

**Physiotherapists' attitudes and beliefs towards
common low back pain:
Factor structure and internal consistency of the
Norwegian version of the PABS-PT**

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FORORD

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ABSTRACT

Background: The Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) is a self-administrated questionnaire designed to discriminate between a biomedical and a biopsychosocial treatment orientation of therapists with regard to low back pain management.

Aim: The aim of this study was to translate the PABS-PT into Norwegian from the original 36-item Dutch version, and to examine its dimensionality and internal consistency.

Methods: The Norwegian version was generated in a forward- backward translation procedure. A cross-sectional web-based survey was conducted. A convenience sample of 3.849 physiotherapists was invited to fill out demographic and professional data and the PABS-PT. Therapists who had not been involved in back pain management for the last 6 months were excluded. Descriptive statistics was used to describe demographic data. Principal factor analysis and reliability analysis was performed to determine the factor structure and internal consistency.

Results: The PABS-PT was successfully translated into Norwegian. Responses from 921 therapists were obtained (response rate 24.8 %). 774 therapists completed the questionnaire of which 647 were included in factor analysis. Principal factor analysis confirmed the two-factor structure of the original Dutch version. Thirty-six items were reduced to 19, with 13 items in factor I and 6 items in factor II. Internal consistency (Cronbach's alpha) of the biomedical subscale amounted to 0.79 while alpha of the biopsychosocial subscale amounted to 0.57, explaining 18.1 % and 7.1 % respectively, of the total variance.

Conclusion: The results of this research project provide evidence supporting the internal structure and internal consistency of the Norwegian version of the PABS-PT. More research is needed to further examine the questionnaire's psychometric properties and usefulness.

Keywords: Attitudes and beliefs, PABS-PT, low back pain, physiotherapist, health care practitioners, psychometrics, biopsychosocial.

SAMMENDRAG

Bakgrunn: Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) er et selvrapportert spørreskjema som er utviklet for å skjelne mellom en biomedisinsk og en biopsychososial behandlingsorientering relatert til behandling av korsryggsmerter blant fysioterapeuter.

Hensikt: Hensikten med studien er å oversette PABS-PT til norsk fra den originale nederlandske versjonen med 36 spørsmål, og å undersøke dets dimensjonalitet og interne konsistens.

Metode: Den norske versjonen ble oversatt i en oversettelses-tilbakeoversettelsesprosess. En internett-basert spørreundersøkelse med tverrsnittdesign ble gjennomført. Et bekvemmelighetsutvalg av 3.849 fysioterapeuter ble invitert til å fylle ut demografiske og profesjonelle data, samt PABS-PT. Terapeuter som ikke hadde behandlet pasienter med korsryggsmerter de siste 6 måneder, ble ekskludert. Deskriptiv statistikk ble brukt for å beskrive de demografiske dataene. Prinsipal faktoranalyse og reliabilitetsanalyse ble gjennomført for å bestemme faktorstrukturen og intern konsistens.

Resultater: Oversettelsen av PABS-PT til norsk var vellykket. Svar fra 921 terapeuter ble innsamlet (svarprosent 24.8 %), 774 terapeuter fylte ut spørreskjemaet, hvorav 647 ble inkludert i faktor analysen. Prinsipal faktoranalyse bekreftet to-faktorstrukturen til den originale nederlandske versjonen. De 36 spørsmålene ble redusert til 19, med 13 spørsmål i faktor I og 6 spørsmål i faktor II. Intern konsistens (Cronbach's alpha) til den biomedisinske subskala kom opp i 0.79, mens alpha til den biopsychososiale subskala kom opp i 0.57, som forklarte henholdsvis 18.1 % og 7.1 % av den totale variansen.

Konklusjon: Resultatene av dette forskningsprosjektet skaffer evidens for intern struktur og intern konsistens til den norske versjonen av PABS-PT. Mer forskning er nødvendig for videre undersøkelse av spørreskjemaets psychometriske egenskaper og egnethet.

Nøkkelord: Holdninger og antagelser, PABS-PT, korsryggsmerter, fysioterapeut, psykometri, biopsychososial.

CENTRAL CONCEPTS

Attitude:

“An enduring pattern of evaluative responses (or of feeling, thinking and behaving) toward a person, object or issue”.¹ Attitudes are relevant for understanding and predicting behavior. Attitudes arise spontaneously and inevitably as beliefs are formed (Ajzen, 2001). Attitudes affect information processing, which means that attitudes may bias the perception of information quality, causing selective exposure to information (Bohner and Dickel, 2011).

Belief:

“Any proposition that is accepted as true on the basis of inconclusive evidence”.²

¹ "attitude n." A Dictionary of Psychology. Edited by Andrew M. Colman. Oxford University Press 2009. Oxford Reference Online. Oxford University Press. University of Bergen. 19 January 2012
<http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t87.e722>

² "belief n." A Dictionary of Psychology. Edited by Andrew M. Colman. Oxford University Press 2009. Oxford Reference Online. Oxford University Press. University of Bergen. 19 January 2012
<<http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t87.e955>>

1.0 INTRODUCTION

1.1 Low back pain

Low back pain (LBP) is a very common musculoskeletal disorder, constituting a major socio-economic health problem and a management challenge to health care providers (Waddell, 2004). In the Nordic countries, approximately 66% of the population report having suffered from low back pain at least sometime during their lifetime and approximately 50% have experienced low back pain sometime during the preceding year (Leboeuf-Yde et al., 1996). Among musculoskeletal disorders, low back pain is the most frequent medical reason for work absenteeism and disability pensions in Norway, representing respectively 11% and 9% of all cases in 2008 (Brage et al., 2010).

Low back pain is one of the most frequent reasons to consult a general practitioner (Hunskår et al., 2003) and accounts for about 10% of medical consultations (Werner and Indahl, 2005). Two other important groups of treatment providers are physiotherapists and chiropractors. Low back pain represents 27% of all physical therapy consultations and 82% of chiropractor consultations in Norway (Werner and Indahl, 2005). Of patients who had experienced low back pain, 17% visited a physiotherapist, 18% a chiropractor and 25% visited a general practitioner (Werner et al., 2005).

Although low back pain commonly is classified as acute (less than 12 weeks) and longstanding or chronic (more than 12 weeks), its course is often characterized by relapses and recurrences over time with 60-80% of first-time low back patients still experiencing pain symptoms and related disability one year after the first consultation with their general practitioner (Croft et al., 1998).

1.2 Biomedical perspective on low back pain management

Traditionally, research and clinical practice in physiotherapy have been based on a biomedical or biomechanical model of understanding and managing the structure and function of the spine. In this perspective, the patient's sign and symptoms are the result

of structural and biomechanical deficits, causing functional aberrations like hypo- and hypermobility or neuromuscular dysfunction. Assessment is aimed at identifying specific structures, lesions or impairments relating to the pain and disability (Maitland, 1986, Ombregt et al., 2003, Lederman, 2011). As pain is considered a signal of tissue damage, treatment will probably be adapted to the patient's pain level and is therefore often described as *pain contingent* (Turk and Flor, 1984). The biomedical model has been criticized as a reductionist approach to dealing with a complex problem in a simplistic manner (O'sullivan, 2011). It is now clear that in most back pain a precise patho-anatomical substrate cannot be pointed out as a sure explanation for the patients' complaints (Waddell, 2004, Jarvik et al., 2005). Theoretically, the biomedical model is formed of a predominantly linear looking at the world. Such a perspective may be the right approach for linear problems, with clear cause-effect relationships and "one-size-fit-all" solutions, but trying to apply linear thinking to complex problems, like longstanding non-specific low back pain and focusing on searching for the single best solution, may actually result in exacerbation of the pain problem (Brown, 2009). The result of this has been called "iatrogenic disability" (Waddell, 2004), where treatment can actually make the condition worse instead of better.

1.3 Biopsychosocial perspective on low back pain management

The lack of effective interventions for patients with low back pain has caused many experts to change their focus from a biomedical model of illness to a biopsychosocial model (Foster et al., 2003a). In a biopsychosocial perspective, low back pain, especially if longstanding, is seen as the consequence of many interacting physical, behavioral, lifestyle, neurophysiological, psychological/cognitive and social factors, which makes it a complex disorder that seldom follows a linear pathway and consequently requires a range of management strategies (Brown, 2009, O'sullivan, 2005). Assessment is primarily aimed at identifying maladaptive cognitive behaviors (negative beliefs, fear-avoidance, catastrophising, hypervigilance), pain behaviors and movement behaviors (O'sullivan, 2011). Treatment implies a focus on increasing activity according to a predetermined timeline rather than the patient's symptoms and is usually described as *time contingent* (Lindstrom et al., 1992, Main et al., 2008).

The biopsychosocial model recognizes that psychological factors play an important role in the development of chronicity in low back pain disorders (Waddell, 2004 p. 231). A recent systematic review demonstrated that patients' depression, psychological distress, passive coping strategies and fear avoidance beliefs, rather than pain, were independently associated with persistent disability (Ramond et al., 2011). Patients' attitudes and beliefs, like negative affect, low self-efficacy, catastrophizing and fear avoidance beliefs have been shown to be major predictors of long-term disability (Linton, 2000, Denison et al., 2004, Linton, 2005) and seem to have the greatest influence on the outcome of low back pain conditions, irrespective of the severity of symptoms or any underlying physical pathology (Waddell, 2004). Attention has especially focused on the influence of fear avoidance beliefs (Crombez et al., 1999, Rainville et al., 2011). The fear avoidance model is a cognitive-behavioral account that explains why a minority of LBP patients may develop a chronic pain problem by engaging in protective behaviors, such as guarding and taking rest, because of fear for pain (Leeuw et al., 2007). These patients may avoid resuming certain movements and physical activity if they believe that it will worsen their condition. A vicious circle may develop where pain triggers fear and catastrophizing leads to avoidance that in turn heightens the perception of pain, leading to still more avoidance (Linton et al., 2002). It has been suggested that the fear of pain may result in more disability than the pain itself (Crombez et al., 1999, Waddell, 2004 p.227).

Patients' beliefs regarding their low back pain may be influenced by various factors including previous pain experiences (Leeuw et al., 2007), cultural background (Sanders et al., 1992), socio-economic status (Dionne et al., 2001, Hagen et al., 2005) and the prevailing culture of back pain and disability in society (Goubert et al., 2004). The projected beliefs of the members of the social context, including family, work, and the patient's own health care provider, may influence the beliefs and thereby the coping strategies and illness behavior of the patient (Rainville et al., 1995, Waddell, 2004). The recommendations and explanations offered to patients with respect to their pain can have a profound effect on their beliefs, and this effect may be negative. Not only patients, but also health care providers may have fear avoidance beliefs (Linton et al., 2002).

1.4 Clinical practice guidelines

Clinical practice guidelines for the management of low back pain were developed to facilitate evidence based clinical practice (Koes et al., 2001, Bekkering et al., 2003, Lærum et al., 2007), emphasizing a biopsychosocial approach to care. Guidelines recommend that patients are reassured and taught self-management, are encouraged to be physical active despite pain, to continue with normal day activities and return to work as soon as possible. In spite of the evidence that guideline adherence improves outcomes and decreases health care utilization (Rutten et al., 2010), the treatment behavior of physiotherapists appeared often to be inconsistent with LBP treatment guidelines (Rainville et al., 1995, Swinkels et al., 2005). Persistence of a pure biomedical approach among physiotherapists was shown in a qualitative study (Daykin and Richardson, 2004). An important portion of therapists was found to continue treatment of patients with back pain even when they failed to improve, which is not in line with clinical guidelines (Pincus et al., 2006a). Physiotherapists with a biomedical orientation and high levels of fear avoidance beliefs seemed to enhance their patients' irrational and dysfunctional concerns about their back pain (Foster et al., 2003b, Daykin and Richardson, 2004, Pincus et al., 2006a, Pincus et al., 2007) and were less likely to adhere to low back pain treatment guidelines (Domenech et al., 2011, Darlow et al., 2011).

The reasons for poor guideline adherence among physiotherapists are not clear, but may include therapists' treatment beliefs toward low back pain (Coudeyre et al., 2006), the lack of knowledge of clinical guidelines (Simmonds et al., 2012), a lack of communication skills to apply guidelines in the treatment of the individual patient (Jeffrey and Foster, 2012) and the experience of therapists that some patients have expectations that do not match guideline recommendations (Schers et al., 2001).

1.5 Health care providers' attitudes and beliefs

The variety of attitudes and beliefs found in health care providers are generally reported to represent two different treatment orientations: a biomedical treatment orientation and a biopsychosocial treatment orientation (Ostelo et al., 2003). A physiotherapist's treatment orientation may vary from neutral to the extremes of these two approaches.

Although the biomedical and biopsychosocial perspectives on health and health care apparently are contradictory, it seems that health care providers are able to hold paradoxical beliefs based on both perspectives, indicating that both being true under certain conditions, at certain times and for certain people (Brown, 2009). Vertebral manipulation and behavioral orientated rehabilitation may represent two diametrically opposed treatment orientations, but both are important parts of a pragmatic low back pain management strategy.

Therapists have been shown to hold a range of attitudes and beliefs about low back pain and disability and there is evidence that these attitudes and beliefs are associated with certain treatment behavior (Rainville et al., 1995, Linton et al., 2002, Ostelo et al., 2003, Houben et al., 2005a, Houben et al., 2005b, Bishop et al., 2008, Ostelo and Vlaeyen, 2008, Evans et al., 2010a, Domenech et al., 2011, Simmonds et al., 2012). Moreover, therapists' belief system seems to influence their perceptions of the severity of the patient's symptoms (Rainville et al., 2000). The choice of treatment, the explanations given to patients regarding their back pain disorder, recommendations on activity, sick leave and work and the nature of supplementary investigations are ways of treatment behavior that are related to the pain beliefs of practitioners. Practitioners' attitudes and beliefs may also be expressed by the emphasis on different treatment outcomes such as pain relief, restoration of function or participation in work and society (Rainville et al., 2000).

There is strong evidence that the beliefs and attitudes of patients with low back pain are influenced by the beliefs and attitudes of the health care provider whom they have consulted (Darlow et al., 2011, Vlaeyen and Linton, 2006, Linton et al., 2002). Health care providers with elevated fear avoidance beliefs advised limitation of work and activities to their patients (Linton et al., 2002, Coudeyre et al., 2006). Furthermore, health care providers' attitudes and beliefs appear to be associated with patients' outcome. Doctors with a treatment style emphasizing bed rest and pain contingent analgesics had patients with significantly more disability at follow-up, when compared to doctors with a treatment style consistent with patient self-care (Von Korff et al., 1994).

The explanations and advice given to patients as part of treatment are assumed to reflect the health care provider's own ideas and treatment orientation (Sieben et al., 2009).

Beliefs among physiotherapists about back pain and disability were found to correlate with their recommendations to patients (Latimer et al., 2004, Ferreira et al., 2004, Bishop and Foster, 2005, Houben et al., 2005b, Domenech et al., 2011, Evans et al., 2010b). If therapists believe that patients with low back pain should not engage in normal activities when experiencing pain and are advised to avoid certain activities, these negative beliefs can possibly reinforce patients' unhelpful illness perceptions and increase spinal vigilance, hence contributing to the development of chronic spinal disability (Fullen et al., 2011).

There is limited knowledge on which factors influence health care providers' attitudes and beliefs. Only professional competence and specialty have been found to impact attitudes and beliefs (Fullen et al., 2008, Buchbinder et al., 2009, Houben et al., 2005b). There is inconsistent evidence for the impact of demographic factors like gender, age, experience, personal experience of back pain or the level of education on health care providers' attitudes and beliefs (Fullen et al., 2008).

The available studies on health care providers' attitudes and beliefs support the need for implementation research, including the need to ensure transfer of research findings to clinical practice. For this purpose validated tools which assess or measure health care providers' attitudes and beliefs are needed.

1.6 Tools to assess practitioners' attitudes and beliefs

Several instruments are available that assess the attitudes and beliefs held by health care providers regarding low back pain. A critical review of the quality of these measurement tools demonstrated limited reporting of their validity and reliability (Bishop et al., 2007). The reviewers considered further development and testing of existing tools to be a priority to ensure valid measures of attitudes and beliefs.

One of the first measures developed for this purpose is the Healthcare Providers' Pain and Impairment Relationship Scale (HC-PAIRS) (Rainville et al., 1995). This instrument was adapted from a questionnaire for patients' pain beliefs (Riley et al., 1988) and measures the extent to which health care providers believe that pain invariably leads to disability in chronic pain patients. However, it has been pointed out that the one-

dimensional nature of the construct does not allow for a closer examination of inter-individual differences between therapists or different specialties (Houben et al., 2004, Bowey-Morris et al., 2010).

Ostelo and colleagues developed the Pain Attitudes and Beliefs Scale for Physical Therapists (PABS-PT) to determine the attitudes and beliefs, and subsequently the treatment orientations of physiotherapists toward the management of back pain (Ostelo et al., 2003, Houben et al., 2005b). The scale was found to have two main factors, suggested to relate to either a biomedical (biomechanical) orientation or a biopsychosocial (behavioral) orientation. The development, use and psychometric properties of the scale are described in detail in section 1.7.

