

Chapter 7

General discussion

Introduction

In this concluding chapter, the implications of the main findings in this thesis are critically discussed. The primary aim of this thesis was to assess the efficacy of client-centred practice in patients with multiple sclerosis (MS) compared to usual care. The secondary aim was to establish the reproducibility and the responsiveness of the Canadian Occupational Performance Measure (COPM). This is a client-centred assessment instrument developed to identify and evaluate a patient's most important perceived performance issues. Finally, we evaluated to which extent instruments that aim to measure participation indeed do so, and how frequent participation domains are assessed.

This general chapter will first elaborate on client-centred practice and second on the assessment of patients' perceived problems and how participation was assessed. Subsequently, an overview is given of the methodological considerations and future research challenges.

Evidence on client-centred practice

Efficacy of client-centred practice

Many patients and health professionals are nowadays advocating for a client-centred approach. The results of our trial on the efficacy of client-centred practice showed that the process outcomes (e.g., the client-centredness of the organisation and the perceived quality of therapy) were in favour of the client-centred intervention. However, the functional outcomes of the client centred therapy (e.g., fatigue or mental health) tended to be worse compared to usual care. More detailed assessments revealed that the client-centred therapy resulted in a more intensive diagnostic evaluation process and less intensive treatment compared to usual care.

While many authors claim beneficial effects of client-centred practice, an in-depth review of the literature revealed studies that reported no or negative effects on functional outcomes. For example, a systematic review on primary health care physicians and nurses reported beneficial effects on communication between health professionals and patients, and patient satisfaction, but mixed results were observed on health care behaviour, health care use, and health status.¹ Similarly, a review on client-centred care concluded that satisfaction-studies indicated

that client-centred care was what most patients wanted, but there was limited evidence on a relationship between client-centred health care and overall health.² Furthermore, a recent review on the effects of client-centred goal setting in stroke rehabilitation services concluded that the consequences of applying client-centred principles in goal setting had not been evaluated rigorously in aspects other than psychological effects.³

Studies presenting beneficial effects of client-centred practice focus mainly on process outcomes and behavioural or psychological aspects. Improving process aspects, like the patient-doctor communication and information exchange, are considered as the most important aspects to increase a patients overall evaluation of the quality of care.⁴ Many of these aspects are related to the basic elements of client-centred practice.^{5,6} These aspects are valuable in themselves and may alleviate a patient's distress associated with illness and uncertainty.⁷ Least associated with the perceived quality of care are outcome aspects like physical functioning.⁴ These mixed results however, do not necessarily mean that treatment outcomes are not relevant to patients. For example, a patient is satisfied with his or her physician's listening skills, yet her chronic disease control has worsened^{8,9}, has client-centred care effectively been accomplished in this situation? The improved process aspects that are inherent to client-centred care can indicate how the patient has experienced the client-centred process. However, although the process improvements are important to a patient, client-centred therapy should also lead to enhanced functional health outcomes.¹⁰

Some studies that failed to find differences between client-centred practice and usual care attributed this mainly to a limitation in the implementation of client-centred practice.^{3,6,11-13} Perceived barriers in implementing client-centred practice included for example, lack of a clear operationalization of client-centred care, inadequate education, lack of coordinated collaboration, shortage of staff, and the dominance of the biomedical model in health care.⁶ In our trial, we eliminated most of these barriers by extensively training, guiding, and coaching the therapists in providing client-centred therapy, not only during the goal-setting process, but during the entire treatment process. We used the Canadian Practice Process Framework (CPPF)¹⁴ as an explicit method to work in a client-centred way. An experienced skilled trainer in teaching and performing client-centred practice guided the client-centred process. Furthermore, the staff members of the participating centres agreed to facilitate and provided time to the therapists to implement client-centred practice. Hence, it seems unlikely that inappropriate implementation of client-centred practice can explain our findings.

