practitioners, and is integral to an optimal professional development. Supervision also serves to process and organize the stress of the professional encounter with clients and their families, who sometimes cause emotional flooding and, in some instances, can impair the practitioners' judgment, as the supervision process is so important but lacks clear guidelines, and the supervisory dyad moves in and out of various configurations or modes of supervisory interaction (Weinstein et al., 2009, 1379-1400).

Falender & Shafranske point out the effective supervisor practices. It is wise to show respect for the supervisee and client(s). It is essential to form a supervisory alliance identifying strains to the supervisory relationship and work to repair them. The supervisor must have understanding of the supervisee roles and one's expectations to a supervisor. The supervision contract must be done collaboratively, providing informed consent regarding expectations and supervisor and supervisee roles and responsibilities. Transparent monitoring protects the client, and the supervisor acts as a gatekeeper sharing assessment of competencies with the supervisee. Gatekeeping means in this context that it is essential for the supervisor to provide ongoing accurate positive and corrective feedback anchored in competencies. Observation should be direct—live or video—and regular to provide behavioral, anchored feedback on the competencies and identified supervisee goals. (Falender & Shafranske, 2014, 291-313).

The main idea in clinical supervision is that the person is not only a passive object or respondent of supervision but rather an active agent, who interprets one's experiences and whose meaning making- process plays an essential role in the outcome (Lysaker et. al., 2011, 58-69).

## **Models of supervision**

Clinical supervision has been underutilized in the post-educational setting, and empirical and theoretical examination of the use of clinical supervision with rehabilitation counsellors after graduation from a degree program, has been lacking. The literature supports the need for rehabilitation agencies to engage in such activities and the benefits of doing so, but it remains a low priority. There continues to be a severe lack of understanding the role clinical supervision plays in the field of rehabilitation counselling and the benefits that engaging in clinical supervisory activities could provide. By beginning to explore the supervisory process in the work setting, the field of rehabilitation can move forward to accomplishing greater outcomes and address internal concerns, such as counsellor apathy or high turnover rates. The use of clinical supervision in rehabilitation agencies will serve to empower counsellors and contribute to a better-functioning staff. (Schultz et. al. 2002, 220-221).

Clinical supervision is based on a reciprocal relationship, where both the supervisor and supervisee set mutual goals to be accomplished within the context of their supervisory alliance (Bordin, 1983, 3-13).



## Prevention of occupational stress using e-mail in clinical supervision

With the emergence of electronic communication and its increasing role in distance education, it is important for the counsellor educators and clinical supervisors to consider the effects of using e-mail as a primary supervision technique. Controversy exists regarding the feasibility and efficacy of using e-mail for clinical supervision purposes. (Graf&Stebnicki, 2002, 41). The availability of electronic communication creates some unique opportunities for the rehabilitation faculty supervisors, who are engaged in practice and internship supervision. However, clinical supervision during practice and internship may also represent one of the greatest challenges in the distance education curriculum for rehabilitation educators (Smart, 1999, 187-206). Stebnicki & Glover reported the benefits of e-mail supervision including: (a) ongoing access to clinical supervisors, (b) more relaxed communication styles, (c) increased time dedicated to processing and clarifying thoughts, (d) greater immediacy of responses, and (e) greater monitoring capacity. (Stebnicki & Glover, 2001, 283-293). While it is probably too soon to suggest that e-mail supervision can replace entirely a face-to face supervision (because of the loss of visual cues, such as facial expression and body language, and the loss of audio cues, such as tone of voice), with the addition of video monitoring equipment, quality distance supervision is well within reach. (Graf & Stebnicki, 2002, 49).

### Summary

Clinical supervision can support wellbeing and prevent occupational stress at an organisational and individual level. Clinical supervision is an old but not such a familiar tool in stress preventing among care professionals. We have gone a long way from a face-to-face supervision to a remote e-mail based supervision. Further researches will hopefully clarify more benefits that a clinical supervision can provide for the professionals working with rehabilitation.

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# 10 Orienting with insufficient map?

