Rehabilitation team members‘ view on how goal-setting is practised in patients after stroke

Nataša Bizovičar, Teja Kovačec Hermann

University Rehabilitation Institute Republic of Slovenia, Ljubljana, Slovenia

Correspondence:
Nataša Bizovičar,
e: bizovicar.natasa@gmail.com

Key words:
stroke; rehabilitation; goal setting; rehabilitation team members

Received: 14. 1. 2018
Accepted: 18. 6. 2018

Abstract

Background: Goal-setting is a key element in the rehabilitation process of stroke patients. Patient centeredness has not only become an important underlying principle for the delivery of health and rehabilitation services, it has also become an important aspect of the goal-setting process. Current research in the area of stroke rehabilitation suggests that there is a lack of consensus concerning best practice for goal-setting. The aim of the study was to determine how rehabilitation team members set rehabilitation goals in patients after stroke, which assessment tools do they use and what obstacles are present during the goal-setting process.

Methods: Qualitative semi-structured interviews were conducted with 35 stroke unit rehabilitation team members at the University Rehabilitation Institute. The interview included questions about clinical experience of goal-setting process generally in rehabilitation, the use of assessment tools and problems that arise in setting goals.

Results: Most of the team members already used goal-setting as a measure of the effectiveness of rehabilitation treatment and perceived goal-setting as demanding. Most common mentioned barriers to goal-setting were lack of time, and patient characteristics (disease, personality and expectations). Specific improvements were suggested regarding education.

Conclusion: This study highlights a number of issues relevant to rehabilitation team members during the goal-setting process in stroke rehabilitation. Rehabilitation process should be patient-centred and goal-directed. In the future, it is important to develop clear guidelines about goal-setting in stroke rehabilitation, as well as additional training for healthcare professionals.

Cite as: Bizovičar N, Kovačec Hermann T. [Rehabilitation team members‘ view on how goal-setting is practised in patients after stroke]. Zdrav Vestn. 2019;88(7–8):304–16.

DOI: 10.6016/ZdravVestn.2694

1 Introduction

After a stroke patients often exhibit physical, cognitive, social and emotional consequences that result in the stroke having an effect on many aspects of a patient's life. Consequently a multidisciplinary team approach is recommended for rehabilitation of stroke patients (1). Goal setting has become an integral part of the rehabilitation process of stroke patients, and is also recommended in national clinical guidelines (2,3). The set goals must be clear, understandable and

represent a challenge for the patient (4). Focus should also be on the activity and participation, and both short-term and long-term elements (5,6). Goals can also help therapists to guide the therapy, to make a discharge plan and handle the expectations of the patient and their relatives regarding the progress, and forecast the functional outcome after the discharge from the rehabilitation institution (7). Goal-setting also improves communication among different members of the rehabilitation team and their cooperation (5,8).

Setting rehabilitation goals is a demanding process, consisting of different concepts. Both short-term and long-term expectations of the patient, their relatives and the healthcare professionals have to be taken into account (9). The healthcare professionals are often uncertain of what level of rehabilitation can be achieved and how to include the patients who do not yet know what they want, or may have unrealistic expectations (10). A discord in the goals set by rehabilitation team members and the patient is one of the key factors that worsen the outcome of a rehabilitation process (11). Scobbie et al. describe that therapists are often expected to set and achieve therapeutic goals, even though they often lack clear instructions to guide them in how to use their theoretical knowledge when setting the goals in day-to-day clinical practice (12). The participating therapists describe the fear of losing professional authority and the lack of time and resources as the most frequent obstacles when setting goals (13,14). In previous research different goal-setting methods were used in the rehabilitation process for stroke patients, however, no methods have yet been developed specifically for treating stroke patients (15).

Only a few studies have been made that included aspects of different therapeutic groups of the rehabilitation team regarding goal-setting for patients who suffered a stroke; in most cases the study sample only included one therapeutic group (e.g. doctors, occupational therapists, physiotherapists). The studies were also fairly heterogeneous, and consequently it was difficult to set clear conclusions regarding the effectiveness and the adoption of goal-setting in rehabilitation teams (5,16-19). In most studies the therapists agreed that goal-setting is a key process of the rehabilitation treatment, even though it is frequently limited by practical obstacles. They also believed that the goals should be patient-oriented, specific, ambitious and time-limited (20,21). Even though many motivational factors for including patients in the process of setting rehabilitation goals are present, there are also numerous obstacles (e.g. lack of time, uncooperative patients, communication issues, organizational difficulties) that decrease the frequency of using goals in clinical practice (22). Goal setting is mainly guided by therapists, while patients and their relatives are not included in this process as much. Goals are especially focused on an activity and not on participation (23). Literature rarely describes the role of nurses in rehabilitation goal-setting, making it more difficult for them to prove the effectiveness of their work (24). The only study that reviewed the opinions of different rehabilitation team members regarding the goal-setting aspect in stroke patients therapy included occupational therapists, physiotherapists and speech therapists, and was conducted on a relatively small sample of 13 participants (20). There is a need for further research regarding goal-setting in regular clinical practice of rehabilitation treatment of stroke patients.