The HC-PAIRS and the PABS-PT are the two most thoroughly tested instruments (Bishop et al., 2007). Three other tools have been used to assess health care providers' attitudes and beliefs. The Fear Avoidance Beliefs Questionnaire (FABQ) was originally developed by Waddell (Waddell et al., 1993) and adapted for use with health care providers (Coudeyre et al., 2006, Poiraudreau et al., 2006). Another fear avoidance beliefs tool aimed at health care providers was developed and used in one single study (Linton et al., 2002), demonstrating that practitioners' pain beliefs are related to the opinion that sick leave is a good treatment. A disadvantage of both instruments is that they capture just one dimension of attitudes, namely fear-avoidance. Another instrument, the Attitudes to Back Pain Scale in Musculoskeletal Practitioners (ABS-mp), was developed by Pincus and colleagues (Pincus et al., 2006b) using robust methods, including identification of items from semi-structured interviews with relevant practitioners (physiotherapists, chiropractors and osteopaths). Factor analyses were carried out, revealing two subscales with a six factor and a two factor solution. Confirmatory factor analysis on a separate sample of responders showed this model to have a good fit. However, testing of reliability and validity of the ABS-mp is still lacking (Bishop et al., 2007).

1.7 The Pain Attitudes and Beliefs Scale for Physiotherapists

The Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) is a self-administrated questionnaire developed to assess the strength of two possible treatment

orientations of physiotherapists toward the management of low back pain. The instrument discriminates between a predominantly biomedical orientation and a predominantly behavioral orientation. Characteristic for a biomedical orientation is the physiotherapists' belief in a biomechanical model of disease, where pain and disability are considered as the consequence of specific pathology or tissue damage, and treatment is aimed at treating the signs and symptoms of the pathology. Indicative for a more behavioral orientation is the physiotherapists' belief in a biopsychosocial model of disease, in which pain and disability are not necessarily considered to be signs of biomechanical impairments or tissue damage, but can be influenced by psychological and social factors. The developers of the scale have stated that the two categories are not opposites of the same scale, but that both are important in determining therapists' treatment approach (Houben et al., 2005b, Ostelo et al., 2003).

The PABS-PT fared well on pre-defined quality criteria in a critical review assessing five available measurement tools (Bishop et al., 2007). Its psychometric properties have recently been systematically reviewed (Mutsaers et al., 2012) and the results suggested that the PABS-PT has a satisfactory internal consistency, good test-retest reliability and that scores on the PABS-PT are able to predict actual treatment management and advice to patients. Furthermore, scores seem to be sensitive to change since they are responsive to educational interventions. The PABS-PT does not discriminate between acute and chronic complaints, although it seems originally to be constructed for chronic low back pain. Although originally developed to measure the attitudes and beliefs of physiotherapists, the instrument has successfully been used in assessing medical doctors' conceptions of low back pain (Jellema et al., 2005, Watson et al., 2008, Fullen et al., 2011). The scale has also been adapted for use in a study of neck pain (Vonk et al., 2009).

Conceptual model of the scale

The original PABS-PT was developed in the Netherlands by Ostelo and colleagues and published in 2003 (Ostelo et al., 2003). It consisted of 31 items and was partly composed by reviewing existing questionnaires that measure patients' attitudes and beliefs toward low back pain and rephrasing items to a therapist's point of view. Eight items were collected from the Tampa Scale of Kinesiophobia (TSK) (Haugen et al., 2008), two from the Back Beliefs Questionnaire (BBQ) (Symonds et al., 1996) and two

from the Fear Avoidance Beliefs Questionnaire (FABQ) (Waddell et al., 1993). Nineteen items were devised by the developers themselves. Following an expert review procedure by experienced physiotherapists and being tested on a sample of 421 physiotherapists, the scale was subjected to principal factor analysis, aimed at clustering items and item reduction. Nine items were excluded from analysis because of skewness, because the vast majority of therapists either totally agreed or totally disagreed with the statement, or because of minimal loading and/or loading on both factors. Two items were excluded because their deletion raised Cronbach's alpha. Factor analysis resulted in a two factor solution. These two factors were labeled "biomedical treatment orientation", consisting of 14 items accounting for 25.2 % of the variance and a "behavioral treatment orientation", consisting of 6 items, accounting for 8.2 % of the variance. The original PABS-PT has been revised by Houben and colleagues with the aim of strengthening the behavioral subscale, which showed poor internal consistency (Houben et al., 2005b). Five items were added to the original pool of items used by Ostelo et al. (2003). The revised 36-items PABS-PT was evaluated on internal consistency, factor structure and concurrent validity, by comparing the scale to other measures of attitudes and beliefs. The revised PABS-PT was with factor analysis reduced to 19 items, of which 10 were within the biomedical subscale (explaining 23.4 % of the total variance) and 9 items within the behavioral subscale (explaining 10 % of the variance) (Houben et al., 2005b).

Instructions for completion and scoring

Respondents indicate on a six-point Likert scale (totally disagree=1, largely disagree=2, disagree to some extent=3, agree to some extent=4, largely agree=5 and totally disagree=6), the extent to which they agree or disagree with each statement. Completion takes about 15 minutes for the 19-item version. Treatment orientation is measured on two subscales, named *biomedical subscale* and *behavioral subscale*.

Subscale scores are calculated by a simple summation of the responses to the subscale items. In the 19-item version, biomedical subscale scores may range from 10 to 60 (10 items), the behavioral subscale scores may range from 9 to 54 (9 items). Higher scores on a subscale indicate a stronger treatment orientation. This means that a high score on the biomedical subscale refers to a conviction of a relation between pain and tissue damage. A high score on the behavioral subscale refers to the belief that it is possible to

overcome functional disability, despite pain (Houben et al., 2005b). The developers of the scale have not established a cut-off point that signifies high or low scores.

Internal consistency

Internal consistency is defined as the degree of interrelatedness among the items (Mokkink et al., 2010). Internal consistency is a measure of the extent to which items assess the same construct. The parameter used to assess the internal consistency is Cronbach's alpha, which represents a kind of mean value of correlations between scores on a subscale. An accepted guideline for its value is between 0.70 and 0.90 (de Vet et al., 2011).

The internal consistency of the PABS-PT has been rated as positive in a critical review of its psychometric properties (Mutsaers et al., 2012). The biomedical subscale has been shown to be stable and robust with high internal consistency, but the behavioral subscale has proved to be more problematic, with an internal consistency that has consistently fallen short of recommended levels of Cronbach's alpha. The number of items included in both subscales varies considerably between the studies that have assessed its internal consistency, which indicates that the PABS-PT is still in a developmental stage (Mutsaers et al., 2012).

In the original PABS-PT (Ostelo et al., 2003), Cronbach's alpha for the biomedical orientation factor was 0.84, indicating satisfactory internal consistency, and 0.54 for the behavioral orientation factor, indicating poor internal consistency. In the revised PABS-PT (Houben et al., 2005b), Cronbach's alpha for the behavioral factor was found to increase from 0.54 to 0.68 by the deletion of two items and the addition of four extra items to the original Ostelo scale. Only two out of the four added items were new to the original scale. In a German version of the PABS-PT, Cronbach's alpha for the biomedical factor was 0.77 and for the behavioral factor 0.58 (LE Laekeman et al., 2008).

Reliability

Reliability is defined as "the extent to which scores for patients (or therapists) who have not changed are the same for repeated measurement under several conditions" (Mokkink et al., 2010). There is evidence for a satisfactory test-retest reliability of the PABS-PT (Mutsaers et al., 2012). In the German version a Pearson's correlation

coefficient of 0.83 was found for the biomedical factor and 0.70 for the behavioral factor (LE Laekeman et al., 2008). In an English 17-items version, amended for British general practitioners (Bowey-Morris et al., 2010), intraclass correlation coefficients were 0.81 for the biomedical scale and 0.65 for the behavioral scale.

Construct validity

Construct validity is defined as “the degree to which the scores of a measurement instrument are consistent with hypotheses, based on the assumption that the instrument validly measures the construct it purports to measure” (Mokkink et al., 2010). There are three aspects of construct validity: structural validity (which refers to whether the scores of the measurement instrument reflect the dimensionality of the construct, usually assessed by factor analysis), hypothesis testing (which concerns the relationship of scores on the instrument under study with scores of other instruments or differences in scores between relevant subgroups) and cross-cultural validity, which refers to the performance of items on a translated instrument compared to the original instrument (Mokkink et al., 2010, de Vet et al., 2011). Construct validity of the PABS-PT was rated as positive in a critical review of its measurement properties (Mutsaers et al., 2012).

In their survey in the Netherlands, Ostelo et al. found that the PABS-PT was able to discriminate between physiotherapists with a biomedical orientation versus those with a behavioral orientation. (Ostelo et al., 2003). Scores for the biomedical factor were significantly higher for physiotherapists who followed biomedical courses or reported themselves as manual therapists or McKenzie therapists. Physiotherapists who followed biopsychosocial courses (e.g. cognitive behavioral management) or reported themselves as “chronic pain therapists” scored significantly higher on the behavioral factor.

Bishop et al. found in their national survey that work advice was significantly associated with scores on the PABS-PT. Physiotherapists and general practitioners with high scores on the biomedical subscale, had significant lower scores on the behavioral subscale and were more inclined to advise their patients to remain off work (Bishop et al., 2008).

Associations between the PABS-PT scores and scores of other measures assessing health care providers’ attitudes and beliefs were examined by Houben et al. (2005). Scores of the PABS-PT were found to be highly significantly associated with the scores

of other measurement tools of similar constructs such as the Tampa Scale for Kinesiophobia for Health Care Providers (TSK-HC), the Back Beliefs Questionnaire (BBQ) and the Health Care Providers' Pain and Impairment Relationship Scale (HC-PAIRS). Regression analysis further revealed that scores on both factors of the PABS-PT were significantly predictive of therapists' perceptions of the harmfulness of daily physical activities, as measured by the Photographic Series of Daily Activities (PHODA), and also were predictive of health care providers' recommendations regarding return to work and daily activities (Houben et al., 2005b).

Responsiveness

Responsiveness is defined as "the ability of an instrument to detect change over time in the construct to be measured" (Mokkink et al., 2010). Responsiveness of the PABS-PT was rated as positive in the critical review of Mutsaers et al. (2012). Scores on the PABS were found responsive to educational interventions. Two studies measuring changes in PABS-PT scores after educational courses on biopsychosocial issues, found only decreased biomedical scores but no changes in behavioral scores (Jellema et al., 2005, Bowey-Morris et al., 2010). Two other studies reported also elevated biopsychosocial scores after a behavioral rehabilitation training program for physiotherapists (Overmeer et al., 2011, Overmeer et al., 2009).

Cross-cultural validity

An English translation was provided by the developers in their publications (Houben et al., 2005b, Ostelo et al., 2003), and this 19-item version of the scale has been used in a large sample of general practitioners and physiotherapists in the United Kingdom (Bishop et al., 2008), although it had not formally been subjected to a cross-cultural adaptation and validation process. A non-validated Swedish version of the PABS-PT was used to examine the effect of an eight-day university-based training course, aimed at addressing psychosocial factors, on physiotherapists' attitudes and beliefs (Overmeer et al., 2009). The PABS-PT was translated into French for an internet-based survey of physiotherapists in Canada, using forward-backward translation techniques (Simmonds et al., 2012).

Following the recommendations for cross-cultural adaptation and by use of a forward-backward translation procedure, Laekeman and colleagues developed a German version

of the PABS-PT from the original 36-item questionnaire (LE Laekeman et al., 2008). Factor analysis confirmed two subscales: the biomedical subscale was found to consist of 10 items, explaining 21.5 % of the variance, while the behavioral subscale consisted of 4 items, explaining 3.6 % of the variance. Only 7 out of the 10 biomedical items and 3 out of 4 behavioral items were identical to the Houben version. In the German version, Cronbach's alpha was 0.77 for the biomedical factor, and 0.58 for the behavioral factor.

The 19-item version of the PABS-PT was translated and culturally adapted into Brazilian-Portuguese and tested for its psychometric properties (Magalhaes et al., 2011). The authors found adequate levels of internal consistency, but moderate reproducibility and weak correlations with a similar scale, the HC-PAIRS.

2 PURPOSE AND RESEARCH QUESTIONS

2.1 Purpose

Scientific knowledge regarding the attitudes and beliefs on low back pain management of physiotherapists in Norway is limited and there is need for a reliable instrument to measure treatment orientations. However, no such instrument is available in the Norwegian language. The purpose of this research project was to make a measurement instrument available in Norway for use in clinical research and educational evaluation. The Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) was considered appropriate for this purpose. The aim of this research project was first to translate the original Dutch version of the PABS-PT into Norwegian and then to examine the translation's dimensionality and internal consistency, as a first step in a cross-cultural validation process.

2.2 Research questions

1. Can an adequate equivalence be reached between the original Dutch version and a translation into Norwegian of the Pain Attitudes and Beliefs Scale for Physiotherapists?
2. What is the underlying factor structure of the Norwegian version of the Pain Attitudes and Beliefs Scale for Physiotherapists? Past research suggests a two-factor structure (biomedical and behavioral). Is the structure of the Norwegian version of the scale, using a convenience sample of physiotherapists, consistent with this previous research?

3.0 MATERIALS AND METHODS

3.1 Design and Setting

The present research project was conducted in two stages:

First, a Norwegian version of the Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) was developed by translating and cross-culturally adapting the original Dutch measurement instrument.

Second, a descriptive cross-sectional web-based survey of physiotherapists in Norway was conducted, using the translated instrument.

The translation and adaptation of the PABS-PT was done following the recommendations of the American Academy of Orthopaedic Surgeons (AAOS) Outcome Committee (Beaton et al., 2000). The participants for the survey comprised general and specialist physiotherapists, manual therapists, osteopaths and psychomotor physiotherapists in Norway, involved in the management of patients with low back pain. Data collection was conducted between February and April 2012. The project was reviewed and accepted by the Norwegian Data Protection Official for Research (NSD) in December 2011. Written consent was not sought from each participant for use of survey data, but consent of respondents was assumed if they completed the questionnaire. Our application and the approval by the NSD are provided in Appendices 1a and 1b.

The chapter on materials and methods is divided according to the two stages. In Section 3.2, the translation process into Norwegian is described. Section 3.3 provides a description of the participants, their recruitment, the questionnaire and the procedures for data collection and data analysis.

3.2 Translation into Norwegian and cultural adaptation of the Pain Attitudes and Beliefs Scale for Physiotherapists

Since the PABS-PT was not available in the Norwegian language, a request was sent to Dr. R.W.J.G Ostelo, the developer of the questionnaire, asking for his permission to translate the instrument. Dr. Ostelo kindly provided us with a copy of the original Dutch version of the questionnaire, together with valuable suggestions for our research and recommendations on methodological issues. A copy of the request and a copy of Dr. Ostelo's consent are provided in Appendices 2a and 2b. Commencement of the translation process followed the allowance. Cross-cultural adaptation of a questionnaire for use in a new country intends to reach equivalence between the original source and target versions of the questionnaire. This implies that the items not only must be translated well linguistically, but must be adapted culturally to maintain the content and face validity of the instrument at a conceptual level. The process of cross cultural adaptation tries to produce semantic, idiomatic, experiential and conceptual equivalency between the source and target versions, mainly based on content. However, it should be noted that although the translation process may be accurately performed, this does not ensure retention of the instrument's psychometric properties. Validity and reliability may change in the process and investigators are recommended, after the translation and adaptation process, to ensure that the new version demonstrates measurement properties needed for the intended application (Beaton et al., 2000). Cross-cultural validation is therefore needed in addition to the adaptation to ensure that the adapted instrument measures a construct comparable to the original (de Vet et al., 2011).

3.2.1 The translation process

To translate the original Dutch version of the PABS-PT into Norwegian, we followed the recommendations of the American Academy of Orthopaedic Surgeons (AAOS) Outcome Committee (Beaton et al., 2000) with slight modifications. The translation process consisted of six steps as recommended, and each step was recorded and documented in writing by the participants involved. A graphic representation of the recommended steps is provided in Figure 1.

Step 1: Forward translation

It is recommended that step 1 of the process should entail translation of the questionnaire from the original language to the target language by two bilingual translators, producing two independent translations (Beaton et al., 2000).

The original 36-item Houben version of the PABS-PT was translated by two Norwegian manual therapists, one male (labeled as “J”) and one female (labeled as “M”), both having their professional education in physiotherapy and manual therapy from the Netherlands. They produced two independent versions (version J and version M), noting challenging phrases, uncertainties and considerations for their decisions. Although guidelines recommend that one of the translators should be a language expert and naïve on the topic, both translators had expertise on the construct under study, since they are manual therapists. In addition to the two manual therapists, an authorized Dutch translator was asked to produce a professional translation of the questionnaire (version T). The professional translator had been living in Norway for more than 20 years and was neither aware nor informed of the concept.