## Ethical issues in rehabilitation sector

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Paula Müller

Rehabilitation sector employees are balancing in the middle of enormous amount of different aspects and demands. Those demands come from the client needs, interests and expectations, law and regulations, professional ethics, norms and habits of society and personal values. In addition, there might be financial pressure or lack of resources. All these challenges may cause severe moral distress, dilemma and institutional constrains. The aim of this article is to comprise information about rehabilitation practitioners' work experiences in the health care sector, with respect to conflicts in ethics and issues causing these contradictions. And in addition, to illuminate the prevalence of the ethical conflicts in their daily work.

It's been noticed that rehabilitation practitioners face regular ethical dilemmas in their work (Kassberg & Skär 2008, 206). For example, in Barnitt's (1998, 194) research "Ethical dilemmas in occupational therapy and physical therapy: a survey of practitioners in the UK National Health Service", 69% of informants told that they had been facing ethical contradictions during the last six months. According to a study made in Finland 2013, up to 40% of the informants experienced ethical dilemmas weekly and 31% monthly (Kulju et al. 2013, 574).

### **Material and Methods**

Studies used as a source in this review address the ethical conflicts and concern from the perspective of occupational therapists and/or physiotherapists. Altogether seven studies published 1997-2019 were included in the review and were chosen based on the relevance of the study questions, so they could bring up information about rehabilitation practitioners' experiences and their understanding of the subject.

Participants of the studies were actively practising their occupation with inpatient or outpatient clients, both in public and private sector. Geographically, the studies were implemented in the European Union area, USA, Canada and Australia.

The sample size varied from 12 (Kassberg & Skär 2008, 205) to 225 therapists (Barnitt 1998, 194) depending on the data collection and analysis method. Four of the studies used questionnaires as data collecting method (Barnitt 1998, 194; Foye et al. 2002, 91; Kulju et al. 2013, 569; Rivard & Brown 2019, 3) and one of the studies used semi-structured interviews (Kassberg & Skär 2008, 206). In addition, one study approached the subject from hermeneutic phenomenology using interviews, where the informants were asked to tell the story of an ethical dilemma they had experienced at work (Barnitt & Partridge 1997, 181). In turn, Durocher & Gibson (2010, 3) made a case study where details were collected from interviews, meetings and the client record.

## Identified themes describing existing ethical conflicts

Situations where the rehabilitation professionals face and solve conflicts of ethics are related to interaction with clients and their relatives and other healthcare providers (Kassberg & Skär 2008, 206). Also, the management has a role when setting limitations to human resources allocated for the therapy (Barnitt 1998, 196; Kulju et al. 2013, 572). It has been noticed that ethical dilemmas occur not only at personal level but also at organisational and societal level (Kulju et al. 2013, 568).

## Clients' needs and rights

Concern and need to serve a client but also to set limits and act professionally bring up contradictions, while a therapist tries to find the best possible solution for the client (Kassberg & Skär 2008, 206). The client's view of and participation in decision-making should be respected and, at the same time, the therapist's professional judgement and suggestions might be questioned, either by the patient and/or carers (Barnitt & Partridge 1997, 188; Foye et al. 2002, 92, 94).

The principles of autonomy and beneficence might cause tension, for example, when the care team is committed to ensure that the actions do not harm the client, and that the alternatives the client insists, are known to have risks but also benefits (Barnitt 1998, 196; Barnitt & Partridge 1997, 188; Durocher & Gibson 2010, 6). Also assessing the client's decision-making capacity may cause difficulties, and thus, accepting the patient's refusal of, for example, a recommended treatment can set up a situation where the client's right for self-determination might be in conflict with the therapist's view, and thus possibly risk even a long-term prognosis about recovery (Foye et al. 2002, 94).

## Clients' behavior

Clients having difficulties in controlling their actions and who are therefore dangerous or scary to family or community may cause therapists ethical conflicts. In the article by Barnitt, an example of this kind of a situation was described; an occupational therapist had provided a harness to a family to prevent their child with intellectual disability from physically harming the other family members even knowing that the harness can be also used wrong as an easy way to control the child. (Barnitt 1998, 195.)