The objective of our study was to establish how rehabilitation team members set rehabilitation goals for stroke patients, which assessment tools they use, what obstacles are present in goal-setting, and what are the options for improving the knowledge in goal-setting.

2 The subjects and the methods

The study included all the members (35 people) of the rehabilitation team at the Department for rehabilitation of patients after stroke of the University Rehabilitation Institute of the Republic of Slovenia. All participants filled out the questionnaire. We assembled a questionnaire that included 13 close-ended questions in which the participants selected 1 answer from 4 according to the Likert scale, 1 close-ended question where they selected 1 answer from 3 according to Likert scale, 3 close-ended questions in which the participants selected 1 answer from 2 according to the Likert scale, 3 close-ended questions with more possible answers, 1 combined close-ended and open-ended question, and 3 open-ended questions. With close-ended questions the participants selected among 2 and up to 6 possible answers, namely: about how demanding is setting rehabilitation goals, the estimate of the time that takes to reach a therapy goal, patient inclusion in goal-setting process, differentiating between the patient's and the therapists' set goals, using assessment tools for estimating the achievement of the therapy goal, how often is it reasonable to inform the patient on the progress in achieving the goals, the factors that can hinder goal achievement, the principles and used methods for goal-setting, the characteristics of the higher quality set goals, the issues and negative aspects of goal-setting, the impact of goal-setting on the organization of work in rehabilitation treatment and the possibilities for improving the obtained knowledge in setting goals. The data from the filled out questionnaires were entered into Excel. We performed descriptive statistics for the basic parameters and prepared visual representations of some results. The statistical analysis displays the data for numerical variables as percentages or median (range).

3 Results

3.1 Sample of participants

The sample of 35 members of the rehabilitation team included: 6 doctors, 3 registered nurses, 9 medical technicians, 2 psychologists, 2 speech therapists, 2 social workers, 6 physiotherapists and 5 occupational therapists; 32 were women and 3 were men. The median age was 37.0 years (range of 24.0–67.0 years), the median work experience was 11.3 years (range of 0.8–43.1 years) and the median work experience in a team for rehabilitation of stroke patients was 7.0 years (range of 0.08–38.0 years). Once all the participants were divided into subgroups by total years of work experience, the 0–5 years group included 9 people, the 5.1–10 years group included 5 people and the >10 year group included 21 people. When taking into account years of work experience in a team for rehabilitation of stroke patients, the 0–5 years group included 15 people, the 5.1–10 years group included 8 people and the >10 year group included 12 people.

3.2 Setting rehabilitation goals

In the study 88.2 % of the rehabilitation team members responded that they use goal achievement as a measure of

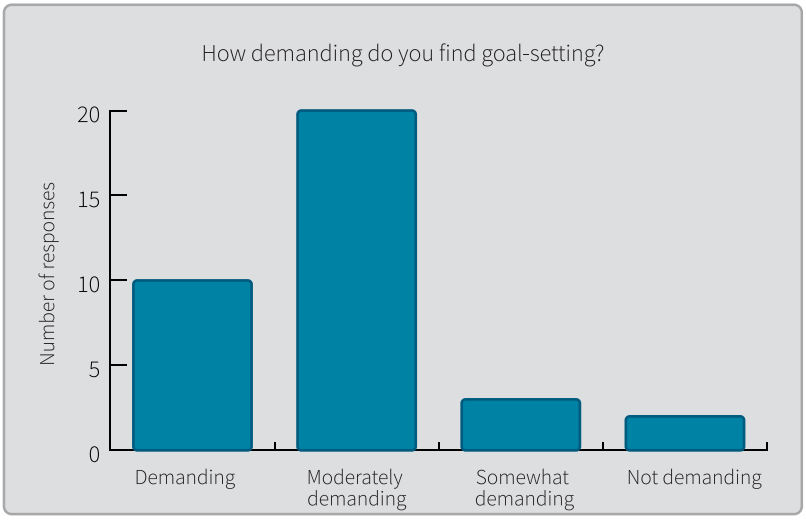

Figure 1: The difficulty of rehabilitation goal setting.

effectiveness of the rehabilitation process, while 11.8 % are not using it yet. At the same time most rehabilitation team members found that goal-setting significantly (62.9 %) or at least somewhat (34.3 %) improves the organization of team work, while only 2.8 % of respondents believed it has little effect.

Most respondents believe that setting rehabilitation goals is a demanding process (74.3 %), while 25.7 % found that this is not a demanding process (Figure 1). At the same time 54.3 % of respondents also said that deciding on when a rehabilitation goal is achieved is moderately demanding, while fewer were of the opinion that it is very (11.4 %) or somewhat (8.6 %) demanding, or not demanding at all (26.7 %). 54.3 % find that the goals set by therapists upon admittance rarely change until the patients are discharged, while 40.0 % find that goals change frequently during this time, and 5.7 % find that they always change. Quite the opposite, the goals set by the patient at admittance and at discharge from care differed in most cases (79.4 %) (Figure 2). A good half of respondents (54.3 %) said that it is possible to estimate already during admittance in what time a patient will be able to achieve a certain rehabilitation goal, while 45.7 % found that it is not possible to estimate the time frame for achieving rehabilitation goals upon admittance. More than a half of the respondents said that when admitting a patient long-term goals can be only seldomly set (57.1 %), while 5.7 % believed that this is not possible at all; on the other hand, 37.2 % believed that long-term goals can also be frequently set upon admittance.