To understand better why client-centred practice resulted in poorer functional results compared to usual care therapy we conducted additional analyses. These analyses showed that client-centred therapy compared to usual care resulted in a more intensive diagnostic evaluation and less intensive treatment. Client-centred practice requires shared decision making and setting goals as well as exploring the health professional's and patient's needs, perspectives, strengths, and societal and practice context aspects.¹⁴ This could have stimulated the emphasis on diagnostic consultation with less attention devoted to actual treatment. However, the results of our study showed that too much emphasis on diagnostics can be counterproductive and unwanted, while it can result in less functional health outcomes. Therefore, we recommend that client-centred practice should be changed by paying more attention to actual treatment to attain better functional outcomes in patients who receive client-centred practice.

Client-centred health care

The current emphasis on client-centred practice is not only evident in clinical settings but is also prominently positioned on the political agenda and in discussions about quality of care.^{9,15} The increasing focus on client-centred practice is driven by the challenges to the health care system to guarantee quality of care, long-term access, and financial sustainability. The health care system has to face the sharp rise in an ageing population, control the increase of chronic conditions, prevent unhealthy behaviour, and diminish health differences between socio-economic classes in times of labour and financial shortages.¹⁶ To meet these challenges, health care managers advise that the core value of health should shift from "care for the disease" towards "behaviour and health".¹⁵ This shift implies that the patient needs to be empowered and should take more responsibility and control for his/her own health, lifestyle, and therapy. The health professional is expected to act towards a long-term perspective as a coach in self-management interventions.¹⁵

Self-management support intends to activate persons to be informed and to be able to manage their situation themselves by assisting and coaching patients and their families.¹⁷ Client-centred practice also aims to enable and empower patients to find their own path to improvement.¹⁸ However, as shown in our study, this does not necessarily result in better functional health outcomes. For client-centred self-management, it is not enough if a health professional only informs, assists, and motivates the patient to improve functional outcomes. To reach better functional results, the focus in client-centred practice should be especially on productive

interactions leading to improved functional outcomes, and not just to improved process outcomes.

The economic constraints on health care seem to be a recent driver of client-centred practice. However, the evidence on the cost-effectiveness of client-centred practice is not substantial and conclusive.⁶ Many measures that intend to measure the outcomes of client-centred care confound behaviour and process outcomes with functional health outcomes, leading to confusing results.^{9,19} Obviously there are budgetary pressures, but to guarantee quality of care, access to health care, and financial sustainability, we should reconsider the way client-centred is promoted and implemented in health care systems.

Recommendations on client-centred practice

The results of our study and the results of other studies indicate that adaptation of client-centred practice is necessary to improve functional health outcomes. It is suggested to spend less time on diagnosing and analyzing the patient's problems, as results have shown that too much emphasis seems to be counterproductive. It is suggested that the therapist takes responsibility for providing treatment for the health issues that need to be treated. For example, during the therapy of an MS patient suffering from fatigue, it is important that the therapist and the patient spend enough time on actual training to create a balance between workability and workload to manage fatigue in daily life.

Client-centred practice could be more effective and suitable for certain patients. For example, there are patients who favour personal contact, who like to practice together with the health professional, who need conveniently arranged information, and who will not appreciate it to direct care themselves, to participate in shared decision making, or to receive several treatment options.¹⁶ On the other hand, other patients appreciate it to participate in shared decision making and in their care, to have online consultations, and to consider alternative treatment options. Self-management programs could be less suitable for patients who view the health professionals as an authority concerning their treatment, while the client-centred approach could be suitable for patients who appreciate it to be the director of their own health care, to be well informed, and who like to share in the decision-making process about their treatment.¹⁶ The different patient characteristics and attitudes regarding health care could have implications for the successful implementation of client-centred health innovations.

Although further research is necessary to explore whether client-centred practice may be more effective for certain patients under certain conditions, there

are indications that some patients benefit more from a client-centred approach than others. There are studies that show that patients with lower education, a worse prognosis, as well as a higher level of anxiety, may be more likely to have a lower preference for client-centred communicative approaches.²⁰ Others have described that client-centred practice was associated with more satisfaction among patients who had a psychosocial condition, but with less satisfaction among patients with complex or with straightforward medical problems.^{20,21}

To improve the effectiveness of client-centred practice on functional outcomes, more research is needed to determine the contribution of focusing less on diagnostics and analyses, focusing more on actual treatment, and to establish the contribution of tailoring treatment to different patient characteristics.