In addition, clients may have potentially risky behaviors, like drug addiction or acting against recommendations, which possibly jeopardize their own or other people's health. The therapist can be aware of these unsafe behaviors, feeling responsibility for acting even when the client would be against it, (Foye et al. 2002, 94.) forcing the therapist to act against the patient's integrity and professional secrecy.

## **Equality and respect**

Clients' discrimination due to different individual factors was found causing ethical problems risking equal allocation of therapy between patients. The client's age, background, behaviour, illness, demanding family or cultural differences could reason such behavior (Kulju et al. 2013, 572). Also, other employees' unethical conduct or lack of respect for the client puts pressure on therapists (Barnitt 1998, 195; Kulju et al. 2013, 572; Rivard & Brown 2019, 4). For example, breaking clients' confidentiality by talking about their private things in public places or together during breaks, was mentioned as one of such issues (Barnitt 1998, 195; Kulju et al. 2013, 572).

## **Professional role and collegiality**

It has been noticed in several studies that sometimes keeping the professional role might be challenging for the rehabilitation professionals. In long lasting therapy relationships, the therapist might be seen more as a friend than as a professional, and the line between is hard to set. However, retaining in the professional role was seen as a very important thing to be able to do good work. (Foye et al. 2002, 94; Kassberg & Skär 2008, 208.)

Collegiality and multidisciplinary working with other health care professionals might cause ethical conflicts, when mutual understanding, support and respect can't be found or colleagues are behaving unethically or not respecting the professional skills of the therapists (Barnitt & Partridge 1997, 188, 193; Foye et al. 2002, 93; Kulju et al. 2013, 572). Also, if organisational values differ from the therapist's own values, managing at work can be threatened and the therapist has to compromise due to, for example, hospital policy or administration requirements. (Kulju et al. 2013, 572.)

## **Conduct of management**

Concern for the quality and quantity of the treatments and feeling of being forced to choose between clients because of limited or unfair allocation of resources causes ethical contradictions to therapists (Barnitt 1998, 196; Kulju et al. 2013, 572). Practitioners might have many tasks to fulfil, of which meeting patients is equally important. For example, administrative workload can be very heavy. Time allocation might force to prioritize a certain task harming handling of the others. Barnitt (1998, 196) also brings up the perception that therapists had to try to restrict negative impacts of staff who didn't have enough competence to deliver appropriate treatment.

## **Discussion**

Rehabilitation professionals face regular ethical contradictions in their daily work. Issues behind these dilemmas are diverse and can be related to the client, client's relatives or other caregivers

but also co-workers, colleagues or the management being responsible for allocating resources to enable equal treatment for every client.

To be able to manage these contradictions and to be capable of conducting the rehabilitation the client needs, professionals are guided not only by laws and norms but also by professional ethics provided by national and international profession-specified organizations, like the World Federation of Occupational Therapists and the World Confederation for Physical Therapy (The World Federation of Occupational Therapists, 2019; World Confederation for Physical Therapy, 2017).

Nevertheless, in many cases a successful rehabilitation process requires a multi-professional group of experts from different rehabilitation sectors working together. Mutual, commonly accepted ethical guidelines for all the rehabilitation activities to commit and follow, might decrease the risk of value conflicts between actors enabling and ensuring a high-quality treatment equal for every client.

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# 11 Research ethics is everybody's business

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Every now and then research ethics reaches the attention of the general public and media. Often the news is about violations of responsible conduct of research or about the use of the external funding to other purposes than what it was granted for. The universities and universities of applied sciences have a big responsibility in educating experts and researchers. Finnish universities of applied sciences (UAS) are committed to guidelines on "Responsible conduct of research and procedures for handling allegations of misconduct in Finland" (TENK, 2012). These guidelines define what Responsible Conduct of Research (RCR) is, how allegations of misconduct should be handled, and emphasize that universities are obligated to offer training in research ethics to their students, teachers, and other persons used as experts. In addition, the UAS sector is also committed to "The Ethical principles of research with human participants and ethical review in the human sciences in Finland" (TENK, 2019).