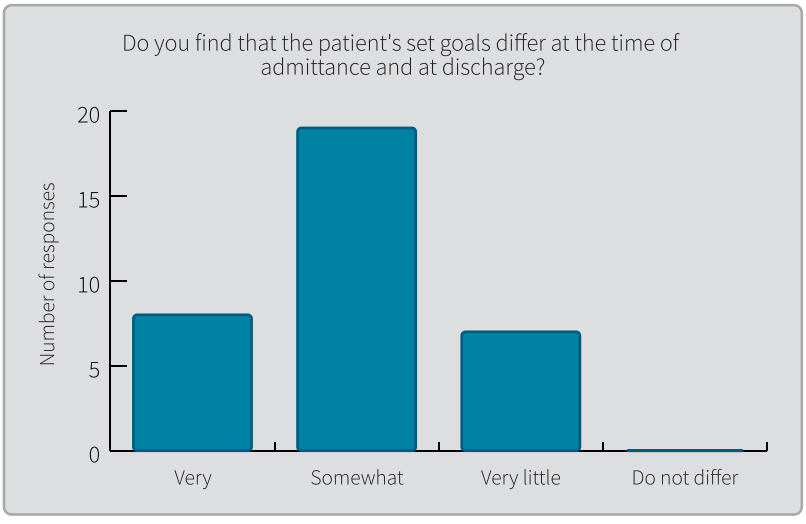

Figure 2: The difference between goals set by patients at admission and at discharge.

Most (63.6 %) rehabilitation team members did not establish any negative aspects of setting rehabilitation goals, while 36.4 % found negative aspects, with one rehabilitation team member describing the following: the stress for a patient not achieving the set therapy goals, the goals that are not specific enough, or those that are defined too narrowly and possibly exclude other important goals, as well as any complications arising from a change to the rehabilitation treatment due to adaptation to a new method of work, different competence levels of medical professionals, a patient's lack of interest in achieving goals, too much focus on filling out forms than on patient's

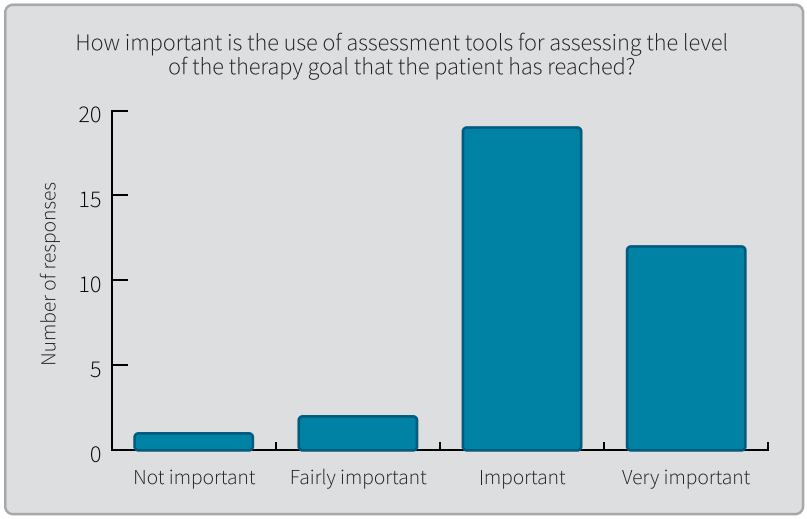

Figure 3: The relevance of assessment tools to evaluate the degree of therapeutic goal achievement.

contact, what to do when a plateau is reached in a set goal; 2 team members said: unrealistic expectations of patients and their relatives, a disconnect between the need for good communication and the lack of time for patient treatment, inconsistency in using assessment tools for goal achievement; 3 team members said: discrepancy between the goals of the rehabilitation team members and those of the patient.

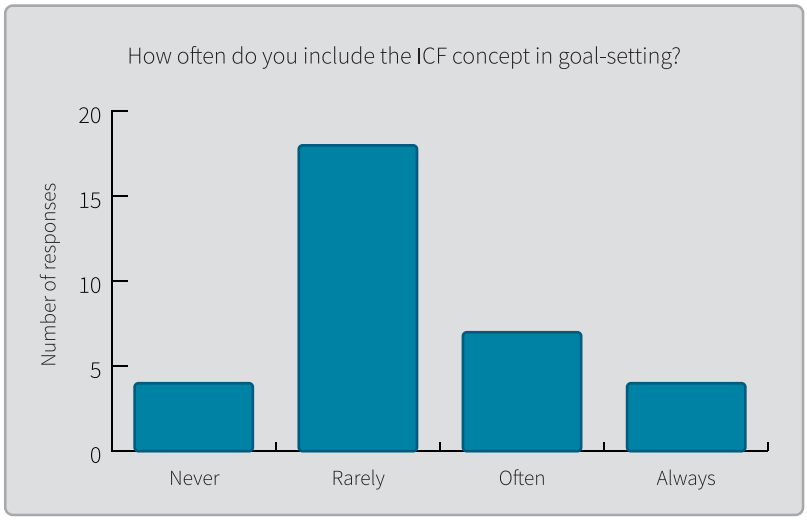

Figure 4: Implementation of the International Classification of Functioning, Disability and Health (ICF) concept into rehabilitation goal setting.