Assessments

In assessing client-centred health care the patient's perspective on activities and participation is important. In choosing the best available clinical outcome measure, the measure should be acceptable and practical to administer and should be scientifically sound in terms of its content and measurement properties.^{22,23} In this paragraph, we will first discuss the reproducibility and responsiveness of a client-centred outcome-measure, the Canadian Occupational Performance Measure (COPM), and subsequently the content validity of participation instruments.

Canadian Occupational Performance Measure

The COPM is an outcome measure designed to help patients to identify, prioritize, and evaluate important issues they encounter in occupational performance.²⁴ The COPM was originally developed by occupational therapists but is nowadays used by other disciplines as well.²⁵ The client-centred structure of the COPM provides a process through which a patient's values and preferences can be identified.²⁶⁻²⁸ Although the COPM can increase patient participation in the goal-setting process and provide health professionals with information on what is meaningful to the patient, the COPM does not automatically ensure client-centred practice.²⁹

The implementation of the COPM in clinical research and practice is expanding, but the clinimetric properties are not yet fully known. Supportive information was available on the content, convergent, and divergent validity²⁸, as well as on the intra-rater agreement.³⁰ No information was available on the inter-rater agreement, and only limited information was available on the responsiveness of the COPM.

In this study, we assessed the reproducibility of the performance and satisfaction scores of the individually identified problems. Furthermore, we measured the reproducibility of the mean scores of the problems prioritized by the patients.³¹ Lastly, we assessed the COPM's ability to detect changes (criterion and construct responsiveness) in the mean scores and we assessed the feasibility of the COPM.³²

In clinical practice, therapy often focuses on problems identified by the individual on the COPM and on the performance and satisfaction scores. Although analysing and discussing these problems and their scores with the patient can be elucidating, the reproducibility of the individually identified problems in our study was poor. Since the reproducibility of the mean scores in our study was moderate to high, we recommend that the mean scores should be used for individual assessment.³¹ To reduce the variability in scores and thereby improving the reproducibility of the COPM, we propose being more specific in describing the prioritized problems. For example, one should use the word vacuuming instead of doing the housework, or putting on a pair of shoes instead of dressing or self-care.³¹ In our responsiveness study we incorporated this advice, but we did not verify if applying this advice indeed improved the reproducibility. Further research should evaluate whether a more specific assessment method can improve the reproducibility of the COPM, while preserving the intrinsic client-centred properties of the COPM.

We found supportive evidence for the COPM's ability to detect changes in perceived occupational performance issues (criterion and construct responsiveness).³² Criterion responsiveness indicated cut-off values lower than the two-point difference in the COPM-manual²⁴. Although the ability to detect improvement was lower for the blind scores (reassessment scores that were obtained without showing patients the initial assessment) than for the reflective scores (reassessment scores that were obtained with showing the initial scores) the responsiveness of both scores was supported.

Since the COPM can be used to generic populations and interventions, we did not look for differences in cut-off points for specific diagnostic groups, specific interventions, and different phases or duration of the disease. However, to interpret the outcomes on the COPM in a more client-centred manner, it would be of interest to know whether different cut-off points do exist and how they differ among the patients.

In the responsiveness study, we only focused on assessing the COPM's ability to detect improvement, but not on the ability to detect deterioration. Our results

showed that 57% of the patients reported improvement on the COPM, 14% reported deterioration, and 29% reported no change. We focused on improvement because we assumed that most issues addressed would be translated into therapeutic goals. However, we did not verify this assumption. Reasons for the deterioration could be related to the make-up of the population. Many patients enrolled in this study suffered from a chronic disease in which 'cure' is no longer an option and in which it can be difficult to detect improvement.

Patients' responses on the COPM's feasibility were in general positive. Our results showed that patients rated the COPM as a good measure of identifying problems. Furthermore, patients perceived the scores provided by the instrument as meaningful. During the first assessment many patients perceived scoring the COPM as difficult. However, during the reassessment the number of patients who found scoring easy increased significantly. This difficulty in scoring has also been recognized in other studies.³³⁻³⁵ Possible reasons for the perceived difficulty could be 1) the fluctuating state of the disease, 2) difficulties with numeric scoring procedures, or 3) the expectations of patients that the health professional should rate the level of the health issue and decides which problems require intervention.³⁵ Another possible explanation could be found in the high correlation between the performance and satisfaction scores of the COPM that suggest that these scores are measuring the same concept. Although in some cases, important information can be obtained by talking to the patients about the differences between both scores, the necessity of using both concepts is questionable.