Step 2: Synthesis of the forward translations

The two manual therapists synthesized the results of their translations, producing one common translation, which was coded as “version M/J”. The translators were instructed that consensus rather than one person’s compromising should resolve discrepancies. The researchers did not take part in this synthesis process. The professional translation (version T) was left unhampered in this synthesis. In order to obtain maximum diversity of considerations, a third translation was produced by one of the researchers (NE), who is a Dutch manual therapist with 30 years practice in Norway. This translation (labeled “version N”) was based on the Dutch and the English versions of the questionnaire. Since the English version was produced and published by the developers themselves (Ostelo et al., 2003, Houben et al., 2005b), it seemed natural to include this version in our review. In addition, a fourth translation was produced by the researcher (NE), labeled as “Forslag” (Proposal), based on the five mentioned versions including the English and the Dutch versions and meant to be a recommendation to the expert committee.

Step 3: The pre-final version composed by the expert committee

The expert committee consisted of three members: two experienced researchers in physiotherapy science, with the degree of Dr. Philos., and the researcher (NE). Neither the three translators (M, J and T), nor the developers of the questionnaire were directly involved in this process. The expert committee produced a pre-final synthesis, based on the review of all six versions, including the English and Dutch ones. The completed pre-final version is presented in Appendix 3.

The next section summarizes the report of the expert committee, documenting the issues and the rationale for coming to decisions:

Of the questionnaire's 36 items, a total of 19 translated items were adopted without any changes or modifications. Of these 19 items, 14 were adopted from one of the four translations. On the remaining 5 items, consensus was present between two or more translators. (Three translations agreed on 4 items and two translations agreed on 1).

The expert committee modified a total of 17 items, of which 12 items were adjusted for minor grammatical or idiomatic uncertainties. The expert committee had to resolve more challenging problems regarding 5 items, mainly because of discrepancies in content and meaning between the Dutch and the English version. These problematic items are discussed next.

Item 10

The Dutch version of item 10 stated that "pain is a consequence of tissue damage". The English version differed regarding its content, stating that "pain is a nociceptive stimulus, indicating tissue damage". The expert committee adopted a translation following the Dutch version, reasoning that the English version does not suggest a causal relationship, as the Dutch version does.

Item 11

A discrepancy regarding the content of this statement was present between the English and Dutch version, complicating our translation. The Dutch version stated that "a patient suffering from severe back pain will benefit especially from physical exercises". The English version stated only that "a patient suffering from severe back pain will benefit from physical exercises". The expert committee adopted the Dutch version,

reasoning that the statement is augmented by the fact that particularly patients with severe back pain will benefit especially well from exercises.

Item 22

The Dutch version of item 22 stated that “if back pain increases in severity, I immediately adjust the physical exercises in my treatment”. The English version stated “.....I immediately adjust the intensity of my treatment accordingly”. The expert committee produced a compromise version: “.....I adjust immediately the intensity of exercises in my treatment”, reasoning that it is intensity that needs adjustment and that treatment is not necessarily the same as physical exercises but may imply for instance manual therapy or laser therapy.

Item 29

Item 29 was the most challenging statement for the expert committee, since the Dutch version showed poor grammatical wording and furthermore differed widely from the English version regarding its content. The Dutch version stated that “Even if pain has worsened, the patient can do physical exercises”. The English version stated that “even if pain has worsened, the intensity of the next treatment can be increased”. The expert committee produced a compromise: “A patient can do physical exercises, even if pain has worsened since the last treatment”, reasoning that the Dutch version did not specify a time perspective for the worsened pain. The expert committee did not follow the English version, which stated that the intensity can be increased, in spite of pain worsening.

Item 35

The expert committee agreed that Item 35 was a major idiomatic challenge. The Dutch term “rugafwijkingen” means literally “spinal defects, abnormalities or anomalies”. The English version used “spinal impairment”. In Norwegian, no equivalent terms exist, and a word with a similar meaning had to be found. The expert committee agreed on the expression “ Skade eller dysfunksjon i ryggen” (damage or dysfunction in the back), reasoning that “impairment” as well as “rugafwijking” implies both structural and functional deficits.

Step 4: Back translation

The purpose of back translation is to assure that the translation is consistent. Agreement between the back- and forward versions does not guarantee a satisfactory translation. It is rather a process of validity checking to make sure that the translated version is reflecting the same item content as the original version (Beaton et al., 2000).

Since two out of three members of the expert committee did not speak Dutch, it was considered inappropriate to include a Dutch backward translation in the expert committee's review of all translations. Therefore, back translations were performed of the pre-final version, after the expert committee had reached consensus.

Two Dutch physiotherapists, one male specialist in psychomotor physiotherapy and one female involved in work-related health and environment, produced two independent translations into Dutch (labeled as "version C" and "version H") of the pre-final Norwegian version. Both translators were totally blind to the original version and uninformed of the concepts explored. However, since they both have a medical background, information bias cannot be ruled out. This implies that unexpected meanings of the items in the translated version may not have been elicited. However, the instrument is meant for care providers, containing professional jargon and is not meant to be understandable for laymen or patients. For this reason, medical background does not necessarily decrease the likelihood of detecting imperfect translations (de Vet et al., 2011).

Step 5: Test of the pre-final version

The pre-final version of the questionnaire was sent to a sample of physiotherapists (n=24) in order to test the response, comprehensibility and suitability of the data material for statistical analysis. Most of these responders were researchers at the University of Bergen. Invitations were sent by e-mail with a link to the questionnaire. On beforehand, the responders were informed by e-mail of the purpose of the pilot and were asked to fill out the questionnaire, comment on comprehensibility and indicate imperfections and shortcomings. Twenty-one responders returned the questionnaire (response rate 88 %). Four responders (19 %) were not involved in treatment of low back pain and did not fill out the questionnaire. The remaining 17 responders left a total of five items unanswered; two of these were items of the PABS-PT while one single demographical item was not filled out by 3 responders. Missing data constituted thereby

less than 0.005 % of all questionnaire items. One minor comment on comprehensibility was received from one respondent.

Step 6: Appraisal of the adaptation process by the developer

Approval by the developers should be regarded as premise for performing cross-cultural validation of the translated scale (Beaton et al., 2000). As mentioned earlier, a request for approval of translating the PABS-PT from Dutch into Norwegian was sent to Dr. Raymond Ostelo at the commencement of the research. During the project, translations and written reports, including the back translation, were shown to and discussed with Dr. Ostelo.

3.3 The Survey

3.3.1 Source population

The source population encompassed general physiotherapists and four specialized physiotherapy groups: physiotherapy specialists, manual therapists, osteopaths and psychomotor physiotherapists. In December 2010, there were registered 12.863 chartered physiotherapists in Norway, of whom 10.920 were working (source: Statistics Norway, SSB (<http://www.ssb.no/hesospers/tab-2011-06-09-01.html>)). A substantial number of physiotherapists in Norway are private practitioners. In 2011, 3014 physiotherapists, 467 manual therapists/manual therapy students and 335 psychomotor physiotherapists/students were charging reimbursement for treatment from the National Health Finances Administration (source: HELFO Analyserapport. Statistikk over fysioterapeuters takstbruk 2011).

Physiotherapy specialists: The Norwegian Association of Physiotherapists has to date (2012) conferred specialist titles to 650 physiotherapists in 13 areas of postgraduate competence. Our sample included four specialties: General practice-, Sports-, Orthopedic- and Rheumatologic, since only these specialties were assumed to be involved in examination and treatment of low back pain. Other specialties like Oncology, Geriatrics, Pediatrics, Neurology or Obstetrics were not considered representative for our research.

Manual therapists: According to the National Health Finances Administration (HELFO) there are approximately 400 certified manual therapists, but numbers from the two professional organizations for manual therapists may indicate a total of 450 manual therapists in Norway (source: <http://www.fysioterapeuten.no/xp/pub/venstre/nyheter/553296>). This number includes also non-clinicians. Unlike other physiotherapists, manual therapists have a so called “gate keeper” function in Norwegian health care. This implies the allowance to provide sickness absence certification and to refer patients to medical specialists if deemed necessary.

Osteopaths: The number of osteopaths practicing in Norway is unknown. On request, the Norwegian Association of Osteopaths (NOF) informed us to have approximately 250 members, of whom 50 have no background in physiotherapy. We found 153 osteopaths listed on the website of the NOF, 26 of these had not given their e-mail address. Most osteopaths are private practitioners, but since osteopathy is not part of regular health care in Norway, treatment is not refunded by the Norwegian Health Service.

Psychomotor physiotherapists: In December 2011, there were approximately 425 psychomotor physiotherapists in Norway, and about 400 of these were member of the union branch for psychomotor physiotherapy in the Norwegian Association of Physiotherapists (NFF) (data from NFF-www.fysio.no). Norwegian Psychomotor Physiotherapy, also called Psychosomatic and Psychiatric Physiotherapy, represents a longstanding and unique tradition within physiotherapy in Norway. Unlike other physiotherapists, psychomotor physiotherapists work from a clear psychological and phenomenological perspective. The close connection between thoughts, emotions and the lived body is emphasized. According to the tradition, tensional changes in the body may have an effect on a variety of other body regions and functions. Therefore, examination and treatment include the whole body. Psychomotor physiotherapists focus on the patient’s own feelings and experiences and on bodily flexibility and ability to relax, with an emphasis on muscular tension, posture and respiration (Thornquist, 2006, Thornquist, 1994).

3.3.2 Questionnaire samples, recruitment and mailing process

The Norwegian Association of Physiotherapists (NFF) is the professional and trade union body representing Norway's chartered physiotherapists with 9369 members (January 1. 2012) and approximately 85 % of all physiotherapists in Norway are member of the NFF. On August 30th 2011, we sent a letter to the president of the NFF, accounting for our planned research project and with a request to access NFF's membership database in order to distribute the questionnaire to a sample of physiotherapists in Norway. Our request was rejected for reasons of anonymity. Since membership in a trade union is regarded as person-sensitive information according to current law, consent was required from members to make their professional affiliation public. Instead of giving us access to their membership lists, the NFF offered to send out one email invitation on our behalf to their members.

A copy of our request to the president of the NFF is provided in Appendix 4.

In addition to the request to the NFF, the Internet was searched for public membership lists of physiotherapists in Norway. Five membership lists of four specialized physiotherapy groups were found and considered suitable for our research. As a result, the present survey encompassed two samples of convenience comprising a total of 3850 potential responders. Sample 1 was recruited by the Norwegian Association of Physiotherapists and sample 2 was recruited by the researchers. The samples and the recruitment process for each sample are described next.

Sample 1

Sample 1 included exclusively physiotherapists who are member of the Norwegian Association of Physiotherapists (NFF). An e-mail, containing our invitation to participate in our study, was sent out on February 7th 2012 by the administration of the NFF to 2860 of their members. The sampling frame was based on a geographic distribution: all registered NFF members in the counties of Nordland, Sør-Trøndelag, Hordaland and Oslo were included. These counties were chosen because they represent different parts of Norway: the northern, middle, western and south-eastern parts. Sample 1 included NFF members with all kinds of backgrounds, like private practitioners, hospital- and community employees, students, retired members, researchers and non-clinicians, for example those working in administration. Physiotherapists working with special patient groups like geriatrics, obstetrics, neurology, oncology or pediatrics were also represented in sample 1. The distribution of the various professional backgrounds

in the sample was not known to us. However, based on the geographical distribution, sample 1 was known to include 78 manual therapists, 113 psychomotor physiotherapists and 34 physiotherapy specialists. Since no further details on these NFF members were known, we had no account of non-responders and consequently it was not possible to send a reminder.

A copy of an e-mail invitation to sample 1 is provided in Appendix 5.

Sample 2

Contrary to general physiotherapists, members of the NFF who are physiotherapy specialist, manual therapist or psychomotor physiotherapist advertise their professional affiliation on the website of the NFF. Likewise, the Manual Therapists Service Office (Manuellterapeuters Servicekontor) and the Norwegian Association of Osteopaths (Norsk Osteopat Forbund) have their members' name and e-mail addresses listed in registers on their website, available for the public and patients.

Five lists of professional therapists were identified on the websites of their trade union. The therapists' first name, last name, e-mail address and specialty were copied into five Excel worksheets, which allowed us to identify and correct double registrations. The Excel files were saved in a format that is suitable for transfer into the web-based survey instrument SurveyMonkey (www.surveymonkey.com). This survey instrument does not allow for double registrations and automatically removes double occurrences of e-mail addresses. The procedure resulted in four respondent lists; physiotherapy specialists, manual therapists, osteopaths and psychomotor physiotherapists. In this way, a total of 989 e-mail addresses could be extracted for the purpose of this survey, from five registers that were available on the internet.

On February 20th 2012, e-mail invitations were sent to all physiotherapy specialists in Sports, Rehabilitation, Orthopedics, Rheumatology and General Practice (n=85), manual therapists (n=387), osteopaths (n=127) and psychomotor physiotherapists (n=390) who had their e-mail addresses listed on the websites of the Norwegian Association of Physiotherapy (Norsk Fysioterapeuters Forbund, NFF), the Manual Therapists Service Office (Manuellterapeuters Servicekontor) and the Norwegian Association of Osteopaths (Norsk Osteopat Forbund, NOF).

No incentives (for example in the form of a chance to win a prize) were offered for completing the questionnaire. Two reminders were sent, after two and four weeks, to all non-responders in Sample 2. Since some of the therapists in sample 2 already had received an invitation sent out by the NFF, the invitations contained a request to the participants not to fill out the questionnaire, if they had done so in response to the invitation from the NFF. All invitations and reminders contained a link with an option to be removed from our mailing list. The survey was ‘closed’ (i.e., no further responses accepted) on April 26th 2012.

A copy of an e-mail invitation to sample 2 is provided in Appendix 6.

3.3.3 Data collection

The survey was performed using the web-based survey instrument SurveyMonkey.com. Therapists participated by following the electronic link provided in the invitation and answering the questionnaire administered by SurveyMonkey.com.

Entered data were deployed to a database, owned by SurveyMonkey.com. All communication with this database was encrypted. Log files contained no personal identifications items, e-mail addresses or IP addresses. Entrance and exit by the participants were time stamped. Responders were able to correct their answers on previous pages by use of a “Back” button; however, they were prevented from re-entering the survey after they had ticked the “Finish” button. After the exit page, participants were automatically hyperlinked to the web page of the Research Group for Physiotherapy at the University of Bergen.

Written information was provided both in the e-mail invitation and in the introduction part of the questionnaire regarding the purpose of the study. We explained that we wished to investigate the cognitions of clinicians toward low back pain. Anonymity was guaranteed and it was emphasized that participation was voluntary.

A filter question was used to identify those participants who had treated at least one patient with low back pain in the previous six months, so that only responders with recent experience of managing patients with low back pain were included in the analysis and other therapists could be disqualified from answering the survey. Responders who

answered “no” on the question whether they had examined or treated a patient with low back pain recently, were automatically conducted to a disqualification page.

3.3.4 The questionnaire

The questionnaire consisted of six pages divided into two sections: section one included a number of demographic and practice questions. Section two consisted of the Norwegian translation of the 36 items Houben version of the Pain Attitudes and Beliefs Scale for Physiotherapists. The complete questionnaire is provided in Appendix 7.

Section one: Demographics and practice information

Page 1 of the questionnaire contained an informative introduction and the filter question. Page 2 presented six items on demographics and practice information, such as gender, age, professional background or specialty, years of experience, work settings (in private solo practice, private group practice, hospital or in a rehabilitation/pain clinic) and professional interest in low back pain. Page 3 of the questionnaire presented three items on practice and treatment of low back pain, such as the average number of patient consultations per week, the number of patients with low back pain seen per week and postgraduate courses followed. Page 4 contained three items: respondents were asked to report on own experiences of low back pain (none, acute, sub-acute or chronic) and were further asked to specify what kind of treatment approach they considered themselves to use mostly. A biomedical treatment approach is generally considered to be pain contingent (Turk and Flor, 1984) and a biopsychosocial approach is considered to be time contingent (Lindstrom et al., 1992). However, since these terms are most often used in connection with administration of pain medication, while physiotherapy management often specifically focus on various levels of function and disability, we added two options to this item: the first option prioritizing recovery of bodily functioning like strength, mobility and motor control (meant to represent the more biomedical oriented “Body Component” of the International Classification of Functioning, Disability and Health (ICF)) and the second option prioritizing restoration of work tasks and daily activities (meant to represent the more biopsychosocial oriented “Activity and Participation Component” of the ICF) (World Health Organisation, 2004).

Finally, responders were asked for their acquaintance with the national clinical guidelines for low back pain.

Section two: Pain Attitudes and Beliefs Scale for physiotherapists

By way of introduction to the PABS-PT, the participants were instructed that the questions or statements in the PABS only related to so-called “nonspecific” low back pain, which excludes low back pain resulting from nerve root involvement, cauda equine syndrome, fractures, infections, inflammation, tumours or metastases. It was emphasized that the intention was not to test knowledge of back pain or clinical guidelines, but that the respondent’s personal opinion was sought for. Since all 36 items were located on two pages and pages were larger than normal screen resolution, scrolling was necessary.

3.4. Data analysis

Descriptive statistics was used to examine demographic variables of participants. Statistical analysis was performed utilizing the Statistical Package for Social Sciences version 18 (SPSS 18). The survey instrument SurveyMonkey.com generated a download of the entire response set that was formatted to open with SPSS analytical software, which made manual data entering and cleaning redundant.