According to rehabilitation team members the patient is mostly included in the process of setting rehabilitation goals (frequently in 60.0 % of the cases, always in 28.6 % and never in 11.4 %). According to a half of the respondents the goals set by a therapist often differ from the goals set by the patient (54.3 %), while 5.7 % said that this happens always, and 40.0 % that this happens rarely. Setting goals for patients with aphasia reached a similar percentage (always with 11.4 %, frequently with 37.1 %) and was not a major issue for rehabilitation team members (rarely with 48.6 % and never with 2.9 %).

3.3 Assessment tools in setting rehabilitation goals

91.2 % rehabilitation team members found that using assessment tools for assessing the level and success rate of achieving rehabilitation goal is important for the patient (Figure 3). In Table 1 rehabilitation team members listed the assessment tools used in assessing the achievement rate of therapy goals.

3.4 Characteristics of rehabilitation goals

Most respondents (94.3 %) found that the most important characteristic of a set rehabilitation goal is patient-centredness, and that it must be set in collaboration between the therapist and the patient. The respondents found that setting goals allows the patient to understand that rehabilitation is a gradually improving process (80.0 %), that goal-setting must include the purpose and the available time (74.3 %), that the goals must include the patient's perspective (68.6 %), that goals are important for motivation, patient interaction and for better patient cooperation (65.7 %), that the goals focus

Table 1: Goal setting evaluation tools.

DOCTOR	FIM, MMSE, ICF, FMA, water-swallowing test, gait assessment tool, fall risk assessment tool, respiratory complications risk assessment, anamnesis and status, passive and active range of joint motion.
RN	FIM, Waterlow score, nursing anamnesis, patient categorization, nursing issues with an assessment plan, observation of changes and documentation, rehabilitation goals in nursing care.
MT	FIM, team meeting form, continence test.
PSYCHOLOGIST	Clinical psychological diagnostics (various tests), neuropsychological diagnostics, basic clinical psychological assessment with observation of behaviour, emotions and moods, heteroanamnesis data (relatives, team).
SPEECH THERAPIST	Frenchay Aphasia Screening Test, Frenchay Dysarthria Screening Test / Robertson Dysarthria Profile, MASA, assessment battery: examination of speech and language abilities – Ogrin, observation and clinical examination of speech and language capabilities.
SOC. WORK.	No assessment tools or no response.
PHT	Passive and active range of joint motion, pain intensity assessment with VAL, timed walk tests, functional walk tests, gait assessment, dynamic and static balance assessments (the Berg Balance Scale, the Romberg test, the Four Square Step Test, the Modified Asworth scale, PASS, the Modified mini-BESTest, FGA, Sensory testing, tests for motor functions of the upper and the lower limb, assessment of associated reactions.
OT	COPM, FIM, SHAP, WMPT, Test of daily activities, the Box and Block Test, the Nine-Hole Peg Test, internal tests of occupational therapists, pain intensity assessment with VAL, measuring muscle strength with a dynamometer.

RN – registered nurse; MT – medical technician, PHT – physiotherapist; OT – occupational therapist; FIM – Functional Independence Measure; MMSE – Mini Mental State Examination; ICF – International Classification of Functioning, Disability and Health; GAS – Goal Attainment Scaling; FMA – the Fugl-Meyer Assessment; MASA – Mann Assessment of Swallowing Ability; VAS – Visual Analogue Scales; PASS – Postural Assessment Scale for Stroke; FGA – Functional Gait Assessment; COPM – Canadian Occupational Performance Measure; SHAP – Southampton Hand Assessment Procedure; WMFT – Wolf Motor Function Test.

the therapist to be more specific in fulfilling the set task (62.9 %), while a minority found that setting goals increases the patient's trust in the therapist's work (34.3 %). More than a half (54.3 %) of rehabilitation team members were aware of setting goals according to the SMART system (Specific, Measurable, Achievable, Relevant, Timed) (25), while 45.7 % respondents did not know this principle. The concept of the International Classification of Functioning, Disability and Health (ICF) (26) was according to the participants' opinion included frequently or always in only 33.3 % of goal-setting procedures (Figure 4).