Participation

Participation is often seen as an important long-term outcome of medical, rehabilitation, and social service programs.³⁶ Health professionals have expressed interest in client-centred assessments that aim to improve participation. However, measuring participation can pose conceptual and psychometric challenges.³⁷

Participation arises from an interaction of what a person can do and wants to do, and also what the social environment enables and expects.³⁸ Participation can therefore have many meanings and multiple applications. For example, there are people who participate in multiple aspects of life, not only at work but also in school, home and social activities, while other people participate primarily at home, with family members and are not aspiring for more.³⁸ Participation can be difficult to measure as both the quality and quantity of participation are affected by the environment and personal characteristics.³⁶ Hence, there are many definitions

of participation, but the actual meaning and operationalization of participation remains unclear.

Consensus about the concept and operationalization of participation is crucial, given that it is a valuable outcome for patients, health professionals, and policymakers. Which participation aspects are useful depends on the intended purpose of the measurement and can differ across the life span and developmental stages of an individual.

The concept participation

In line with several other participation definitions^{39,40}, we have suggested that participation items should be related to social roles and should be considered as the performance of roles in a social context, involving not just an environmental factor, but mainly involving other people. Furthermore, participation items should require (or allow) a combination of multiple activities and these activities should be related to a role.⁴¹ This working definition implies that participation is not the same as activity and that participation is more than just performance.

In our review, we found that most instruments that aim to measure participation do so only to a limited extent. Most instruments also seem to assess other constructs that are closely related to participation, including for example activity, autonomy, disability, job satisfaction, individual capacity, and participation as in taking part in treatment. The lack of consensus about the concept participation has resulted in the availability of several definitions of participation. In the International Classification of Functioning, Disability and Health (ICF)⁴², participation is listed together with the concept activity which makes it difficult to distinguish it from each other. To assess adequately participation, one first needs to reach consensus how to define the construct participation. This includes reaching consensus on the participation domains and participation aspects.^{23,41,43}

The operationalization of participation

Our review showed that participation is operationalized in different ways. We distinguished three participation aspects: participation accomplishment, participation problem, and satisfaction with participation. Participation accomplishment refers to the extent or degree of participation. Participation problem indicates the difficulty in accomplishing social roles. It refers to a person's experience of a participation problem or the meaning of the personal burden of the problem. The aspect satisfaction with participation includes a person's current perception of participation according to what the person wants or expects.

The instruments that we screened as part of our study referred mostly to participation problems and participation accomplishment, and less to satisfaction with participation. Different participation domains could be distinguished: work/study, social life, general participation, home, family, financial, or combinations of those. There were also domains with participation items of which one can question whether these items belong to participation while these items are not necessarily connected to a role (undetermined participation items): leisure, transport, shopping, perception, and religion.⁴¹

Of the 68 instruments in our review that contained 50% or more (un)determined participation items in the entire instrument, 26 were one-scale instruments and 42 multi-scale instruments. One can question whether one-scale measures can fully describe the complex interactions between individuals and their environments that affect participation. Covering all aspects of participation may require multi-scale instruments. One-scale instruments can be used for a specific domain and participation aspect. Given the multifaceted nature of participation, an approach that offers multiple ratings may be the most appropriate way to measure participation.⁴³

In our review, we screened instruments that aim to measure participation. To screen the instruments, we used a working definition for measuring participation. Although this working definition was based on definitions in the literature, other ideas about including or excluding items as participation can exist, as there is not yet a consensus based definition of the construct participation. Furthermore, we did not assess the methodological quality of the screened instruments. Therefore, the instruments that were included in our review do not necessarily encompass good measurement properties. Further consensus about the construct and operationalization of participation as well as reviews on the measurement properties of the participation instruments scales are recommended.