3.4.1 Factor analysis

An exploratory factor analysis of the responses on the PABS-PT (NV) was conducted. Factor analysis is a statistical “data reduction” technique that is used in the development and evaluation of scales. Factor analysis serves to refine and reduce a large number of items to form a smaller number of coherent subscales that represent different constructs (Pallant, 2010 p.181). Factor analysis is further used for item reduction, because items that have no contribution to the factors can be deleted (de Vet et al., 2011)

De Vet et al. explain the principles of factor analysis as follows:

“Factor analysis is based on item correlations. Items that correlate highly with each other are clustered in one factor, while items within one factor should show a low correlation with items belonging to other factors. The items clustered in one factor share variance which is explained by the underlying dimension. With factor analysis, we try to identify these factors and explain as much as possible of the variance with a minimum number of factors” (de Vet et al. 2011 p.73)

To examine the underlying factor structure of the PABS-PT (NV), the procedure suggested by Houben et al. (2005) was followed. Although confirmatory factor analysis is usually recommended for the purpose of cross-cultural validation (de Vet et al., 2011), an exploratory factor analysis was chosen because the PABS-PT is considered to be still in a developmental stage (Mutsaers et al., 2012, Bishop, 2010, Bishop et al., 2007).

Before examining the factor structure, each item was examined for heterogeneity since this can bias the results of the analysis. Items were excluded from analysis if Skewness and Kurtosis were not between -1.5 and +1.5 or more than 75% of the scores were located in extreme categories. “Extreme” was defined as score 1 or 2 for disagreement and score 5 or 6 for agreement. Principal Axis Factor Analysis (PAF) with an Oblique rotation (Oblimin with Kaiser normalization) and list-wise deletion of cases was performed. The number of factors extracted was based on the scree plot and the item loading on the different factors (de Vet et al., 2011, Domholdt, 2000). In the scree plot, a break may be identified between the factors with relatively large eigenvalues and those with smaller eigenvalues. Factors that appear after the break were considered to account for only a minor amount of variance and were therefore not retained. In addition, Horn’s parallel analysis was used in determining the number of factors (software: MonteCarlo PCA for parallel analysis developed by Watkins 2000, in Pallant, 2010). In parallel analysis, the size of eigenvalues obtained from factor analysis is compared to those obtained from a randomly generated data set of the same size. Only factors with eigenvalues exceeding the values obtained from the corresponding random data set are retained for further investigation (Pallant and Bailey, 2005). Factors were extracted until the eigenvalue dropped below 1 (Kaiser’s criterion) or until the eigenvalue hardly changed between two subsequent factors, visible as a leveling off on the scree plot. Items with a factor loading below 0.25 were excluded. If loading on one factor exceeded 0.25, but the difference between loadings on two factors was less than 0.1, items were

also excluded. Before the analysis, we calculated the Kaiser-Meyer-Olkin coefficient and the Bartlett test for Sphericity, to find out whether factor analysis was justified.

3.4.2 Internal consistency

Internal consistency is defined as the degree of interrelatedness among the items (Mokkink et al., 2010). It indicates the extent to which items in a (sub)scale measure the same construct.

After factor analysis, internal consistency was assessed by calculation of Cronbach's alpha. It has been suggested that alpha values should be above 0.60 and preferably above 0.70, but probably not higher than 0.90. (de Vet et al., 2011). Item -total correlations were calculated by correlating the score of each item with the total score, omitting the score of that individual item in turn. Items with item-total correlation of less than 0.3 do not contribute much to the discrimination of individuals on the construct under study (de Vet et al., 2011). Streiner and Norman (2008) suggest as a rule of thumb that an item should correlate with the total score above 0.20 and that items with lower correlations should be discarded (Streiner and Norman, 2008). The impact on alpha value of deleting separate items from the factor (alpha if item deleted) was examined next. A Pearson's correlation coefficient was calculated between the factors.

4.0 RESULTS

The PABS-PT was translated to Norwegian as described. The translated version is presented in Appendix 8. The back translations confirmed the consistency of the Norwegian version. No conceptual errors were found in our translation compared to the original Dutch version. Minor discrepancies were found in items 22, 29 and 35 only. These items were adapted by the expert committee in order to achieve idiomatic and semantic equivalence in expressions or wordings. The back translations are provided in Appendix 9.

4.1 Response rate

Invitations to participate were sent by email to 3849 physiotherapists. A total of 134 email invitations were bounced while 29 therapists opted out by removing themselves from our e-mail list. E-mail responses from 57 therapists were received; 35 therapists notified that they were not in clinical practice or not involved in LBP management, while 21 therapists had previously answered the questionnaire on request of the NFF. One therapist declined from participation. A total of 921 therapists answered the questionnaire, 456 therapists in sample one (response rate: 16.7 %), and 447 therapists in sample two (response rate: 47.5 %). Overall, the response rate was 24.8 %. Response rates and composition of the participants are outlined in Figure 2.

Reminders were sent to participants in sample 2 only. The initial e-mail invitation to sample 2 produced a response rate of 18.2 % (n=179). The response rate increased to 37.0 % (n=362) after the first reminder and to 47.5 % (n=465) after the second reminder. Responses from the four professional groups in sample 2 varied: the response rate of physiotherapy specialists was 44.7 % (n=38), manual therapists 46.9 % (n=181), osteopaths 42.6 % (n=52) and psychomotor physiotherapists 50.1 % (n=194).

Of the 921 responders, 147 (15.9 %) reported that they had not examined or treated one patient with low back pain for the last 6 months (sample 1: n=127 (27.9 %), sample 2: n=19 (4.1 %) and these responders were consequently excluded from analysis. The remaining 774 responders were included in the research project for preliminary analysis.

4.2 Sociodemographics

The majority of therapists were female (63.2 %). Most therapists were older than 41 years (61.4 %) and worked in private practice (79.3 %), mainly in group practices with other therapists. The predominant treatment disciplines were general physiotherapists (33.3 %), manual therapists (26.8 %) and psychomotor physiotherapists (25.7 %). Practice experience was more than 10 years for 70.8 % of the therapists. The average work load was 39.2 patients per week (SD = 22.7, range 0-120). Patients with low back pain comprised 25.8 % of this weekly workload. With regard to personal factors, 67.7 % of therapists reported to have previously experienced low back pain themselves. National clinical guidelines had been read by 45.4 % of therapists, while 27.1 % reported to have little or no knowledge of clinical guidelines. Great interest in low back pain was reported by 14.7 % of the therapists. The demographic and professional characteristics of the respondents are summarized in Table 1.

The characteristics of responders by professional group (general physiotherapists, physiotherapy specialists, manual therapists, osteopaths and psychomotor physiotherapists) are summarized in Table 2. The large majority of psychomotor physiotherapists was female (85.8 %), aged more than 40 years (80.2 %) and had more than 20 years of work experience (56.0 %). Physiotherapy specialists showed similar characteristics: 77.8 % was female, 83.9 % had age over 41 years and 73.2 % had a work experience of more than 20 years. Manual therapists and osteopaths were more likely to be male. The majority of general physiotherapists and osteopaths were aged less than 40 years (57.0 % and 58.9 % respectively) and had less than 20 years of work experience (71.6 % and 78.5 % respectively). A substantial part of psychomotor physiotherapists (30.6 %) worked in private solo practice, while only 8.2 % of manual therapists and 4.2 % of physiotherapy specialists did.

Manual therapists were more likely to have had a personal experience of low back pain, to be familiar with the national clinical guidelines for LBP and to have a professional interest in LBP. The majority of physiotherapy specialists reported to have read the national clinical guidelines for LBP, but to have no special professional interest in LBP.

4.3 Participants included and excluded from factor analysis

A substantial part of the responders did not complete the PABS-PT; however, the large majority completed the demographic part of the questionnaire. In average, 6.5 % of the demographic items were left unanswered, with a range of 2.5 % to 11.6 % per item. In comparison, an average of 15.0 % of the PABS-PT items was left unanswered (range 12.8-17.6 %). Of the 774 therapists who were appropriate for analysis, 525 (67.8 %) completed all 36 items on the PABS-PT and were included in factor analysis (Figure 2). An additional 122 responders (15.8 %) who had 10 % or less missing values on the PABS-PT were also included. Missing values from these responders were excluded from analysis but the other items were taken into account. Ninety five responders (12.3%) had all values missing on the PABS-PT, while 35 responders (4.5 %) had more than 10 % missing values on the PABS-PT. These responders were excluded from the factor analysis. As a result, 647 responders were included in the factor analysis. Table 1 shows a differentiation between the group of therapists that was included in the factor analysis and the group that was excluded from factor analysis because of more than 10 % missing items on the PABS-PT. Comparing responders to non-responders, there seems to be no clear pattern. The data suggest that females, therapists aged over 55 years and osteopaths are slightly overrepresented in the excluded responders group. This also accounts for therapists who reported either chronic back pain or no previous back pain. Manual therapists, therapist working in pain clinics and therapists reporting great interest in low back pain seem to be slightly underrepresented in the excluded group. Excluded therapists were further found to treat fewer patients with back pain per week.

4.4 Data examination

The percentage of missing scores of the 647 responders included in factor analysis ranged from 0 % to 2.3 %, which is acceptable (de Vet et al., 2011)(p.68). Prior to factor analysis all items on the PABS-PT were examined for heterogeneity, since this influences factor analysis. Nine items (1,6,9,13,15,16,18,21 and 32) were excluded from analysis because of a Skewness or Kurtosis not falling between +1.5 and -1.5, or because more than 75 % of all scores were located in the extreme categories (either 1-2 or 5-6). Table 3 lists Skewness and Kurtosis values for all 36 items of the PABS-PT, and gives an account of the exclusion criteria applied in previous research.

4.5 Factor extraction

A principal axis factor analysis (PAF) with oblimin rotation was performed on the remaining 27 items. The PAF was performed in order to cluster the different items into factors and to reduce items of the total questionnaire. The Kaiser-Meyer-Olkin Measure was 0.826, exceeding the recommended values of 0.6. Bartlett's Test of Sphericity with an approximate Chi-Square of 2650.03 was highly significant ($p \leq 0.001$). Both measures justified the continuation of analysis. The eigenvalue >1 criterion initially suggested the presence of 8 factors, together explaining 53.6 % of the total variance. The results of Parallel Analysis showed four components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the sample size (27 variables x 647 respondents). Inspection of the scree plot (Figure 3) revealed a clear break after the second factor, suggesting the extraction of two factors. Following the recommendations by de Vet et al. (2011), it was decided to retain two factors for further investigation. The subsequent forced two factor solution supported this. Appendix 10 provides tables of loadings.

Three items were removed after examination of the factor loadings because of a loading of less than 0.25 (item 8, 27 and 28). No items were found to load on both factors while displaying a difference in loadings of less than 0.1, which was a premise for exclusion. Two factors remained, consisting of 17 items (factor 1) and 7 items (factor 2). The two factor solution explained a total of 25.3 % of the variance, with factor 1 contributing 18.1 % and factor 2 contributing 7.1 %. There was a weak negative correlation between the two factors ($r = -0.115$) at this stage. Table 4 shows the descriptives for all items that were excluded during the process of factor analysis. Table 5 shows the descriptives for all items ultimately included in one of the extracted factors and their final rotated factor loadings. In appendix 11, the complete pattern matrix and structure matrix coefficients are presented.

4.6 Internal consistency

To determine the internal consistency of both factors, a reliability analysis was conducted on each factor by calculating Cronbach's alpha. Factor 1 (17 items) appeared to have an alpha of 0.59. After deleting 4 items that were negatively correlated and were

indicated as giving a raise of alpha (item 3,7,19 and 36), alpha increased to 0.79. This resulted in a 13 item factor. Factor 2 (7 items) had an alpha of 0.55. Deletion of one item (item 2) gave an increase of alpha to 0.57. The result was a 6 item factor 2. Table 6 provides item-total correlations and Cronbach's alpha of an item if deleted in the subscales of the PABS PT-NV.

The items loading on factor 1 addressed issues like tissue damage, injury, pain as a threat and the importance of reducing or avoiding pain. A high score on factor 1 may represent a belief system which presupposes a relation between pain and tissue damage or lesions, which is characteristic of a biomechanical or biomedical treatment orientation. This factor was therefore named Biomedical. All items loading on factor 2 addressed issues like the beneficence of exercise and activity, the importance of self-efficacy, the belief that back pain during activity is not dangerous and the recognition that back pain may be related to psychosocial factors. A high score on the factor 2 may refer to a belief that functional disability can be overcome in spite of pain, which is regarded as a feature of a behavioral or biopsychosocial treatment orientation. This factor was named Biopsychosocial.

The Pearson's correlation coefficient between the two subscales was -0.35 ($p < 0.01$), indicating a moderate negative association between them.

5.0 DISCUSSION

5.1 Main results

The aim of this research project was to translate the original 36-item Dutch version of the Pain Attitudes and Beliefs Scale for physiotherapists (PABS-PT) into Norwegian and to examine the dimensionality and internal consistency in order to compare the translated version with the original scale.

Our translation- and adaptation procedure resulted in a Norwegian version of the PABS-PT with a satisfactory equivalence when compared to the original Dutch scale. Our analysis resulted in a shorter version with 19 items, and confirmed the postulated two-factor structure of the Norwegian version of the PABS-PT, in accordance with previous research. The results demonstrated further that the questionnaire really allows a distinction between a biomedical and a biopsychosocial treatment orientation. However, although the internal consistency of the biomedical factor is satisfactory, there is room for further improvement of the biopsychosocial factor.

5.1.1 Translation and adaptation of the instrument

The process of translation and cultural adaptation of the PABS-PT was done following widely accepted international guidelines (Beaton et al., 2000). The aim, to reach semantic and idiomatic equivalence between the original measure and the Norwegian version of the PABS-PT, was in our opinion uncomplicated and reached in a satisfactory way. In the first step of forward translation, we used two bilingual translators to conduct a synthesis, engaged a professional authorized Dutch translator, and produced an additional translation based on the English and Dutch versions. The submission of several forward translations emerged to support the task of the expert committee to produce a pre-final version of the questionnaire.

An adequate translation is the first step in the process of cross-cultural validation of a measurement instrument. Cross-cultural validity is defined as “the degree to which the performance of the items on a translated or cultural adapted (patient-response outcome) instrument are an adequate reflection of the performance of items in the original version of the instrument” (Mokkink et al., 2010). In cross-cultural validation, a special

attention is paid to the equivalence of scores in the original and the new target population (de Vet et al., 2011 p.182).

Factor analysis is an often used method to assess differences between the original and translated version of a measurement instrument (de Vet et al., 2011 p.185). According to de Vet and colleagues, the instrument is expected to retain the same factor structure in the new population if all items have kept the same meaning after translation. If one or more items do not load on the original factor after translation, this indicates that these items have a different meaning, either due to the translation or due to cultural differences (de Vet et al., 2011, p.185).

5.1.2 Interpretation of the two factors

The extraction of two factors in this study suggested the construction of two well interpretable subscales, the first one consisting of 13 items and the second one of 6 items. The interpretation of the two subscales was consistent with previous research on the PABS-PT (Ostelo et al., 2003, Houben et al., 2005, Laekeman et al., 2008). The items loading on factor 1 addressed issues like tissue damage, injury, pain as a threat and the importance of reducing or avoiding pain, and the responsibility of the therapist to treat the pain. A high score on the first subscale represents a belief system which presupposes a relationship between pain and tissue damage or lesions, which is characteristic of a biomechanical or biomedical treatment orientation. All items loading on factor 2 addressed issues like the beneficence of exercise and activity, the importance of patients' self-efficacy, the belief that back pain during activity is not dangerous and a recognition that back pain may be related to psychosocial factors. A high score on the second subscale refers to a belief that functional disability can be overcome in spite of pain, which is a feature of a behavioral or biopsychosocial treatment orientation.

Comparison with the factor structure in other studies

Compared to the three other studies that have examined the factor structure of the PABS-PT, differences were found regarding the number of items. Our analysis revealed 13 items on the biomedical subscale, while the Dutch version of Houben et al. (2005) contained 10 items. The biopsychosocial subscale of the Norwegian version consisted of 6 items in contrast to 9 items in the Dutch version. The German version (Laekeman et al. 2008) found 10 items representing the biomedical factor and 4 items for the

biopsychosocial factor. In the earlier 31 items version, Ostelo et al. (2003) found 14 items on the biomedical subscale and 6 items on the biopsychosocial subscale. In all versions, the biomedical factor seems quite robust with regard to the number of included items, while the biopsychosocial factor is less stable.

Comparison of included items

Compared to the study of Houben et al. (2005), there are modest differences in the content of items making up the two factors. In the biomedical factor, all 10 items of the Dutch version were also included in the Norwegian version. Three items that were included by us, were excluded by Houben et al. (2005): two items (items 4 and 5) because of minimal loading, and one item (item 26) because of loading on both factors.

Five out of the 6 items making up the Norwegian biopsychosocial factor (items 11, 12, 17, 29, 33 and 34) were also included in the same factor by Houben et al. (2005). Three biopsychosocial items that were included by Houben et al. (2005) were excluded by us because of non-heterogeneity (item 6), minimal loading (item 27) and rise in alpha if deleted (item 7).