Rehabilitation team members most often use the following methods to make therapy goal-setting easier: structured team meetings (75.6 %), goal documentation (60.6 %), reporting on the patient's progress on the set goals (45.5 %), assessment of patient's and family aspects of

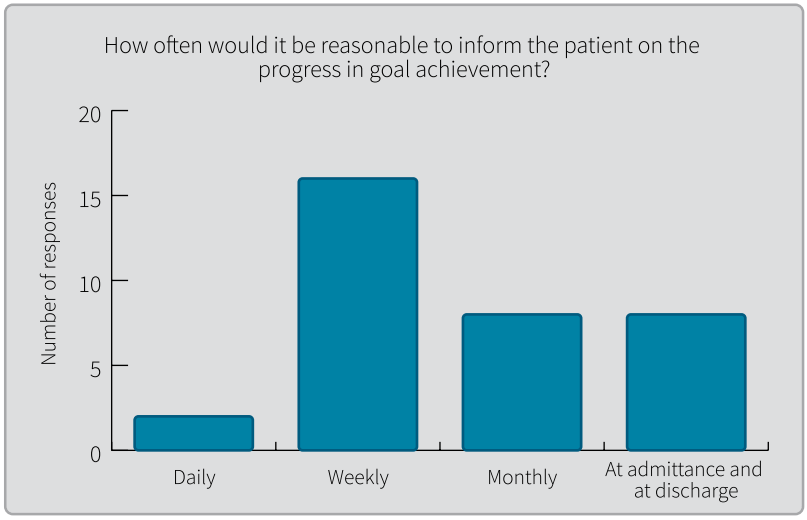

Figure 5: Frequency of informing the patient about the achievement of the rehabilitation goal.

goal-setting (33.3 %), and the assessment of the result of the set goals (30.3 %).

3.5 Informing patients regarding achievement of rehabilitation goals

Team members most frequently recommended that the patient is informed of the progress in goal achievement on a weekly basis (47.1 %) (Figure 5).

3.6 Factors hindering faster rehabilitation goal achievement

In Table 2 rehabilitation team members listed which factors most often hinder faster achievement rate of therapy goals.

3.7 Recommendations for improving the know-how in rehabilitation goal-setting

The recommendations for improving the knowledge in goal-setting from rehabilitation team members include: the need for further education in goal-setting and assessment tools, education on the biopsychosocial approach to therapy, education on stroke and prognostic factors, using appropriate strategy for setting measurable goals (e.g. SMART), improvement of information flow and good collaboration among rehabilitation team members, knowledge transfer between individual members of the therapy team, constant monitoring of goal achievement by all rehabilitation team members, promptly informing the patient and their relatives about the level of achieved goals, the supervision of the whole team and for more time for treating individual patients. Medical technicians also added to this question that they would prefer more emphasis on setting and adhering to the nursing goals. Some therapists also said that they are not aware of any education courses for improving their knowledge in goal-setting. A great majority of the respondents believe that they would need additional education in goal-setting (79.4 %), with only 20.6 % believing they do not need this.

4 Discussion

Most respondents in our study estimated that they use goal achievement as a measure of the success rate of the rehabilitation therapy. This matches with the data from other studies that reported goal-setting is used for most patients, that activities related to goal-setting are routinely documented with 83 % of patients, and that team meetings related to goal-setting are most frequently held on a weekly basis (27). The study from Young at al. also notes that rehabilitation team members assessed that goal-setting is useful (4). Goal setting also improves multidisciplinary team work and helps in assessing the result of the rehabilitation therapy (5). Studies show that all re-

Table 2: Factors that prevent faster achievement of rehabilitation goals.

DOCTOR	General weakness and tiredness of the patient, overtly optimistically set goals, internal complications and multiple diseases, injuries from falls, additional diagnostic procedures, infections, epileptic seizures, significant decline in sensory capabilities, a high level of motor disability, uncooperative patient.
RN	The inability to learn, poor comprehension of instructions, medical complications (infection, falling down), understaffed medical professionals, too short therapy.
MT	Injury from falling, complications resulting from urination and defecation, the need for isolation because of colonization with multiple resistant microbes, unrealistic expectations of the patient and their relatives, uncooperative and uncritical patients, medical complications, decline in sensory capabilities, poorer general physical performance.
PSYCHOLOGIST	Medical complications, additional examinations in other clinics, tiredness, patient's unrealistic goals, patient's personality factors (potential anosognosia, grieving when facing stress/disease), unrealistic expectations of the relatives, short duration of rehabilitation therapy.
SPEECH THERAPIST	Issues with listening comprehension, verbal and oral apraxia, decline in the general physical condition, difficulties with accepting the disease and its consequences.
SOC. WORK.	Too high and unrealistic expectations of the patient and their relatives, poor functional state of the patient, current circumstances.
PHT	Poor heart and breathing capability, significant cognitive decline, communication issues, patient's unrealistic goals, poor patient cooperation, issues with learning, hemispatial neglect, internal complications, high level of motor disability, inappropriate support from relatives, pain, lack of motivation, sensory perception disturbance, problems with facing with the disease, lack of understanding from relatives.
OT	Significant cognitive decline, multiple diseases, medical complications (infection, falling down, internal complications), uncooperative patient, depression, high level of motor disability.

RN – registered nurse; MT – medical technician, PHT – physiotherapist; OT – occupational therapist

habilitation team members are responsible for planning rehabilitation therapy of stroke patients (24). In spite of the fact that all medical technicians in our study found that setting rehabilitation goals is a demanding process, in most cases they confirmed using goal-setting as a measure for rehabilitation therapy. Medical technicians at the department do not directly set rehabilitation goals, but they always set them together with registered nurses, and assist in goal achievement. According to literature medical technicians play an important role in goal-setting, as they have the most direct contact with the patient, and can also discuss any potential obstacles with them, as well as monitor the patient's progress and report on it to other team members(15).