Methodological considerations

Efficacy of client-centred practice

Many studies in the area of client-centred practice are qualitative and subjective studies. This may be due to the individual nature of client-centred practice. Conducting randomised trials can be difficult to perform while the aspects that are client-centred for one patient may not suit the needs and values of another.⁴⁴ The client-centred intervention is a complex intervention where both the quality and

the quantity of different components may vary between patients.⁴⁵ To assess the usefulness and quality of the outcomes of a trial, several measurement properties concerning the internal and external validity of the study are important.

Missing data

Internal validity refers to the extent to which differences identified between randomised groups are a result of the intervention being tested. One of the markers of internal validity is to have a sufficient sample size.⁴⁶ In our trial, we accounted for a 15% loss of follow up in the required sample size to perform appropriate analysis. Our longitudinal trial design consists of approximately 807 measurements (269 patients with three measurements each), which makes it almost inevitable to have missing data. However, we managed to keep the number of missing data limited. Only 14 persons (5%) dropped out of the study leading to a total of 34 missing measurements. This did not have an impact on the results because we used data-analysis techniques that are robust and little affected by a low level of missing data.⁴⁷

Allocation

In many clinical trials, participants are randomised as individuals to different treatments. We did not first include patients and then randomise them into clusters, because individual allocation could potentially contaminate the two interventions when patients receiving client-centred care and patients receiving usual care are treated in the same occupational therapy department. The hospitals and rehabilitation centres (including health professionals and patients) were first stratified for their potential different patient constitution and then randomised into clusters. Selection bias was avoided as much as possible by including consecutive eligible patients, and by providing in- and exclusion criteria and instructions for those identifying and recruiting patients. However, we cannot completely eliminate the possibility that the recruiting physicians and occupational therapists did not select all consecutive eligible patients. To avoid selection bias, we could have used blind recruiters from outside the cluster. However, for logistical reasons and for keeping the patient's workload as low as possible, we did not do this.

Another important marker that determines the value of the research results is blinding to allocation status. In our trial, the patients and the outcome assessors were blinded to the allocation but the therapists and recruiters were not. Patients were blinded to the allocation status to prevent that the characteristics of individual participating patients were influenced by knowledge about their allocation status.

They all received the same kind of information: sufficient information about the interventions to decide whether they want to participate in the trial, but not enough information to really know what the difference between the interventions was to avoid dilution of an intervention effect. We did not evaluate the blinding of the patients by checking whether patients knew what kind of intervention they had received. However, we did evaluate the blinding of the assessors towards the randomisation groups. The blinding succeeded for 90% of the cases.

Despite our stratification by hospitals and rehabilitation centres and randomising the treatment centres, differences in several baseline characteristics between both intervention groups were present. We looked carefully into this issue but could not find any other explanation than chance. In the analyses, we have corrected for these baseline differences.

Contrast between the intervention groups

In our trial, we evaluated the content of the intervention delivered to the patient, checked the treatment integrity, and performed a process evaluation. One can question whether the operationalization of the client-centred intervention was clearly differentiated from usual care. Client-centred practice can be seen as an important component of most of the major occupational therapy conceptual practice models and can therefore, at some level, be considered as 'usual care' in OT. If this assumption was right than no or just a small contrast would be visible between both groups. However, we found a clear contrast in outcomes between both groups. Furthermore, if the contrast between the groups would have been even stronger, it is likely that also the negative functional outcomes of client centred therapy would have been even worse.

Outcomes

We used several primary and secondary outcomes. One can argue that only one primary outcome should be defined. However, several reasons can be given why multiple outcomes can be useful.⁴⁵ OT aims to optimize activities and participation. Since the relationship between disabilities and the perceived deficits concerning activities or participation is not linear, measures that cover a continuum of domains should be used. Therefore, we used more than one primary outcome measure.

We used generic measures in our trial. Using generic measures, such as the DIP, IPA or SF36, which cover a large number of domains, can be questionable since only a few items in a generic measure can be affected.⁴⁵ In our study, the primary outcome measures were generic measures and these did not reveal significant

differences. However the secondary outcomes revealed significant differences in favour of usual care OT on specific domains of components of fatigue and on specific domains as vitality, bodily pain and mental health. In retrospect, we could have chosen other primary outcomes measures that focus on specific outcomes.