When comparing the Norwegian version to the German version (Laekeman et al., 2008), small differences in items making up the two factors were found. All 10 biomedical items of the German version were included in the Norwegian version. Three items included by us, were excluded by Laekeman et al.: item 20 (non-heterogeneity), item 22 (non-heterogeneity and skewness) and item 24 (skewness).

Of the four items making up the biopsychosocial factor of the German version, three corresponded to the Norwegian version. One item (item 19) included by Laekeman et al. (2008) was excluded by us because of raise in alpha if item deleted. Laekeman et al. (2008) excluded three items included by us: item 33 (skewness + heterogeneity), item 17 (skewness) and item 12 (loading < 0.25). The difference in included items between the German and Norwegian version may be due to different exclusion criteria with regard to heterogeneity and extreme scorings for items prior to factor analysis. In our research project, we followed the procedure suggested by Houben et al. (2005) more stringent than Laekeman et al. (2008) did.

All studies, including the study of Ostelo et al. (2003), showed a clear consistency with regard to which items made up the content of the two factors: none of the four

mentioned studies had items on one factor that loaded on another factor of the remaining studies.

5.1.3 Internal consistency

Despite the differences in number of items loading on the two factors, the values for internal consistency were comparable in all four studies. In our analysis, reliability determined by Cronbach's alpha achieved a value of 0.79 for the biomedical subscale and of 0.57 for the biopsychosocial subscale. Comparable to this, Houben et al. (2005) found internal consistency values of $\alpha=0.73$ for the biomedical subscale and $\alpha=0.68$ for the biopsychosocial subscale, whereas Laekeman et al. (2008) found values of $\alpha=0.77$ and of $\alpha=0.58$, respectively. Ostelo et al. (2003) found values of $\alpha=0.84$ and of $\alpha=0.54$. As in the previous studies, Cronbach's alpha of factor 1 in our study was satisfactory, whereas alpha of factor 2 continued to fall short of recommended values for internal consistency of $\alpha > 0.70$. It has been stated that the value of Cronbach's alpha is highly dependent on the number of items (de Vet et al., 2011 p. 84). The lower alpha value for the biopsychosocial factor observed in our study is difficult to explain, but is not necessarily due to the smaller number of items allocated to this subscale by factor analysis, since Laekeman et al. (2008) actually achieved a somewhat higher alpha with only 4 items.

Both the study of Laekeman et al. (2008) and our study obtained poor alpha values for the biopsychosocial factor after translation and adaptation of the scale. Low values of Cronbach's alpha might indicate that the scale is not entirely homogeneous and that the items on the subscale measure a construct that is not yet well defined and precisely demarcated (de Vet et al., 2011, p.13). However, alpha values obtained by Houben et al. (2005) were satisfactory ($\alpha=0.68$).

One other study assessed internal consistency of the PABS-PT (Watson et al., 2008). These researchers used an adapted version (17 items) of Houben's 19-item PAPS-PT, in a group of general practicing doctors in the United Kingdom and found alpha values of 0.79 for the biomedical subscale and 0.60 for the biopsychosocial subscale. Values were comparable to ours, although an amended English version was used that had not been subjected to cross-cultural validation.

5.1.4 Physiotherapists' opinions

Similar to the studies by Ostelo et al. (2003) and Houben et al. (2005) , several items were excluded from the factor analysis because the vast majority of therapists (76.4 to 94.7 %) either totally agreed or totally disagreed with the statement.

Norwegian physiotherapists seemed to disagree strongly on items stating that patients with LBP should refrain from all physical activity, should avoid activities that stress their backs or should be advised to be careful and make no unnecessary movements (items 1, 9 and 13). They further disagreed strongly with the statements that back pain indicates something dangerously wrong (item 15) and sport activities should not be recommended for patients with low back pain (item 21).

Furthermore, Norwegian physiotherapists seemed to agree strongly on items stating that mental stress may cause back pain (item 6), patients' belief system influences the progress of symptoms (item 16), therapy can completely alleviate the functional symptoms of back pain (item 18), and that a rapid resumption of daily activities is an important goal in treatment (item 32). All items, except for item 6, were excluded by Houben et al. (2005) for the same reasons, indicating consensus in opinions between Dutch and Norwegian physiotherapists.

These excluded items reflect important issues addressed in clinical guidelines on chronic low back pain (Koes et al., 2010, Lærum et al., 2007). Clinical guidelines stress the importance of reassuring patients that there is nothing dangerously wrong with their back, to consider psychosocial factors if there is no improvement and to motivate them to resume normal activities as soon as possible. Consequently, the opinions of Norwegian physiotherapists on back pain seem to be in accordance with clinical guidelines, as was found in previous studies (Werner et al., 2008, Werner et al., 2005, Werner and Indahl, 2005, Ihlebaek and Eriksen, 2004).

However, while there is broad consensus among physiotherapists regarding items that address issues dealt with in clinical guidelines, no consensus seem to exist on obvious biomedical items indirectly addressed in the guidelines. Statements included in the biomedical factor, like “reduction of daily physical exertion is a significant factor in treating back pain” (item 4), “pain is a nociceptive stimulus, indicating tissue damage” (item 10) and “patients with back pain should preferably practice only pain free movement” (item 14), showed mean scores that were neither in strong agreement nor strong disagreement.

These response modes might be regarded as contradictory to what one might expect. Similar scores on comparable items were found in the two Dutch studies. Ostelo et al. (2003) and Houben et al. (2005) interpreted these findings as indicative of “social desirability”, a tendency to respond in a professionally acceptable direction. According to Houben et al. (2005), social desirability implies that physiotherapists have knowledge of clinical guidelines and intend to comply with these, but their actual treatment orientation and behavior are short of being in line with the guidelines. The reason for this may be, as Ostelo et al. (2003) point out, that physiotherapists, having originally a more biomedical orientation from their training, are shifting to a more behavioral perspective in line with the biopsychosocial model that is advocated in the guidelines, but are still lacking consistency with regard to the exact details in the management of LBP. These findings are supported by a study by Werner and Indahl (2005), stating that although Norwegian physiotherapists demonstrated attitudes and knowledge in accordance with clinical guidelines, 41 % of them had the opinion that patients suffering from low back pain should listen to their body and avoid everything that provokes pain. A significant lower percentage of physicians and chiropractors sustained the same opinion. Another possible explanation for these seemingly paradoxical response modes is the finding that therapists can simultaneously hold beliefs based on apparently contradictory biomedical and biopsychosocial perspectives and change treatment approach, depending on the individual patient and the situation (Brown, 2009). This is confirmed by a study of Norwegian manual therapists, who were found to advice some of their patients to avoid painful movements, which is not in accordance to clinical guidelines, but who first of all adjusted treatment in accordance with the individual patients’ problem (Strand et al., 2005).

5.2 Methodological issues

The translated version of the Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT-NV) was used to conduct a cross-sectional internet-based survey of a convenience sample of physiotherapists in Norway. Following the advice of Dr. Ostelo, the complete 36-items set of the PABS-PT was used for the translation and cultural adaptation. The amended 19-items version of the PABS-PT has been used by other researchers in cross-sectional studies (Hendrick et al., 2012, Bishop et al., 2008, Fullen

et al., 2011, Simmonds et al., 2012) and interventional studies (Vonk et al., 2009, Jellema et al., 2007, Overmeer et al., 2011), but also for validation purposes (Magalhaes et al., 2011, Bowey-Morris et al., 2010, Watson et al., 2008). One reason for using the complete 36-item version was the assumption that the questionnaire is still in a developmental stage with a hypothetical dimensionality. Another reason was that the whole 36-item pool and its arrangement may have influenced the scoring on the 19 items of the subscales. Therefore, Dr. Ostelo recommended not deleting the other items, but rather to use the complete questionnaire and then calculate the sum scores per factor.

However, feedback from our responders indicates that the 36-items questionnaire might be too lengthy and time consuming to complete. A shorter version might have increased completion rates. Prospective applications of the Norwegian version will have to decide on either the (36 items) “research version” or the (19 items) “clinical version” of the PABS-PT, depending on purpose and study design. Our findings suggest that the 19 items Norwegian version can be recommended for use in both research and clinical education, considering the confirmed factor structure, the examination of the internal consistency and the low completion rate of our responders.

5.2.1 Study design

The design of a cross-sectional survey is generally considered to be vulnerable to low response rate and missing information, which may challenge study validity (Domholdt, 2000). An internet-based survey was chosen in favor of a postal survey, mainly because of the simplified research process and the substantial lower costs. Braithwaite et al. (2003) evaluated web-based surveys as valid alternatives to postal surveys, although they imply some major methodological problems (Braithwaite et al., 2003). The main obstacle seems to be external validity, especially with regard to difficulties in obtaining samples that are representative and adequate response rates. In a systematic review of 17 internet-based surveys of health professionals comparable to ours, only 12 studies were found reporting response rates, which varied from 9 to 94 % (Braithwaite et al., 2003).

Paper questionnaires seem to enjoy higher response rates than e-mail surveys (Kaplowitz et al., 2004). Nevertheless, conflicting reports are found on the differential response rates for mailed and web-based surveys; some demonstrating higher initial survey response rates with mailed versus web-based surveys (58 % vs. 45 %, respectively) (Ritter et al., 2004), others reporting the opposite (36% vs. 73%, respectively) (Leece et al., 2004).

Conversely, the difference in final survey response rates between mailed and web-based surveys seems to be small when regular e-mail reminders are sent to non-responders (Oppenheimer et al., 2011), as we did for sample 2. Web survey applications have also been found to achieve a comparable response rate to a surface mail questionnaire if the web version is preceded by an advance surface mail notification (Kaplowitz et al., 2004). In the pilot of our research project, we sent advance e-mail notifications to potential responders and obtained a response rate of 88 %. In retrospect, response rates in sample 2 would probably have been larger than 47.5 % if we had send an advance e-mail invitation, stating the purpose of our survey and at the same time offering the opportunity to unsubscribe from our list.

Several authors have discussed the implications of web-based surveys and provided guidelines for their effective design and distribution (Oppenheimer et al., 2011, Birnbaum, 2004). Dobrow et al. discussed in extent most features in web-based survey applications like SurveyMonkey.com (Dobrow et al., 2008) and stated that reports of internet-based surveys should also include a discussion of the assumptions used in determining response rates, including the impact of email forwarding, server rejections, automated replies, and spam filters.

Guidelines for the design of web-based surveys are available in the literature and were followed by us. Eysenbach et al. (2004) presented a Checklist for Reporting Results of Internet E-Surveys (CHERRIES), to ensure the quality of reports in the medical literature and to ensure complete descriptions of web-based surveys. The main purpose of the Checklist is to give readers of scientific papers a better understanding of the sample selection and its possible differences from a "representative" sample (Eysenbach, 2004).

Non-response bias

Non-response bias implies systematic differences in responses of subjects who choose to respond to a survey compared to those who do not respond (Oppenheimer et al., 2011). Non-response bias cannot be ruled out because of the extremely low response rate in sample 1. For this sample, we were not able to assess non-responders for reasons of anonymity and inadequate distribution control. However, we know that 27.9 % of therapists in this sample entering the questionnaire had not seen a patient with low back pain for the last 6 months, indicating that therapists with all kinds of professional backgrounds may have responded.

Age is a well-known non-response bias in web-based surveys; mail survey responders tend to be older than web survey responders (Kaplowitz et al., 2004). However, in our research project, the five different age groups had comparable sizes and a wide spectrum of ages was represented, probably providing a variability of scores as needed.

Calculation of response rates

Responses to internet surveys are affected not only by the way invitations are distributed and responses are collected, but also by the existence of automated (out-of-office) replies, automated forwarding, server rejection, and organizational or personal spam filters (Dobrow et al., 2008). These features challenge the accuracy of response rate calculations in internet surveys, since there are no clear inclusion or exclusion criteria for them.

Dubrow et al. (2008) assessed different ways of determining response rates in their web-based survey of 5000 health care professionals, while considering different assumptions on inclusion and exclusion. They found a 12.5% variation in the response rate, depending on calculation method. Using a similar determination method for our research project, a substantial lower variation in response rates was found (5.3 % in sample and 5.1 % in sample 2). However, direct comparison is not possible because of the large difference in the number of participants.

Response rates

The low overall response rate in our research project (24.8 %) is mainly due to the very low response rate in sample 1. For this sample we did not have control on non-responders and were not able to send reminders. Although low, our response rates are still comparable to response rates of other studies measuring attitudes and beliefs of

health care providers, irrespective of a postal or web-based distribution. Two web-based surveys comparable to ours obtained response rates ranging from 17 % (Hendrick et al., 2012) to 74 % (Derghazarian and Simmonds, 2011). Compared to this, response rates of postal surveys varied from 38 % to 51.7 % (Bishop et al., 2008, Pincus et al., 2007, Houben et al., 2005b, Werner et al., 2005).

Reminders were sent out to responders in sample 2 only. Response rates for both samples were initially comparable (16.7 % for sample 1 and 18.2 % for sample 2). The response rate for sample 2 increased to 37.0 % after the first reminder and to 47.5 % after the second reminder. This underscores the importance of sending out more than one reminder (Oppenheimer et al., 2011). The large difference in response rates between sample 1 and 2 highlights the importance of having control on the distribution of invitations and reminders. A distribution method as followed by us for sample 1 should be advised against.

5.2.2 Study samples

E-mail invitations containing an electronic link to the questionnaire were sent to two samples of convenience. Conclusions drawn from convenience samples are limited and should be regarded with care (Eysenbach, 2004, Domholdt, 2000). The two samples are not expected to represent the entire population of physiotherapists in Norway. Moreover, selection bias cannot be ruled out. Physiotherapists with a post-graduate education are most probably overrepresented in the total sample, since sample 2 in our research project did not include general practicing physiotherapists. On the other hand, almost half of all Norwegian psychomotor physiotherapists, manual therapists and specialist physiotherapists participated in our survey. Nonetheless, conclusions about representativeness of the sample are limited.

The current research project was first of all intended to examine the factor structure and internal consistency of the Norwegian version of the PABS-PT. Factor analysis not only requires data from a large number of representatives of the target population, but also a wide variation in population scores in order to avoid clustering of scores into one or two response categories (de Vet et al., 2011 p.80). Variability of scores is further guaranteed by the different professional and educational backgrounds of participants in our research

project. The sample size (n=647) is considered to be adequate for a valid factor analysis with a ratio of 18 respondents per item. The required number of respondents per item has been recommended to 4 to 10 per item with a minimum of 100 respondents (Kline, 2000, cited by de Vet et al., 2011, p. 80)

Non-responders

We did not assess non-responders in sample 1, because we had no access to the membership data base of the Norwegian Association of Physiotherapists. For sample 2, we considered sending an invitation to fill out a short form containing some key demographic items and statements to non-responders after the second reminder. However, this could be considered as a third reminder and not as a follow-up of non-responders.

We were able to compare responders who completed the PABS-PT with those responders who did not complete the PABS-PT. A surprisingly large number of therapists responded only to the demographic part of the questionnaire but refrained from filling out the PABS-PT. When comparing “completers” of the PABS-PT to “non-completers”, only minor demographic and professional differences were seen, this makes it difficult to explain why a substantial number of responders did not fill out part two of the questionnaire, the PABS-PT.

A reason for non-completion may be that responders considered the 36-items PABS-PT as too extensive and its statements as uninteresting. Conversely, it may be easier for responders to get involved when inquiries are made for demographic and personal issues or professional opinions. Feedback from respondents indeed confirmed that the statements in the PABS-PT were not very engaging or challenging. With regard to the extent of the PABS-PT, we estimated a mean completion time of 18.5 min for the whole web-based questionnaire, based on a selection of entrance- and exit loggings in the survey application. We expected a 15 min completion time, as informed to the participants in our e-mail invitation.

Filter question

Following comparable studies (Bishop et al., 2008, Magalhaes et al., 2011), we used a filter question at the beginning of the questionnaire to exclude therapists who had not seen a patient with low back pain for the last six months. The reason for this was to

collect perceptions on low back pain only from clinicians with experience in its management. However, in this way we might have missed important information from subgroups of physiotherapists like teachers at physiotherapy schools and university lecturers. These physiotherapists, who after all are responsible for the education of our future colleagues, could have been taken into account regarding their attitudes and beliefs that they pass on to their students. The survey instrument Survey Monkey.com could easily be adapted for use with separate groups. The non-clinicians would then first have been guided to a separate form with demographic information.

5.2.3 Analysis

Although confirmatory factor analysis is usually preferred over exploratory factor analysis for the purpose of cross-cultural validation (de Vet et al., 2011), an exploratory factor analysis was chosen in this research project.

Exploratory factor analysis is usually applied in the development phase of the instrument for reasons of item reduction and for deciding on the number of relevant dimensions. Conversely, confirmatory factor analysis is mainly used to assess the construct validity of a measure in order to test whether the data fit a predetermined factor structure, based on previous factor analysis or previous hypotheses (de Vet et al., 2011, p.72). Confirmatory factor analysis can be applied as part of a cross-cultural validation process to assess differences between the original and translated version of a measurement instrument. If differences are found, these may be due to differences in the translated measurement instruments or differences in the populations (de Vet et al., 2011 p.185). Nonetheless, we conducted an exploratory factor analysis for two reasons:

1. In cross-cultural validation, similar scores may be expected if a translated instrument is used in a similar target population (de Vet et al., 2011 p.185). However, it was expected that the responders in our project would comprise a new population of physiotherapists, differing from Dutch or German physiotherapists. Especially the group of psychomotor physiotherapists was thought to represent completely different treatment orientations that had not previously been investigated and therefore no prior hypotheses on the instrument's dimensionality existed. It was not considered appropriate to start with confirmatory factor analysis, as the structure of the PABS-PT

involving psychomotor physiotherapists had not been established previously using exploratory approaches.