We did not find any data in the literature on the rate that the therapists' or patient's goals are changed until the patient's discharge. According to our research, therapists most often do not change the set goals, while the patients' goals are often changed until they are discharged. The goals set by the patients are often broader and also include their long-term wishes and ideas regarding regaining physical activity and independence and the return of previous activity level and the role, while the medical professionals usually set more short-term and specific goals, focused on the patient's functional

defects (18,28). According to literature, the goals are more reliably forecast with patients suffering from a mild to moderate defect, as they are kept in a hospital environment for period of time before being discharged into home care, and will be able to independently care for themselves at discharge. This group of patients could also be presented with a list of pre-set goals that they could choose from (8). During rehabilitation therapy most patients are in the acute or subacute period after the stroke, when recovery can be relatively fast, so the short-term steps in goal-setting are more suitable, as they include the functional defect and the basic daily activities, gradually leading up to long-term goals (28). Rehabilitation team members included in our study also noted in more than half of the cases that it is rarely possible to plan long-term goals when admitting a patient. Setting goals can also have negative aspects due to the conflict resulting from the differences between the goals set by the therapist and those set by the patient, in relation to competitiveness between patients and with aggressive assessments of goal achievement (6).

Similarly to our study, several foreign ones also showed that the goals set by the therapist often differ from the patient's goals (29). That is why it is recommended for the patient to actively collaborate in planning and setting the rehabilitation goals. Such patient inclusion in goal-setting increases the patient's motivation and satisfaction, makes better use of the available time, allows for comprehensive planning and gives the patient the sense of control over their own rehabilitation (5). According to our study, the patient is mostly included in the process of setting rehabilitation goals, while according to literature, this is only the case in 13–60 % of the cases (5,30). According to literature, about a half of therapists give the planned goals to the patient in writing (18).

Most respondents in our study estimated that using assessment tools is important for assessing the success rate of achieving the rehabilitation goals, as they allow for comparison between different patients and medical services. Literature does not yet provide any guidelines with clear and uniform instructions for setting rehabilitation goals for stroke patients (13). In most cases informal types are still used (e.g. informal interview), however, with such an approach the goals are often unclear and not substantiated (31). Formal types of goal-setting are used more rarely (most often the Goal Achievement Scale (GAS) and the Canadian Occupational Performance Measure (COPM), planning goals according to the SMART principle, etc.) (8). GAS and COPM are established grades that provide a standardised approach to establishing patient-oriented goals and measuring the progress of achieving the set goals (27). Of these recommended tools the occupational therapists in our study listed regularly using COPM, while other assessment tools are not yet in regular clinical use. However, different scales for assessing functioning stroke patients are used. According to literature formal methods for setting rehabilitation goals are used by only 14 % of therapists, with fewer than 5 % using patient questionnaires for assessing their priorities in goal-setting (e.g. Rivermead Life Goals Questionnaire) (32). Even though more than a half of the respondents answered that they knew goal planning according to the SMART principle, it is not yet used in regular clinical practice, even though according to literature it provides better goal planning, bringing benefits both to the patient and the therapist, as it is not time consuming or difficult (15). This way every goal is

set based on the target activity, the need for support, assessment of performance and the time required for achieving a certain state (25). Thus far a few studies have been made that have used the ICF concept when assessing the results of the sets goals, and the meta-analysis showed a significant impact on improvement of the health-related quality of living and the emotional state when using such a method of goal-setting (8). According to our survey, the ICF concept is only rarely included in goal-setting, as it is regularly used by doctors, and only rarely by other team members.

In foreign literature rehabilitation team members listed numerous factors that have a negative effect on the process of setting rehabilitation goals. Among external factors the most often mentioned include limited number of medical professionals, other tasks on admittance day, organizational pressures, lack of clinical experience, poor information exchange among rehabilitation team members, lack of time and short hospitalization time (16,28). Often there is a conflict between the speed that the patients want to improve and the actual course of therapy and the difficulty in transferring the goals from the hospital environment into the patient's home environment (16). Additional negative factors listed are similar to those from our study: poor cooperation of the patient, communication issues between the patient, their relatives and rehabilitation team members, cognitive decline, tiredness, mood disorders, lack of insight and denial of the condition, unrealistic expectations of the patient and their relatives, a patient's passive personality, accompanying diseases and health swings, all of which are obstacles in a patient's cooperation in rehabilitation programmes (18). An additional obstacle described was that the patient and their relatives have a poor understanding of the rehabilitation therapy and the medical condition, and consequently also a poor understanding of their issues, the rehabilitation process and the potential for recovery (10,33). Patients with speech and language disorders or with a cognitive decline can still be helped through goal planning, even though it is often difficult to explain them clearly to the patient. It is recommended to use customized materials for patients with aphasia, such as communication aids, pictures and to utilize the help of a speech therapist when setting the goals (33).