A possible limitation of our study could have been that we used the COPM as an outcome-assessment while it can also be used as a tool to initiate a client-centred process. This could have affected the contrast between the two groups. However, the process outcomes in our trial showed that there was a clear contrast between both groups. Other studies have also found evidence that, although the COPM increased patient participation in the goal-setting process and provides information on what is meaningful to a patient, it did not ensure client-centred practice.²⁹

External validity

External validity refers to the extent to which study results can be applied to other individuals or settings.⁴⁶ Generalization of the results to other patients than the study population (MS outpatients) should be done with caution. Nevertheless, there are several factors that improve the generalization of our results. For example, the results of our trial are in accordance with other studies that focused on different health professionals and different patients.^{1,8} Another factor that improves the possibility to generalize our results is that the patients in our trial represent a large number of MS outpatients from 13 health centres (hospitals and rehabilitation centres) in the Netherlands, who varied in age, type of MS, and severity of disease.

Conclusion and suggestions for future research

Evidence on client-centred practice

The poor functional outcomes of client-centred care compared to usual care should make us attentive to the way client-centred care is implemented in health care systems. It is suggested to spend less time on diagnosing and analyzing patients problems, since too much emphasis on the diagnostic process seems to be counterproductive. It is suggested that, while taking the patient's point of view and preferences into account in planning treatment, the therapist should take responsibility for providing treatment for essential issues that need to be treated to gain functional results.

Future research should not just focus on the effect of process outcomes (e.g. communication, satisfaction, information exchange, involvement in the decision

making process), but also on the effect of the functional health outcomes. More research is needed to determine whether a more proportional representation of time devoted to analysis and diagnosis, and the time devoted to the actual treatment, results in more efficiency and improved functional results.

Studies to determine whether certain patient characteristics and attitudes lead to better functional outcomes in client-centred practice can contribute to improve client-centred practice.

Assessments

The results about the methodological properties of the COPM support the implementation of the COPM as a valid, reproducible, and responsive outcome measure to assess and evaluate a patient's perceived problems. The mean performance and satisfaction scores should be used for assessing and evaluating the perceived performance issues, given that the reproducibility of the scores of the separate identified issues was poor. We suggest using a more specific method of assessing the COPM to improve the reproducibility. However, further research is needed to determine whether this indeed improves the reproducibility without violating the client-centred nature of the COPM. Another subject for further research is the need to obtain scores for performance as well as for satisfaction since these two constructs are highly correlated.

Our review about the content validity of instruments that assess participation showed that the content, aspects, and domains of participation are operationalized in different ways. Instruments and instruments' scales that measure participation do this only to a certain extent. Our review contributes to a working definition about how participation can be conceptualised and measured. Nevertheless, it is important to gain further consensus about the construct participation, how to operationalize and measure this construct, and how to define its domains and aspects. Lastly, the methodological quality of the scales and instruments that measure participation need to be established according to their content and purpose.