2. We used the 36-item version since the PABS-PT is considered to be still in a developmental stage (Mutsaers et al., 2012, Bishop, 2010, Bishop et al., 2007). Item reduction seems necessary when the 36-item version is considered too lengthy and for this purpose exploratory factor analysis is well justified (de Vet et al., 2011 p. 81). The original 36-items Dutch version was substantially reduced to 19 items by Houben et al. (2005) and to 14 items by Laekeman et al. (2008) by way of exploratory factor analysis.

In retrospect, cross-validation of the data material might have been an option. In this case, cross-validation means that exploratory factor analysis is performed on one half of the data set and confirmatory factor analysis is performed on the other half to confirm the factor structure (de Vet et al., 2005). A premise for cross-validation is that the two subsamples are selected at random, to ascertain that the two parts are as comparable as possible. Dividing the data randomly into two subsamples requires twice the usual sample size. For our sample, this would mean a ratio of 9 responders per item, which is considered satisfactory for factor analyses (de Vet et al., 2005).

In assessing the dimensionality and internal consistency of the PABS-PT we followed the procedure as described by Houben et al. (2005) with only one minor adjustment. Before factor analysis was performed, Houben et al. (2005) excluded items on which more than 70 % of responders strongly agreed or disagreed, while we excluded items on which more than 75 % strongly agreed or disagreed. The results showed that this difference had no influence on the number of items excluded prior to factor analysis.

5.3 Strengths and limitations

Strength of the present research project is that the PABS-PT was translated and culturally adapted from the original Dutch language and not from the English version, as published by the developers. One other strength is our large sample size (n=647), which is considered to be satisfactory for a factor analysis. A further strength is the recruitment of physiotherapists from widely differing disciplines. Manual therapists and psychomotor physiotherapists are generally preconceived to represent diametrically opposed orientations (Thornquist, 2006), thus providing a variety of scores. In addition,

responses were obtained from almost half of all manual therapists and psychomotor physiotherapist working in Norway.

There are some limitations to our research. Our questionnaire comprised the 36-items PABS-PT only and was administered once. This allowed us to assess the dimensionality and internal consistency of the PABS-PT(NV), but other important psychometric properties, like test-retest reliability (Bowey-Morris et al., 2010, LE Laekeman et al., 2008) and construct validity by comparison of correlations of scores on our factors with scores on measures of related constructs, were not examined. Related measurements, like the Health Care Providers' Pain and Impairment Relationship Scale (HC-PAIRS) (Rainville et al., 1995), the Tampa Scale of Kinesiophobia adapted for health professionals or the Back Beliefs Questionnaire (BBQ) (Symonds et al., 1996), have previously been used to compare on validity with the PABS-PT (Houben et al., 2005b, Magalhaes et al., 2011). However, only the Tampa Scale of Kinesiophobia is available in a Norwegian version (Haugen et al., 2008), but not in an adapted version for health care professionals.

Some studies examining attitudes and beliefs of health care providers used clinical vignettes or case scenarios of patients in their surveys to explore the associations between attitudes/beliefs and reported clinical behavior or adherence to guidelines (Houben et al., 2005b, Houben et al., 2005a, LE Laekeman et al., 2008, Bishop et al., 2008, Fullen et al., 2011, Hendrick et al., 2012). In that way, construct validity of the PABS-PT could be evaluated by determining whether the PABS-PT could be predictive of treatment recommendations to patients.

At the commencement of the project, we considered including clinical vignettes in our research. However, it has been stated that a measurement outcome study and a validation study should not be conducted using the same sample since two objectives of the study exist that may interfere (de Vet et al., 2011 p.193). Therefore, associations between scores on the PABS-PT and recommendations for activity or sick leave should be investigated in a later, separate study.

Social desirability bias should be considered as a limitation. Although concerning all self-reported measurements, social desirability bias may be enhanced in this research project, since back pain beliefs are reported while standards of low back pain management exist in clinical guidelines that therapists are supposed to be familiar with

(Bishop et al., 2007). Since 72.9 % of our responders reported to have read or have knowledge of main issues in national clinical guidelines, scores may have been influenced by an intention to comply with these. However, as pointed out in section 5.1.3, some of the items on the subscales seem to measure responders' belief system independent of their adherence to guidelines.

There is a limitation to the web-based administration of the questionnaire, influencing response rates. Feedback indicates that e-mail invitations were by some participants misconceived as spam and deleted, probably because of the sender's name SurveyMonkey.com. The size of rejections because of this is unknown. Collection options in SurveyMonkey.com did not allow for other names, like the University in Bergen, to be listed as the sender of the e-mail invitation. If so, response rates would probably have been higher.

5.4 Comparison to other studies

To our knowledge, this research project is the first in Norway to address measurement aspects of the attitudes and beliefs on low back pain among physiotherapists. Previous research in Norway have investigated perceptions about low back pain in general practitioners, physiotherapists and chiropractors and compared the attitudes and beliefs of these professional providers (Ihlebaek and Eriksen, 2004, Werner et al., 2005, Werner and Indahl, 2005, Werner et al., 2008, Laerum et al., 2010). Findings suggested that Norwegian health care providers' attitudes and beliefs are in line with national guidelines for acute low back pain, with small differences between professions. Results were not based on a scale or measurement, but on the responders agreement or disagreement upon 7 statements that formulate common misbeliefs on back pain, corresponding to Deyo's myths (Deyo, 1998). Houben et al. (2005b) have pointed out that several items on the biomedical factor of the PABS-PT show a clear similarity to some of Deyo's myths in the sense that both address the possibility to find a cause for all kinds of back pain, the need to reduce activities as long as the pain lasts, and the expectation that back pain will always lead to disability (items 4, 23, 24 and 35). Some other items of the PABS-PT resembling Deyo's myths were excluded by us prior to factor analysis because most respondents strongly disagreed with them (item 1, 9 and 13).

5.5 Recommendations for future research

A main shortcoming of the Norwegian translation of the PABS-PT, as compared and similar to the original version, is the disappointing low internal consistency of the biopsychosocial factor, which does not reach up to recommended levels. Further research should include an endeavor to increase the number of adequate items on the biopsychosocial factor, in order to improve the measurement properties (LE Laekeman et al., 2008).

The validity of the PABS-PT (NV) was not assessed in this research project. Further validation research should include the examination of test-retest reliability, validity and responsiveness to change. Concurrent validity can be assessed by checking whether the translation shows the expected correlations with related constructs (de Vet et al., 2011 p.185). A previous study (Houben et al., 2005) assessed the concurrent validity of the original Dutch version by comparing associations with the HC-PAIRS (Rainville et al., 1995) and the Tampa Scale of Kinesiophobia (Haugen et al., 2008) and the same magnitude of correlations should be expected for the Norwegian version.

The next step in our research will be to find out whether the Norwegian translation is suitable for use as a measurement instrument in research and clinical education of physiotherapists. This can be done by exploring the effect of demographic and professional factors on scores and by evaluating the differences in attitudes and beliefs among physiotherapists with various professional backgrounds. Knowledge of physiotherapists' attitudes and beliefs may be of crucial importance in the development of strategies for the implementation of evidence-based practice.

The developers of the scale have not established a cut-off point that signifies high or low scores. Further research should evaluate the usage of the PABS-PT; whether it is best to use two separate scores (biomedical and behavioral) or whether it is better to calculate one global treatment approach (Vonk et al., 2009). Vonk and colleagues combined the biomedical and the behavioral treatment approaches after dividing the scores on both factors into quartile. In that way, five different global treatment attitudes were derived by combining the quartiles: 1) a purely biomedical treatment attitude, 2) a more biomedical treatment attitude, 3) a neutral treatment attitude, 4) a more behavioral

treatment attitude and 5) a purely behavioral treatment attitude. This method allows for the identification of subgroups with extreme scores. Large differences in beliefs among physiotherapists may be unfavorable and have been suggested to contribute in part to the frustration patients with LBP may experience after visiting more than one physiotherapist (Werner et al., 2005).

6.0 CONCLUSION

The Pain Attitudes and Beliefs Scale for Physiotherapists was successfully translated from Dutch into Norwegian. The Norwegian version of the PABS-PT was found to have a two-factor solution, which was in accordance with previous research investigating the factor structure. The two factors were identified as representing a biomedical (biomechanical) and a behavioral (biopsychosocial) treatment orientation. Internal consistency of the biomedical factor was satisfactory but the behavioral factor was short of recommended values, showing poor Chronbach's alpha levels. Further research will be necessary to improve internal consistency of this subscale, preferably by increasing the number of adequate items.

7.0 RELEVANCE

This research project seeks to contribute to the body of knowledge regarding the attitudes and beliefs of physiotherapists towards low back pain. Insight into therapists' treatment approach seems fundamental in developing better ways of managing low back pain and will have implications for research on implementation of evidence-based knowledge into clinical practice and the education of therapists.

Direct access to physiotherapy and patient self-referral will probably be introduced in Norway in the near future for all physiotherapists and not only manual therapists. A new role as independent autonomous practitioner entails new challenges and responsibilities, requiring the development of greater skills and knowledge to deal more effectively with disorders like chronic low back pain, and will involve shifting rigid biomedical beliefs and adopting and integrating new approaches. The physiotherapy profession itself will have to ensure that physiotherapists are equipped for direct access and will be responsible for specifying standard of professional practice. Training of new skills, especially in developing effective therapeutic relationships with patients, will be necessary at both graduate and postgraduate levels. Knowledge of therapists' attitudes and beliefs may help tailor the requirements for the role of first contact practitioner.

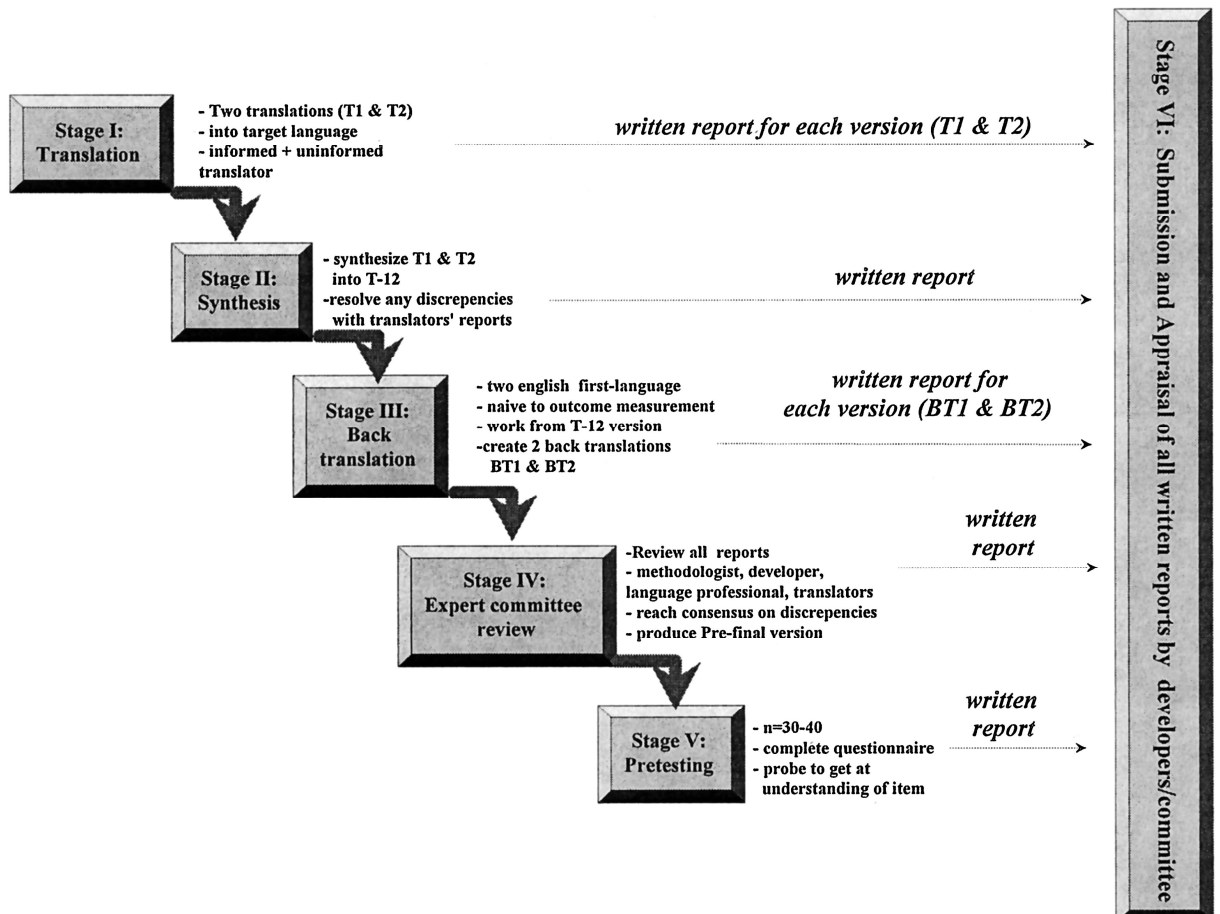


Figure 1. Graphic representation of the stages of cross-cultural adaptation recommended (reproduced after Beaton et al. 2000)

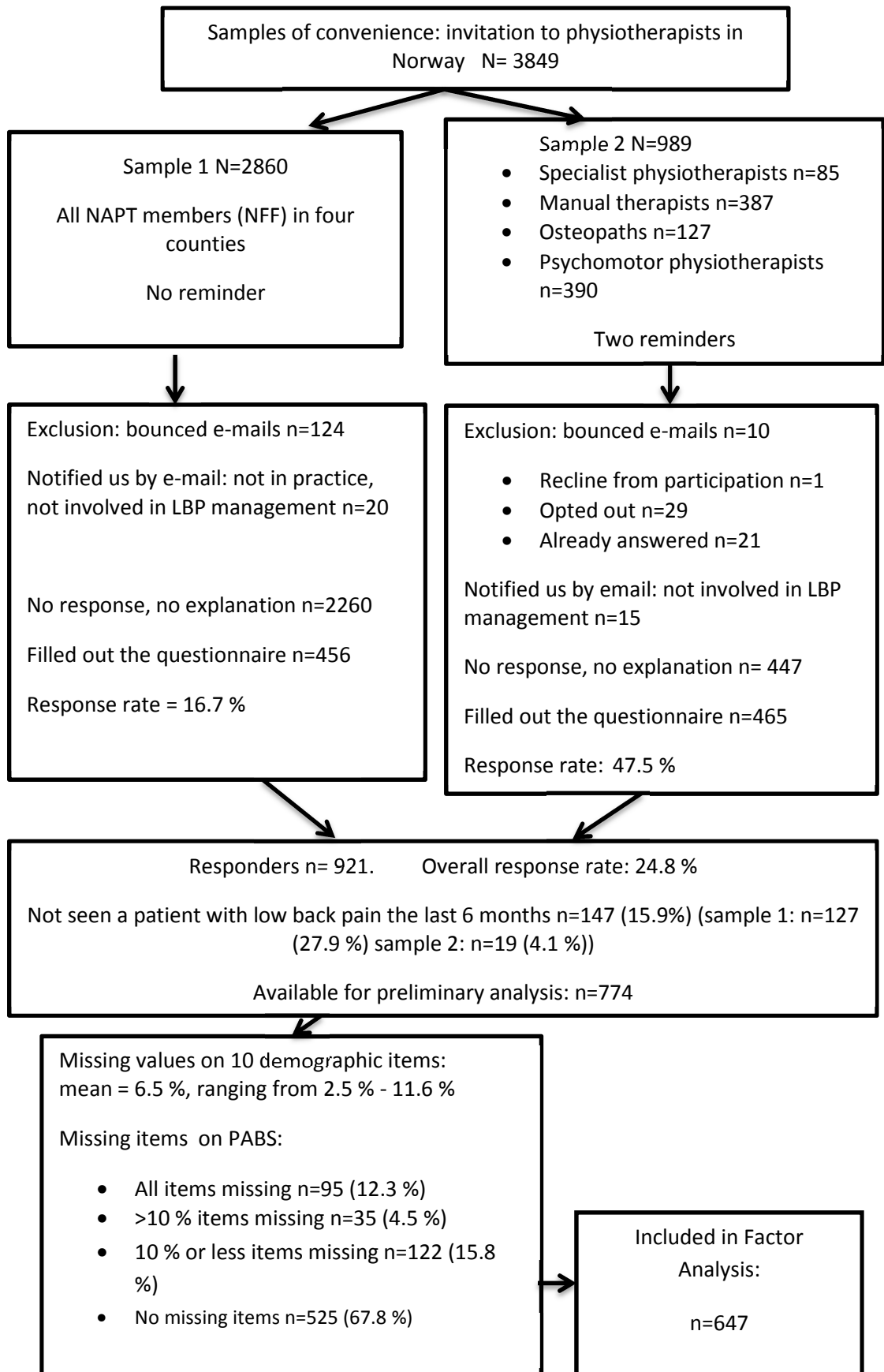


Figure 2. Flowchart: Composition and response rates of the participants. NAPT: Norwegian Association of Physical Therapists. PABS: Pain Attitudes and Beliefs Scale.