The need for additional education in setting rehabilitation goals was emphasized by the majority of respondents. Studies recommend additional education with the objective of training those team members with lower confidence and knowledge for setting patient-oriented goals and for improving the listening, negotiating and communication skills of medical professionals, as well as for improving knowledge about the recovery after stroke (30). Patients also need to be educated about their changed role from passive observers into active participants when setting goals, as well as how to communicate with the medical professionals about their own needs (29).

The study sample was small, as it only included team members of stroke patient rehabilitation. In order to increase the sample it would also need to include members of other rehabilitation teams who treat other diseases, which could in turn make the data more heterogeneous. After dividing into individual therapy groups, individual groups only counted 2 to 9 members, and therefore using statistical tests to compare results among individual therapy groups was not possible.

5 Conclusion

Setting rehabilitation goals is a complex and demanding process. In spite of that rehabilitation team members are aware of the importance of setting and pursuing goals during rehabilitation therapy. In most cases the patient is already included in the process of setting rehabilitation goals. They are also aware of potential issues in goal-setting that may arise from work organisation and the patient's characteristics. In the future more randomised control studies will be needed to assess the positive effects of using rehabilitation goals in rehabilitation therapy, as current studies are very heterogeneous and do not provide clear conclusions. Clear guidelines and assessment tools are also needed, along with additional education of the patients and the medical professionals.

References

1. Young J, Forster A. Review of stroke rehabilitation. BMJ. 2007 Jan;334(7584):86–90. https://doi.org/10.1136/bmj.39059.456794.68 PMID:17218714
2. Wade DT. Goal setting in rehabilitation: an overview of what, why and how. Clin Rehabil. 2009 Apr;23(4):291–5. https://doi.org/10.1177/0269215509103551 PMID:19293289
3. Gage M. The patient-driven interdisciplinary care plan. J Nurs Adm. 1994 Apr;24(4):26–35. https://doi.org/10.1097/00005110–199404000–00010 PMID:8151422
4. Young CA, Manmathan GP, Ward JC. Perceptions of goal setting in a neurological rehabilitation unit: a qualitative study of patients, carers and staff. J Rehabil Med. 2008 Mar;40(3):190–4. https://doi.org/10.2340/16501977–0147 PMID:18292920
5. Rosewilliam S, Roskell CA, Pandyan AD. A systematic review and synthesis of the quantitative and qualitative evidence behind patient-centred goal setting in stroke rehabilitation. Clin Rehabil. 2011 Jun;25(6):501–14. https://doi.org/10.1177/0269215510394467 PMID:21441308
6. Sugavanam T, Mead G, Bulley C, Donaghy M, van Wijck F. The effects and experiences of goal setting in stroke rehabilitation - a systematic review. Disabil Rehabil. 2013 Feb;35(3):177–90. https://doi.org/10.3109/09638288.2012.690501 PMID:22671934
7. Parsons JG, Plant SE, Slark J, Tyson SF. How active are patients in setting goals during rehabilitation after stroke? A qualitative study of clinician perceptions. Disabil Rehabil. 2018 Feb;40(3):309–16. https://doi.org/10.1080/09638288.2016.1253115 PMID:27866416
8. Levack WM, Weatherall M, Hay-Smith JC, Dean SG, McPherson K, Siegert RJ. Goal setting and strategies to enhance goal pursuit in adult rehabilitation: summary of a Cochrane systematic review and meta-analysis. Eur J Phys Rehabil Med. 2016 Jun;52(3):400–16. PMID:26771917
9. Lloyd A, Roberts AR, Freeman JA. 'Finding a balance' in involving patients in goal setting early after stroke: a physiotherapy perspective. Physiother Res Int. 2014 Sep;19(3):147–57. https://doi.org/10.1002/pri.1575 PMID:24302610
10. Holliday RC, Cano S, Freeman JA, Playford ED. Should patients participate in clinical decision making? An optimised balance block design controlled study of goal setting in a rehabilitation unit. J Neurol Neurosurg Psychiatry. 2007 Jun;78(6):576–80. https://doi.org/10.1136/jnnp.2006.102509 PMID:17178823
11. McGrath JR, Davis AM. Rehabilitation: where we going and how do we get there? Clin Rehabil. 1992;6(3):225–35. https://doi.org/10.1177/026921559200600307.
12. Scobbie L, Wyke S, Dixon D. Identifying and applying psychological theory to setting and achieving rehabilitation goals. Clin Rehabil. 2009 Apr;23(4):321–33. https://doi.org/10.1177/0269215509102981 PMID:19293291
13. Levack WM, Taylor K, Siegert RJ, Dean SG, McPherson KM, Weatherall M. Is goal planning in rehabilitation effective? A systematic review. Clin Rehabil. 2006 Sep;20(9):739–55. https://doi.org/10.1177/0269215506070791 PMID:17005499
14. Thomson C, Black L. An exploratory study of the differences between unidisciplinary and multidisciplinary goal setting in acute therapy services. Br J Occup Ther. 2008;71(10):422–6. https://doi.org/10.1177/030802260807101004.
15. Hartigan I. Goal setting in stroke rehabilitation: part 2. How do health professionals set goals and what is the nurse's role? Br J Neurosci Nurs. 2012 Jun;8(3):123–8. https://doi.org/10.12968/bjnn.2012.8.3.123.
16. Playford ED, Dawson L, Limbert V, Smith M, Ward CD, Wells R. Goal-setting in rehabilitation: report of a workshop to explore professionals' perceptions of goal-setting. Clin Rehabil. 2000 Oct;14(5):491–6. https://doi.org/10.1191/0269215500cr343oa PMID:11043874
17. Levack WM, Dean SG, McPherson KM, Siegert RJ. How clinicians talk about the application of goal planning to rehabilitation for people with brain injury-variable interpretations of value and purpose. Brain Inj. 2006 Dec;20(13–14):1439–49. https://doi.org/10.1080/02699050601118422 PMID:17378236