References

1. Lewin SA, Skea ZC, Entwistle V, Zwarenstein M, Dick J. Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev* 2001;(4): CD003267.
2. Harkness J (ed). What is patient-centred health care? London: International Alliance of Patients' Organizations 2005. In: National Ageing Research Institute (NARI). What is person-centred health care? A literature review. Victorian Government Department of Human Services, Melbourne, Victoria; 2006: p.6. Available at http://www.mednwh.unimelb.edu.au/pchc/downloads/PCHC_literature_review.pdf. Accessed June 24, 2011.
3. Rosewilliam S, Roskell CA, Pandyan AD. Patient-centred goal setting in stroke rehabilitation. A systematic review and synthesis of the quantitative and qualitative evidence behind. *Clin Rehabil* 2011;25(6):501-14.
4. Rademakers J, Delnoij D, de Boer D. Structure, process or outcome: which contributes most to patients' overall assessment of healthcare quality? *BMJ Qual Saf* 2011;20(4):326-31.
5. Law M. (ed) Client-centred occupational therapy. Slack Incorporated; 1998.
6. Pelzang R. Time to learn: understanding patient-centred care. *Br J Nurs* 2010;19(14):912-7.
7. Arora NK, Weaver KE, Clayman ML, Oakley-Girvan I, Potosky AL. Physicians' decision-making style and psychosocial outcomes among cancer survivors. *Patient Educ Couns* 2009;77(3):404-12.
8. Kinmonth AL, Woodcock A, Griffin S, Spiegel N, Campbell MJ. Randomised controlled trial of patient centred care of diabetes in general practice: impact on current wellbeing and future disease risk. *BMJ* 1998;317:1202-8.
9. Epstein RM, Street RL. The values and value of patient-centered care. *Ann Fam Med* 2011;9(2):100-3.
10. Tyrell M. Client-centred therapy. Oban: Uncommon knowledge; 2003. Available from: http://www.uncommon-knowledge.co.uk/psychotherapy/client_therapy.html. Accessed June 23, 2011.
11. Leach E, Cornwell P, Fleming J, Haines t. Patient centred goals-setting is a subacute rehabilitation setting. *Disabil Rehabil* 2010;32(2):159-72.
12. Sumsion T, Smyth G. Barriers to client-centredness and their resolution. *Can J Occup Ther* 2000;67(1):15-21.
13. Townsend E, Langille L, Ripley D. Professional tensions in client-centered practice: Using institutional ethnography to generate understanding and transformation. *AJOT* 2003;57:17-28.
14. Townsend EA, Polatajko HJ, editors. Enabling Occupation II: Advancing an Occupational Therapy Vision for Health, Well-being & Justice through Occupation. Ottawa: CAOT Publications ACE; 2007.
15. Raad voor de Volksgezondheid en Zorg (RVZ). Perspectief op gezondheid 20/20. Den Haag: RVZ; 2010.
16. Ministerie van Volksgezondheid, Welzijn en Sport (VWS). Wat werkt bij wie. Een doelgroepbenadering bij innovaties in zorg en preventie. Utrecht; 2009.
17. Cup E. Occupational therapy, physical therapy and speech therapy for person with neuromuscular diseases; An evidence base orientation. Thesis. Radboud universiteit Nijmegen; 2011.
18. Grieder D, Theis G. Wisconsin: Leading the Way to Person-Centered Planning in Community-Based Health International Journal of Psychosocial Rehabilitation 2008;2(2):111-4.
19. Hudon C, Fortin M, Haggerty JL, Lambert M, Poitras ME. Measuring patients' perceptions of patient-centered care: a systematic review of tools for family medicine. *Ann Fam Med* 2011;9(2):155-64.