In order to ensure that all students in universities of applied sciences are aware of the legal and ethical aspects in research, the board of UAS rectors has published "The Ethical Recommendations for Thesis Writing at Universities of Applied Sciences" which is based on the above mentioned guidelines and principles (Arene, 2018). These recommendations have been updated 2019 and the ethical principles of research with human participants were renewed at the same time. The main content of these recommendations will be discussed in the following in the context of master thesis in rehabilitation, but same principles are valid also in other development processes and written reports.

## **Ensuring the knowhow of students in master's degree in rehabilitation**

Based on the RCR guidelines the master's students in rehabilitation have training that includes

- principles of responsible conduct of research that are common to all branches of science
- general ethical principles of research and also those that apply to specific fields of science
- applicable legislation for research, development, and innovation (RDI) activities for example data protection legislation, social and health sector legislation, patient legislation
- the significance of the above-mentioned principles for conducting research

During the preparation of the master's thesis, it is important to plan the thesis by the guidelines of the university. This planning period guarantees that the standards of scientific knowledge and academic writing are met, and that the selected data collection methods conform to scientific criteria and are ethically sustainable. In this planning phase, the necessary research permits need to be acquired and the preliminary ethical review that might be required is applied. Before beginning the thesis process, all parties within the project (the employer, the principal investigator, the team members) agree on the researchers' rights, responsibilities, and obligations, principles concerning authorship, and questions concerning archiving and accessing the data. These agreements can also be specified during the thesis process. (Arene, 2018.)

In the thesis, the master's degree student takes account of the work and achievements of other researchers by respecting their work, citing their publications appropriately, and by giving their achievements the credit and weight they deserve when carrying out the own thesis and publishing it (TENK, 2012).

The RCR guidelines also define the process for handling allegations of the responsible conduct of research and the students are informed how the handling process is carried out at SAMK. Most of the allegations in the Finnish UAS sector has lately been concerning plagiarism. Therefore, the discussions in thesis processes have also changed towards guiding the writing process more intensively. The students do their thesis plagiarism check-up by Urkund text recognition system before the thesis is evaluated by the students' supervisor and another evaluator from the faculty.

## **Ethical principles for research with human participants**

In addition to the common RCR guidelines, research with human participants should be in accordance with the following ethical principles:

- respect for the right to self-determination of the target of research
- avoiding causing harm
- privacy and data protection

In the thesis process of universities of applied sciences, more attention needs to be paid to the handling of personal information and dealing with data protection of the participants of the research. As part of the thesis plan there should be data plan that includes information of how and why personal data will be collected, recorded, stored and destroyed. In addition, part of the plan should be the informed consent of the participants. As a part of the data plan, the information of the pseudonymisation and anonymisation of materials, results, and publications should be considered. Privacy and data protection must be considered and well justified because the thesis is published in the Theseus Open Repository, which is open to all. (Arene 2018.)



## Legislation that guides research, development, innovation activities

The list of regulations and acts that also need to be considered in the thesis process is long and does not cover all. What should be considered needs to be clarified case by case. The list presented in table 1 covers the most common laws and legislations that may be relevant when writing a thesis or scientific publications.

Table 1. Legislation that needs to be considered during the thesis process

<ul style="list-style-type: none"><li>✓ The General Data Protection Regulation, GDPR</li><li>✓ Personal Data Act</li><li>✓ Medical Research Act</li><li>✓ Act on the Status and Rights of Patients</li><li>✓ Act on the Status and Rights of Customers of Social Welfare</li><li>✓ Child Welfare Act</li><li>✓ Acts on the Protection Privacy</li><li>✓ Copyright Act</li><li>✓ Act on the Openness of Government Activities</li></ul>
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## Concluding remarks

SAMK is committed to provide Research Integrity Adviser's services for the staff and students. The discussions with an adviser are always confidential. The advisor can be contacted for example, if the student is unsure if an ethical review is needed, or if there is a suspicion of a violation of responsible conduct of research. However, we must bear in mind that enhancing research ethics is everybody's business: students, supervisors and researchers share the responsibility together with the university and research community.

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**“The aim should not be to make the legless ‘normal’ – whatever that may mean – but to create a social environment where to be legless is irrelevant.”**

**Michael Oliver**

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