18. Levack WM, Dean SG, Siegert RJ, McPherson KM. Navigating patient-centered goal setting in inpatient stroke rehabilitation: how clinicians control the process to meet perceived professional responsibilities. Patient Educ Couns. 2011 Nov;85(2):206–13. https://doi.org/10.1016/j.pec.2011.01.011 PMID:21306859
19. Van De Weyer RC, Ballinger C, Playford ED. Goal setting in neurological rehabilitation: staff perspectives. Disabil Rehabil. 2010;32(17):1419–27. https://doi.org/10.3109/09638280903574345 PMID:20624106
20. Playford ED, Siegert R, Levack W, Freeman J. Areas of consensus and controversy about goal setting in rehabilitation: a conference report. Clin Rehabil. 2009 Apr;23(4):334–44. https://doi.org/10.1177/0269215509103506 PMID:19449469
21. Nair KP, Wade DT. Satisfaction of members of interdisciplinary rehabilitation teams with goal planning meetings. Arch Phys Med Rehabil. 2003 Nov;84(11):1710–3. https://doi.org/10.1053/S0003-9993(03)00313-7 PMID:14639574
22. Al-Haidary H, Qannam H, Lam T. Development of a rehabilitation goal menu for inpatients with neurological disorders: application in a Saudi Arabian context. Clin Rehabil. 2015 Oct;29(10):1002–12. https://doi.org/10.1177/0269215514561877 PMID:25540171
23. Plant S, Tyson SF. A multicentre study of how goal-setting is practised during inpatient stroke rehabilitation. Clin Rehabil. 2018 Feb;32(2):263–72. https://doi.org/10.1177/0269215517719485 PMID:28714342
24. Loft MI, Esbensen BA, Kirk K, Pedersen L, Martinsen B, Iversen H, et al. Nursing staffs self-perceived outcome from a rehabilitation 24/7 educational programme - a mixed-methods study in stroke care. BMC Nurs. 2018 Apr;17(1):17. https://doi.org/10.1186/s12912–018–0285-z PMID:29719491
25. Bovend'Eerdt TJ, Botell RE, Wade DT. Writing SMART rehabilitation goals and achieving goal attainment scaling: a practical guide. Clin Rehabil. 2009 Apr;23(4):352–61. https://doi.org/10.1177/0269215508101741 PMID:19237435
26. Rice DB, McIntyre A, Mirkowski M, Janzen S, Viana R, Britt E, et al. Patient-Centered Goal Setting in a Hospital-Based Outpatient Stroke Rehabilitation Center. PM R. 2017 Sep;9(9):856–65. https://doi.org/10.1016/j.pmrj.2016.12.004 PMID:28082180
27. Scobbie L, Duncan EA, Brady MC, Wyke S. Goal setting practice in services delivering community-based stroke rehabilitation: a United Kingdom (UK) wide survey. Disabil Rehabil. 2015;37(14):1291–8. https://doi.org/10.3109/09638288.2014.961652 PMID:25243765
28. Plant SE, Tyson SF, Kirk S, Parsons J. What are the barriers and facilitators to goal-setting during rehabilitation for stroke and other acquired brain injuries? A systematic review and meta-synthesis. Clin Rehabil. 2016 Sep;30(9):921–30. https://doi.org/10.1177/0269215516655856 PMID:27496701
29. McClain C. Collaborative rehabilitation goal setting. Top Stroke Rehabil. 2005;12(4):56–60. https://doi.org/10.1310/ELB1-EGKF-QUQC-VFE9 PMID:16698737
30. Monaghan J, Channell K, McDowell D, Sharma AK. Improving patient and carer communication, multidisciplinary team working and goal-setting in stroke rehabilitation. Clin Rehabil. 2005 Mar;19(2):194–9. https://doi.org/10.1191/0269215505cr837oa PMID:15759535
31. Neistadt ME. Methods of assessing clients' priorities: a survey of adult physical dysfunction settings. Am J Occup Ther. 1995 May;49(5):428–36. https://doi.org/10.5014/ajot.49.5.428 PMID:7598158
32. Holliday RC, Antoun M, Playford ED. A survey of goal-setting methods used in rehabilitation. Neurorehabil Neural Repair. 2005 Sep;19(3):227–31. https://doi.org/10.1177/1545968305279206 PMID:16093413
33. Leach E, Cornwell P, Fleming J, Haines T. Patient centered goal-setting in a subacute rehabilitation setting. Disabil Rehabil. 2010;32(2):159–72. https://doi.org/10.3109/09638280903036605 PMID:19562579