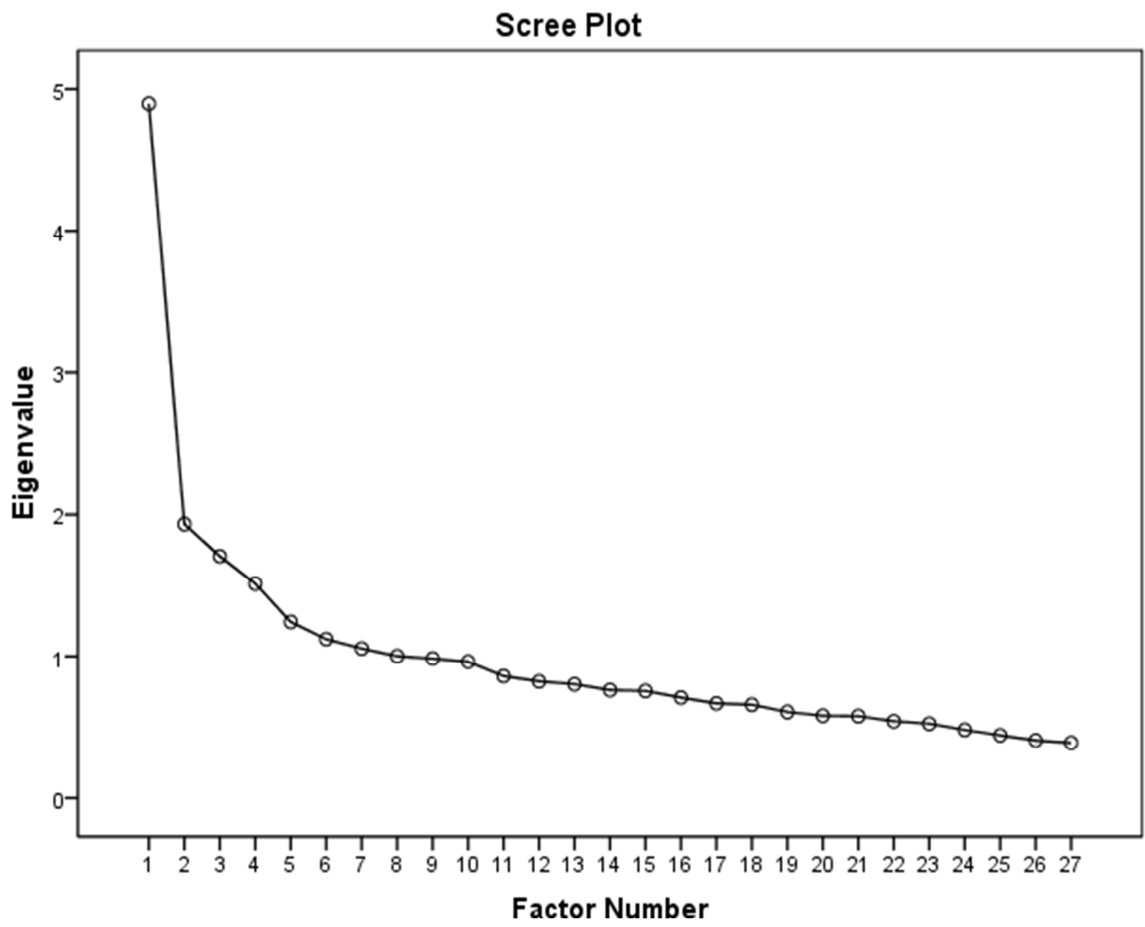


Figure 3. Scree plot.

Table 1. Characteristics of the participants.

	Total sample	Included in factor analysis	Excluded from factor analysis
Number of PTs, <i>n</i>	774	647	127
Gender (female), <i>n</i> (%)	470 (63.2)	394 (61.9)	76 (71.3)
Age, <i>n</i> (%)			
20-35 years	200 (26.5)	176 (27.3)	25 (22.7)
36-45 years	185 (24.5)	162 (25.1)	23 (20.8)
46-55 years	207 (27.5)	175 (27.0)	32 (29.1)
> 55 years	163 (21.5)	133 (20.6)	30 (27.4)
Professional background, <i>n</i> (%)			
Physiotherapist	250 (33.3)	210 (32.5)	41 (38.4)
Physiotherapy specialist	56 (7.5)	50 (7.8)	6 (5.6)
Manual therapist	201 (26.8)	180 (27.9)	21 (19.6)
Osteopath	50 (6.7)	40 (6.2)	10 (9.3)
Psychomotor physiotherapist	193 (25.7)	165 (25.6)	28 (26.2)
Years of experience, <i>n</i> (%)			
1-10 years	219 (29.2)	192 (29.8)	28 (25.7)
11-20 years	205 (27.3)	177 (27.5)	28 (25.7)
21-30 years	168 (22.3)	138 (21.4)	30 (27.5)
> 30 years	160 (21.2)	137 (21.3)	23 (21.1)
Consultations per week			
Mean (SD, range)	39.2 (22.7 0-120)	39.4 (22.6, 0-120)	36.7 (23.0, 0-100)
Patients with LBP per week			
Mean (SD, range)	10.1 (9.1, 0-60)	10.2 (9.1, 0-60)	8.4 (8.7, 0-50)
Practice situation, <i>n</i> (%)			
Private solo practice	113 (16.0)	96 (15.9)	17 (16.8)
Private group practice	446 (63.3)	385 (63.5)	62 (61.4)
Rehabilitation/pain clinic	39 (5.5)	36 (6.0)	3 (3.0)
Hospital	101 (14.3)	84 (13.9)	17 (16.8)
others	6 (0.9)	4 (0.7)	2 (2.0)
Own experience of LBP, <i>n</i> (%)			
None	226 (32.3)	204 (31.5)	22 (40.7)
Experienced acute LBP	227 (32.4)	214 (33.1)	13 (24.1)
Experienced sub-acute LBP	131 (18.7)	125 (19.3)	7 (12.9)
Experienced chronic LBP	116 (16.6)	104 (16.1)	12 (22.3)
Knowledge of clinical guidelines, <i>n</i> (%)			
Have read guidelines	317 (45.4)	293 (45.4)	25 (46.3)
Knowledge of main issues	192 (27.5)	180 (27.9)	12 (22.2)
Little knowledge of guidelines	130 (18.6)	119 (18.4)	11 (20.4)
Have not read guidelines	59 (8.4)	53 (8.2)	6 (11.1)
Professional interest in LBP, <i>n</i> (%)			
Great interest in LBP	110 (14.7)	101 (15.7)	9 (8.5)
LBP is one of more fields of interest	372 (49.7)	314 (48.8)	59 (55.1)
No special interest in LBP	267 (35.6)	228 (35.5)	39 (36.4)
Treatment orientation, <i>n</i> (%)			
Pain contingent	225 (37.8)	212 (37.3)	13 (33.3)
Time contingent	54 (8.9)	51 (9.0)	4 (10.3)
Priority on activities and work tasks	153 (25.2)	148 (25.3)	10 (25.6)
Priority on bodily impairment	174 (28.7)	162 (28.2)	12 (30.8)

LBP= low back pain.

Table 2. Characteristics of responding professional groups (total sample).

	Physiotherapists n=250	Physiotherapy specialists n=56	Manual therapists n=201	Osteopaths n=50	Psychomotor physiotherapists n=193
Gender (% female)	74.5	77.8	31.7	36.0	85.8
Age (%)					
20-30 years	25.5	0	3.5	15.7	0
31-40 years	31.5	16.1	31.3	43.5	19.8
41-50 years	19.5	25.0	28.4	19.6	30.7
51-60 years	17.1	37.5	26.4	17.6	31.3
> 60 years	6.4	21.4	10.4	3.9	18.2
Work experience (%)					
1-10 years	47.8	3.6	22.0	39.2	16.8
11-20 years	22.7	23.2	31.0	39.2	27.2
21-30 years	16.3	33.9	26.5	13.7	24.6
> 30 years	13.1	39.3	20.5	7.8	31.4
Work settings (%)					
Private solo practice	12.7	4.2	8.2	20.0	30.6
Private group practice	48.2	50.0	88.3	80.0	53.9
Rehabilitation/pain clinic	11.8	8.3	1.0	0.0	3.3
Hospital	25.0	35.4	2.6	0.0	12.2
Others	2.2	2.1	0.0	0.0	0.0
Personal experience of LBP (%)					
None	38.7	29.6	23.6	31.1	34.1
Acute/sub-acute	49.1	53.7	57.6	46.7	47.5
Chronic	12.2	16.7	18.8	22.2	18.4
Knowledge of Clinical Guidelines (%)					
Have read the CG	43.9	53.7	56.5	37.0	35.4
Knowledge of main issues	23.7	29.6	34.6	19.6	25.8
Little/no knowledge of CG	32.5	16.7	8.9	43.5	38.8
Professional interest in LBP (%)					
Great interest in LBP	10.0	3.6	32.0	21.6	3.7
LBP is one of more fields of interest	51.8	41.1	55.0	52.9	43.1
Not especially interested in LBP	38.2	55.4	13.0	25.5	53.2
Self-reported treatment approach					
Pain contingent	29.6	30.8	35.3	59.5	44.8
Time contingent	10.2	12.8	5.4	14.3	9.1
Activity and work task priority	27.6	30.8	27.7	7.1	22.4
Bodily functions priority	32.7	25.6	31.5	19.0	23.8

CG = clinical guidelines; LBP = low back pain.

Table 3. Description of all 36 items by mean, standard deviation (SD), skewness, kurtosis and percentage of extreme scores (>75 %), excluded items prior to factor analysis (FA) and resulting factors from three previous studies (O, H, L) and the present study(NV)

No.	Item	Mean(SD)	Skewness	Kurtosis	> 75 % extreme scores:	Excluded prior to FA:	Ultimately included in FA (F1/F2)
1	Back pain sufferers should refrain from all physical activity in order to avoid injury	1.5 (0.8)	2.24	8.15	93.7 %	O,H,L, NV	
2	Good posture prevents back pain	4.3 (1.2)	-0.91	0.45		L	
3	Knowledge of the tissue damage is not necessary for effective therapy	3.0 (1.4)	0.31	0.96			F2-O
4	Reduction of daily physical exertion is a significant factor in treating back pain	3.2 (1.1)	-0.22	-0.74			F1-NV
5	Not enough effort is made to find the underlying organic causes of back pain	3.3 (1.3)	0.24	-0.80			F1-NV
6	Mental stress can cause back pain even in the absence of tissue damage	5.0 (1.0)	-0.142	2.447	78.3 %	L, NV	F2-H
7	The cause of back pain is unknown	3.3 (1.2)	-0.02	-1.03		L	F2-H F2-O
8	Unilateral physical stress is not a cause of back pain	3.1 (1.2)	0.37	-0.42		L	
9	Patients who have suffered back pain should avoid activities that stress the back	2.0 (0.9)	0.92	0.82	76,4 %	H,NV	
10	Pain is a nociceptive stimulus, indicating tissue damage	2.8 (1.2)	0.18	-0.88			F1-H F1-NV
11	A patient suffering from severe back pain will benefit from physical exercise	4.8 (0.9)	-1.13	2.14			F2-H F2-L F2-NV
12	Functional limitations associated with back pain are the result of psychosocial factors	3.8 (1.0)	-0.79	0.28			F2-H F2-O F2-NV
13	The best advice for back pain is: "Take care" and "Make no unnecessary movements"	1.5 (0.8)	1.88	4.92	91.9%	H,L, NV	
14	Patients with back pain should preferably practice only pain free movements	3.1 (1.2)	0.22	-0.52			F1-H F1-NV
15	Back pain indicates that there is something dangerously wrong with the back	1.5 (0.7)	1.74	5.03	94.7 %	H,O,NV	
16	The way patients view their pain influences the progress of the symptoms	5.3 (0.8)	-1.97	6.66	90.7 %	H,O,L,NV	
17	Therapy may have been successful even if pain remains	4.5 (1.1)	-0.69	0.28		O,L	F2-H F2-NV
18	Therapy can completely alleviate the functional symptoms caused by back pain	5.0 (0.9)	-1.13	2.26	77,8 %	H,O,L,NV	

No.	Item	Mean(SD)	Skewness	Kurtosis	> 75 % extreme scores:	Excluded prior to FA:	Ultimately included in FA (F1/F2)
19	If ADL activities cause more back pain, this is not dangerous	4.2 (1.3)	-0.63	-0.20			F2-L
20	Back pain indicates the presence of organic injury	2.2 (1.0)	0.83	0.30		L	F1-H F1-NV
21	Sport should not be recommended for patients with back pain	1.8 (0.8)	1.12	2.22	84.8 %	H,O,L,NV	
22	If back pain increases in severity, I immediately adjust the intensity of my treatment accordingly	4.6 (1.0)	-0.79	0.61		L	F1-H F1-NV
23	If therapy does not result in a reduction in back pain, there is a high risk of severe restrictions in the long term	2.8 (1.2)	0.26	-0.81			F1-H F1-NV
24	Pain reduction is a precondition for the restoration of normal functioning	3.6 (1.3)	-0.30	-0.96		L	F1-H F1-O F1-NV
25	Increased pain indicates new tissue damage or the spread of existing damage	2.3 (1.0)	0.72	0.23			F1-H F1-NV
26	It is the task of the physiotherapist to remove the cause of back pain	2.5 (1.3)	0.712	-0.33			F1-NV
27	There is no effective treatment to eliminate back pain	2.6 (1.3)	0.74	-0.28		L	F2-H F2-O
28	TENS and/or back braces support functional recovery	3.3 (1.1)	-0.31	-0.66			
29	Even if the pain has worsened, the intensity of the next treatment can be increased	4.4 (1.0)	-0.65	0.58			F2-H F2-L F2-NV
30	If patients complain of pain during exercise, I worry that damage is being caused	2.4 (1.0)	0.57	0.14			F1-H F1-NV
31	The severity of tissue damage determines the level of pain	2.5 (1.2)	0.49	-0.70			F1-H F1-NV
32	A rapid resumption of daily activities is an important goal of the treatment	5.3 (0.8)	-1.82	6.05	89.9 %	H,L,NV	
33	Learning to cope with stress promotes recovery from back pain	5.0 (0.8)	-0.49	0.70		L	F2-H F2-NV
34	Exercises that may be back straining should not be avoided during the treatment	4.8 (1.1)	-1.33	1.835			F2-H F2-L F2-NV
35	In the long run, patients with back pain have a higher risk of developing spinal impairments	3.6 (1.3)	-0.25	-0.75			F1-NV F1-H
36	In back pain, imaging tests are unnecessary	3.4 (1.2)	-0.06	-0.84		L	

No, item number; O, Ostelo et al.; H, Houben e al.; L, Laekeman et al.; NV, Norwegian version; F1, factor 1; F2, factor 2.

Table 4

Descriptives for excluded items; means, standard deviation (SD) and reasons for exclusion.

No.	Item	Mean (SD)	Reason for exclusion
1	Back pain sufferers should refrain from all physical activity in order to avoid injury	1.5 (0.8)	A
2	Good posture prevents back pain	4.3 (1.2)	C
3	Knowledge of the tissue damage is not necessary for effective therapy	3.0 (1.4)	C
6	Mental stress can cause back pain even in the absence of tissue damage	5.0 (1.0)	A
7	The cause of back pain is unknown	3.3 (1.2)	C
8	Unilateral physical stress is not a cause of back pain	3.0 (1.2)	B
9	Patients who have suffered back pain should avoid activities that stress the back	2.0 (0.9)	A
13	The best advice for back pain is: "Take care" and "Make no unnecessary movements"	1.5 (0.8)	A
15	Back pain indicates that there is something dangerously wrong with the back	1.5 (0.7)	A
16	The way patients view their pain influences the progress of the symptoms	5.3 (0.8)	A
18	Therapy can completely alleviate the functional symptoms caused by back pain	5.0 (0.9)	A
19	If ADL activities cause more back pain, this is not dangerous	4.2 (1.3)	C
21	Sport should not be recommended for patients with back pain	1.8 (0.8)	A
27	There is no effective treatment to eliminate back pain	2.6 (1.3)	B
28	TENS and/or back braces support functional recovery	3.3 (1.1)	B
32	A rapid resumption of daily activities is an important goal of the treatment	5.3 (0.8)	A
36	In back pain, imaging tests are unnecessary	3.4 (1.2)	C

No. = number of items on questionnaire as administered. Reasons for exclusion: A = non-heterogeneity (skewness); B = minimal loading; C = rise in alpha if item deleted. Answering alternatives: 1="totally disagree", 2="largely disagree", 3="disagree to some extent", 4="agree to some extent", 5="largely agree", 6="totally agree".

Table 5

Descriptives (mean, standard deviation (SD), initial communalities (IC) and factor loading on both factors (F1 and F2) for items selected during factor analysis.