20. de Haes H. Dilemmas in patient centeredness and shared decision making: a case for vulnerability. *Patient Educ Couns* 2006;62(3):291-8.
21. Winefield HR, Murrell TGC, Clifford JV, Farmer EA. The usefulness of distinguishing different types of general practice consultation, or are needed skills always the same? *Fam Pract* 1995;12:402-7.
22. Streiner DL, Norman HL. *Health Measurement scales: A practical guide to their development and use*. New York: Oxford University Press (OUP);1995.
23. Mokkink LB, Terwee CB, Patrick DL, Alonso J, Stratford PW, Knol DL, Bouter LM, de Vet HCW. *Cosmin checklist manual*. Amsterdam: VU university medical center. EMGO Institute for health and care research. Available at: <http://www.cosmin.nl/images/upload/File/COSMIN%20checklist%20manual%20v9.doc>. Accessed april 21, 2011.
24. Law M, Baptiste S, Carswell A, McColl MA, Polatajko H, Pollock N. *Canadian Occupational Performance Measure*. 4th ed. Toronto (Canada): Canadian Association of Occupational Therapists; 2005.
25. Wressle E, Lindstrand J, Neher M, Marcusson J, Henriksson C. The Canadian Occupational Performance Measure as an outcome measure and team tool in a day treatment programme. *Disabil Rehabil* 2003;25(10):497-506.
26. Wressle E, Marcusson J, Henriksson C. Clinical utility of the Canadian Occupational Performance Measure-Swedish version. *Can J Occup Ther* 2002;69(1):40-8.
27. Pan AW, Chung L, Hsin-Hwei G. Reliability and validity of the Canadian Occupational Performance Measure for clients with psychiatric disorders in Taiwan. *Occup Ther Int* 2003;10(4):269-77.
28. Dedding C, Cardol M, Eysen ICJM, Dekker J, Beelen A. Validity of the Canadian Occupational Performance Measure , a client-centred outcome measurement. *Clin Rehabil* 2004;18:660-7.
29. Wressle E. Client participation in the rehabilitation process. Doctoral dissertation no 722. Division of occupational therapy, Department of neuroscience and locomotion, Faculty of Health Sciences, Linköping Universitet; 2002.
30. Cup EH, Scholte op Reimer WJ, Thijssen MC, Kuyk-Minis MA. Reliability and validity of the Canadian Occupational Performance Measure in stroke patients. *Clin Rehabil* 2003;17(4):402-9.
31. Eysen ICJM, Beelen A, Dedding C, Cardol M, Dekker J. The reproducibility of the Canadian Occupational Performance Measure. *Clin Rehab* 2005;19:888-94.
32. Eysen ICJM, Steultjens M, Oud TAM, Bolt EM, Maasdam A, Dekker J. Responsiveness of the Canadian Occupational Performance Measure. *J Rehabil Res Dev* 2011;48(5):517-28.
33. Sewell L, Singh SJ. The Canadian occupational Performance measure: Is it a reliable measure in clients with chronic obstructive pulmonary disease? *Br J Occup Ther* 2002;64(6):305-10.
34. Donnelly C, Eng JJ, Hall J, Alford L, Giachino R, Norton K, Kerr DS. Client-centred assessment and the identification of meaningful treatment goals for individuals with a spinalcord injury. *Spinal Cord* 2004;43(5):302-7.
35. Kjekten I, Slatkowsky-Christensen B, Kvien TK, Uhlig. Norwegian Version of the Canadian Occupational Performance Measure in patients with hand osteoarthritis: Validity, responsiveness and feasibility. *Arthritis Rheum*.2004;51(5):709-15.
36. Heinemann AW. Measurement of participation in rehabilitation research. *Arch Phys Med* 2010;91(9):S1-S4.
37. Schwartz CE. Applications of response shift theory and methods to participation measurement: A brief history of a young field. *Arch Phys Med* 2010;91(9):S38-S43.
38. Heinemann AW, Tulsy D, Dijkers M, Brown M, Magasi S, Gordon W, DeMark H. Issues in participation measurement in research and clinical applications. *Arch Phys Med* 2010;91(9):S72-6.

39. Badley EM. Enhancing the conceptual clarity of the activity and participation components of the International Classification of Functioning Disability and Health. *Soc Sci Med* 2008;66:2335-45.
40. Whiteneck G, Dijkers MP. Difficult to measure constructs: conceptual and methodological issues concerning participation and environmental factors. *Arch Phys Med Rehabil* 2009;90(11):S22-35.
41. Eyssen IC, Steultjens MP, Dekker J, Terwee CB. A systematic review of instruments assessing participation: challenges in defining participation. *Arch Phys Med Rehabil* 2011;92(6): 983-97.
42. World Health Organization. Towards a common language for functioning, disability and Health: ICF. Geneva: World Health Organization; 2002. Available at: <http://www.who.int/classifications/icf/training/icfbeginnersguide.pdf>. Accessed October 11, 2010.
43. Magasi S, Post MW. A comparative review of contemporary participation measures' psychometrics properties and content coverage. *Arch Phys Med Rehabil* 2010;91(9):S17-S28.
44. National Ageing Research Institute (NARI). What is person-centred health care? A literature review. Victorian Government Department of Human Services, Melbourne, Victoria; 2006. Available at http://www.mednwh.unimelb.edu.au/pchc/downloads/PCHC_literature_review.pdf. Accessed June 24, 2011.
45. Wade DT, Smeets RJEM, Verbunt JA. Research in rehabilitation medicine: Methodological challenges. *J Clin Epidemiol* 2010;63:699-704.
46. Eldridge S, Ashby D, Bennett C, Wakelin M, Feder G. Internal and external validity of cluster randomised trials: systematic review of recent trials. *BMJ* 2008;19;336(7649):876-80.
47. Chakraborty H, Gu H. A mixed model approach for intent-to-treat analysis in longitudinal clinical trials with missing values. Research Triangle Park, RTI Press Publication No. MR-0009-0903; 2009.