No.	Item	Mean (SD)	IC	F1	F2
25	Increased pain indicates new tissue damage or the spread of existing damage	2.3 (1.0)	0.483	0.699	
20	Back pain indicates the presence of organic injury	2.2 (1.0)	0.429	0.579	
30	If patients complain of pain during exercise, I worry that damage is being caused	2.4 (1.0)	0.433	0.566	
31	The severity of tissue damage determines the level of pain	2.5 (1.2)	0.327	0.563	
24	Pain reduction is a precondition for the restoration of normal functioning	3.6 (1.3)	0.343	0.530	
10	Pain is a nociceptive stimulus, indicating tissue damage	2.9 (1.2)	0.325	0.499	
23	If therapy does not result in a reduction in back pain, there is a high risk of severe restrictions in the long term	2.8 (1.2)	0.304	0.490	
14	Patients with back pain should preferably practice only pain free movements	3.0 (1.2)	0.260	0.407	
26	It is the task of the physiotherapist to remove the cause of back pain	2.5 (1.3)	0.252	0.401	
4	Reduction of daily physical exertion is a significant factor in treating back pain	3.2 (1.1)	0.225	0.395	
5	Not enough effort is made to find the underlying organic causes of back pain	3.3 (1.3)	0.212	0.372	
35	In the long run, patients with back pain have a higher risk of developing spinal impairments	3.6 (1.3)	0.196	0.357	
22	If back pain increases in severity, I immediately adjust the intensity of my treatment accordingly	4.6 (1.0)	0.219	0.293	
11	A patient suffering from severe back pain will benefit from physical exercise	4.8 (0.9)	0.203		0.513
33	Learning to cope with stress promotes recovery from back pain	5.0 (0.8)	0.215		0.439
29	Even if the pain has worsened, the intensity of the next treatment can be increased	4.4 (1.0)	0.342		0.438
34	Exercises that may be back straining should not be avoided during the treatment	4.8 (1.1)	0.219		0.402
17	Therapy may have been successful even if pain remains	4.5 (1.1)	0.208		0.333
2	Good posture prevents back pain	4.3 (1.2)	0.165		0.275
12	Functional limitations associated with back pain are the result of psychosocial factors	3.8 (1.0)	0.206		0.265

Items are sorted in descending order based on the factors loadings on factor 1 and factor 2, respectively.

Table 6

Item-total correlation and internal consistency (Cronbach's alpha) of items in the subscales of the Pain Attitudes and Beliefs Scale.

No		Item-Total Correlation	Alpha if Deleted
Biomedical subscale (alpha= 0.787)			
25	Increased pain indicates new tissue damage or the spread of existing damage	0.614	0.756
20	Back pain indicates the presence of organic injury	0.524	0.765
30	If patients complain of pain during exercise, I worry that damage is being caused	0.514	0.766
31	The severity of tissue damage determines the level of pain	0.494	0.765
24	Pain reduction is a precondition for the restoration of normal functioning	0.484	0.766
10	Pain is a nociceptive stimulus, indicating tissue damage	0.438	0.771
23	If therapy does not result in a reduction in back pain, there is a high risk of severe restrictions in the long term	0.411	0.773
14	Patients with back pain should preferably practice only pain free movements	0.376	0.777
26	It is the task of the physiotherapist to remove the cause of back pain	0.393	0.775
4	Reduction of daily physical exertion is a significant factor in treating back pain	0.350	0.779
5	Not enough effort is made to find the underlying organic causes of back pain	0.320	0.783
35	In the long run, patients with back pain have a higher risk of developing spinal impairments	0.265	0.788
22	If back pain increases in severity, I immediately adjust the intensity of my treatment accordingly	0.276	0.785
Behavioral subscale (alpha = 0.572)			
11	A patient suffering from severe back pain will benefit from physical exercise	0.336	0.517
33	Learning to cope with stress promotes recovery from back pain	0.384	0.506
29	Even if the pain has worsened, the intensity of the next treatment can be increased	0.360	0.505
34	Exercises that may be back straining should not be avoided during the treatment	0.341	0.513
17	Therapy may have been successful even if pain remains	0.270	0.547
12	Functional limitations associated with back pain are the result of psychosocial factors	0.209	0.572

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Ref Type: Report

LIST OF APPENDICES

- 1a. Application form to the Norwegian Social Data Services (NSD)
- 1b. Approval from the Norwegian Social Data Services (NSD)
- 2a. Request for approval to Dr. Ostelo to translate the PABS-PT into Norwegian
- 2b. Approval of translation from Dr. Ostelo
3. Summary of all translations of the PABS-PT. Result of the expert committee's revision
4. Letter to the president of the Norwegian Association for Physiotherapists (NFF)
5. Copy of e-mail invitation to participants as sent by the NFF
6. Copy of e-mail invitation to specialist participants as sent by the researchers
- 7a. The complete questionnaire
- 7b. The questionnaire, English translation
8. Pain Attitudes and Beliefs Scale for Physiotherapists (Norwegian version)
9. Back Translation of the Norwegian version of the PABS-PT
10. Tables of loading. Extraction Method: Principal Axis Factoring.
11. Pattern and Structure Matrix for Principal Axis Factor Analysis (PAF) with Oblique rotation of the Two Factor Solution of the PABS-PT

APPENDIX 1a.

Application form to the Norwegian Social Data Services
(NSD)



MELDESKJEMA

Meldeskjema (versjon 1.2) for forsknings- og studentprosjekt som medfører meldeplikt eller konsesjonsplikt (jf. personopplysningsloven og helseregisterloven med forskrifter).

1. Prosjekttittel		
Tittel	Attitudes and Beliefs about Low Back Pain: A Cross-Sectional Survey of Norwegian Physiotherapists	
2. Behandlingsansvarlig institusjon		
Institusjon	Universitetet i Bergen	Velg den institusjonen du er tilknyttet. Alle nivå må oppgis. Ved studentprosjekt er det studentens tilknytning som er avgjørende. Dersom institusjonen ikke finnes på listen, vennligst ta kontakt med personvernombudet.
Avdeling/Fakultet	Det medisinsk-odontologiske fakultet	
Institutt	Institutt for samfunnsmedisinske fag	
3. Daglig ansvarlig (forsker, veileder, stipendiat)		
Fornavn	Liv Inger	Før opp navnet på den som har det daglige ansvaret for prosjektet. Veileder er vanligvis daglig ansvarlig ved studentprosjekt.
Etternavn	Strand	
Akademisk grad	Doktorgrad	Veileder og student må være tilknyttet samme institusjon. Dersom studenten har ekstern veileder, kan biveileder eller fagansvarlig ved studiestedet stå som daglig ansvarlig. Arbeidssted må være tilknyttet behandlingsansvarlig institusjon, f.eks. underavdeling, institutt etc. NB! Det er viktig at du oppgir en e-postadresse som brukes aktivt. Vennligst gi oss beskjed dersom den endres.
Stilling	Professor	
Arbeidssted	Forskningsgruppe i fysioterapi	
Adresse (arb.sted)	Kalfarveien 31	
Postnr/sted (arb.sted)	5018 Bergen	
Telefon/mobil (arb.sted)	55586123 /	
E-post	Liv.Strand@isf.uib.no	
4. Student (master, bachelor)		
Studentprosjekt	Ja • Nei ○	NB! Det er viktig at du oppgir en e-postadresse som brukes aktivt. Vennligst gi oss beskjed dersom den endres.
Fornavn	Nicolaas Dingeman	
Etternavn	Eland	
Akademisk grad	Høyere grad	
Privatadresse	Postboks 522 Olsvik	
Postnr/sted (privatadresse)	5884 Bergen	
Telefon/mobil	55268473 / 90983795	
E-post	nic@eland.no	
5. Formålet med prosjektet		
Formål	<p>Det primære formålet med prosjektet er å kartlegge og måle holdninger og antagelser blant fysioterapeuter om smerter og funksjonssvkt ved kroniske korsryggglidelser, undersøke sammenhenger mellom holdninger og antagelser og selvrappoert klinisk behandlingsadferd og profesjonelle karakteristika, samt å sammenligne ulike grupperinger av behandlere med hensyn til deres behandlingsorientering.</p> <p>Det sekundære formålet er å validere den norske versjonen av et nederlandsk spørreskjema (Pain Attitudes and Beliefs Scale for Physiotherapists) som måler holdninger og antagelser til fysioterapeuter om korsryggsmerter.</p>	<p>Redegjør kort for prosjektets formål, problemstilling, forskningsspørsmål e.l.</p> <p>Maks 750 tegn.</p>
6. Prosjektomfang		

Velg omfang	<ul style="list-style-type: none"> ● Enkel institusjon ○ Nasjonalt samarbeidsprosjekt ○ Internasjonalt samarbeidsprosjekt 	Med samarbeidsprosjekt menes prosjekt som gjennomføres av flere institusjoner samtidig, som har samme formål og hvor personopplysninger utveksles.
Oppgi øvrige institusjoner		
Oppgi hvordan samarbeidet foregår		
7. Utvalgsbeskrivelse		
Utvalget	Fysioterapeuter og manuellterapeuter i Norge som behandler pasienter med ryggplager	Med utvalg menes dem som deltar i undersøkelsen eller dem det innhentes opplysninger om. F.eks. et representativt utvalg av befolkningen, skoleelever med lese- og skrivevansker, pasienter, innsatte.
Rekruttering og trekking	<p>Respondenter rekrutteres på to måter:</p> <p>1. Norsk fysioterapeutersforbund sender en e-post til sine medlemmer i fire fylker (Nordland, Sør-Trøndelag, Hordaland og Oslo) med en invitasjon om å delta i undersøkelsen ved å fylle ut vårt spørreskjema. Norsk Fysioterapeuters Forbund tilskriver selv sine medlemmer i sitt nyhetsbrev.</p> <p>2. Alle fysioterapeutspecialister som står oppført på søkesiden til Norske Fysioterapeuters Forbund, Manuellterapeuters Servicekontor og Norsk Osteopat Forbund sine websider under "finn din spesialist/manuellterapeut/osteopat" blir per e-post invitert til å delta i vårt prosjekt. Forskeren selv tilskriver dette utvalget.</p>	Beskriv hvordan utvalget trekkes eller rekrutteres og oppgi hvem som foretar den. Et utvalg kan trekkes fra registre som f.eks. Folkeregisteret, SSB-registre, pasientregistre, eller det kan rekrutteres gjennom f.eks. en bedrift, skole, idrettsmiljø, eget nettverk.
Førstegangskontakt	<p>Utvalg 1: Norsk Fysioterapeuters Forbund sender ut en invitasjon til sine medlemmer per e-post på grunnlag av sine medlemslister.</p> <p>Utvalg 2: Forskeren sender ut en invitasjon til spesialistfysioterapeuter per e-post på grunnlag av offentlig tilgjengelig informasjon og kontaktadresser som er lagt ut på Internett</p>	<p>Beskriv hvordan førstegangskontakten opprettes og oppgi hvem som foretar den.</p> <p>Les mer om førstegangskontakt</p>
Alder på utvalget	<input type="checkbox"/> Barn (0-15 år) <input type="checkbox"/> Ungdom (16-17 år) <input checked="" type="checkbox"/> Voksne (over 18 år)	
Antall personer som inngår i utvalget	<p>utvalg 1 består av alle fysioterapeuter i 4 fylker</p> <p>.Antallet er ikke kjent, men omfatter anslagsvis 1000 personer</p> <p>Utvalg 2 omfatter 850 personer</p>	
Inkluderes det myndige personer med redusert eller manglende samtykkekompetanse?	Ja ○ Nei ●	Begrunn hvorfor det er nødvendig å inkludere myndige personer med redusert eller manglende samtykkekompetanse.
Hvis ja, begrunn		Les mer om inklusjon i forskning av myndige personer med redusert eller manglende samtykkekompetanse
8. Metode for innsamling av personopplysninger		
Kryss av for hvilke datainnsamlingsmetoder og datakilder som vil benyttes	<ul style="list-style-type: none"> ■ Spørreskjema <input type="checkbox"/> Personlig intervju <input type="checkbox"/> Gruppeintervju <input type="checkbox"/> Observasjon <input type="checkbox"/> Psykologiske/pedagogiske tester <input type="checkbox"/> Medisinske undersøkelser/tester <input type="checkbox"/> Journaldata <input type="checkbox"/> Registerdata <input type="checkbox"/> Annen innsamlingsmetode 	Personopplysninger kan innhentes direkte fra den registrerte f.eks. gjennom spørreskjema, intervju, tester, og/eller ulike journaler (f.eks. elevmapper, NAV, PPT, sykehus) og/eller registre (f.eks. Statistisk sentralbyrå, sentrale helseregistre).
Annen innsamlingsmetode, oppgi hvilken		
Kommentar		
9. Datamaterialets innhold		

Redegjør for hvilke opplysninger som samles inn	Del 1 av spørreskjema ber om demografiske opplysninger som kjønn, alder, profesjon/spesialisering, antall år som kliniker, arbeidssituasjon, interesse for ryggsmarter, etterutdanning, egne ryggplager og behandlingsorientering I del 2 blir den norske versjonen av spørreskjemaet Pain Attitudes and Beliefs Scale for Physiotherapists presentert.	Spørreskjema, intervju-/temaguide, observasjonsbeskrivelse m.m. sendes inn sammen med meldeskjemaet. NB! Vedleggene lastes opp til sist i meldeskjema, se punkt 16 Vedlegg.
Samles det inn direkte personidentifiserende opplysninger?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Dersom det krysses av for ja her, se nærmere under punkt 11 Informasjonssikkerhet.
Hvis ja, hvilke?	<input type="checkbox"/> 11-sifret fødselsnummer <input type="checkbox"/> Navn, fødselsdato, adresse, e-postadresse og/eller telefonnummer	Les mer om hva personopplysninger er NB! Selv om opplysningene er anonymiserte i oppgave/rapport, må det krysses av dersom direkte og/eller indirekte personidentifiserende opplysninger innhentes/registreres i forbindelse med prosjektet.
Spesifiser hvilke		
Samles det inn indirekte personidentifiserende opplysninger?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	En person vil være indirekte identifiserbar dersom det er mulig å identifisere vedkommende gjennom bakgrunnsopplysninger som for eksempel bostedskommune eller arbeidsplass/skole kombinert med opplysninger som alder, kjønn, yrke, diagnose, etc. Kryss også av dersom ip-adresse registreres.
Hvis ja, hvilke?		
Samles det inn sensitive personopplysninger?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Hvis ja, hvilke?	<input type="checkbox"/> Rasemessig eller etnisk bakgrunn, eller politisk, filosofisk eller religiøs oppfatning <input type="checkbox"/> At en person har vært mistenkt, siktet, tiltalt eller dømt for en straffbar handling <input type="checkbox"/> Helseforhold <input type="checkbox"/> Seksuelle forhold <input type="checkbox"/> Medlemskap i fagforeninger	
Samles det inn opplysninger om tredjeperson?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Med opplysninger om tredjeperson menes opplysninger som kan spores tilbake til personer som ikke inngår i utvalget. Eksempler på tredjeperson er kollega, elev, klient, familiemedlem.
Hvis ja, hvem er tredjeperson og hvilke opplysninger registreres?		
Hvordan informeres tredjeperson om behandlingen?	<input type="checkbox"/> Skriftlig <input type="checkbox"/> Muntlig <input type="checkbox"/> Informeres ikke	
Informeres ikke, begrunn		
10. Informasjon og samtykke		
Oppgi hvordan utvalget informeres	<input checked="" type="checkbox"/> Skriftlig <input type="checkbox"/> Muntlig <input type="checkbox"/> Informeres ikke	Vennligst send inn informasjonsskrivet eller mal for muntlig informasjon sammen med meldeskjema.
Begrunn		NB! Vedlegg lastes opp til sist i meldeskjemaet, se punkt 16 Vedlegg. Dersom utvalget ikke skal informeres om behandlingen av personopplysninger må det begrunnes. Les mer om krav til informasjon og gyldig samtykke, samt om forskning uten samtykke
Oppgi hvordan samtykke fra utvalget innhentes	<input type="checkbox"/> Skriftlig <input type="checkbox"/> Muntlig <input checked="" type="checkbox"/> Innhentes ikke	Dersom det innhentes skriftlig samtykke anbefales det at samtykkeerklæringen utformes som en

Innhentes ikke, begrunn	Deltakerne blir invitert per e-post og informert om frivilligheten til å delta. De deltakerne som blir tilskrevet direkte får mulighet til å bli fjernet fra vår liste. Informert samtykke forventes dermed innhentet når deltakerne åpner det elektroniske spørreskjemaet	svarslipp eller på eget ark. Dersom det ikke skal innhentes samtykke, må det begrunnes.
11. Informasjonssikkerhet		
Direkte personidentifiserende opplysninger erstattes med et referansenummer som viser til en atskilt navneliste (koblingsnøkkel)	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Har du krysset av for ja under punkt 9 Datamaterialets innhold må det merkes av for hvordan direkte personidentifiserende opplysninger registreres.
Hvordan oppbevares navnelisten/ koblingsnøkkelen og hvem har tilgang til den?		NB! Som hovedregel bør ikke direkte personidentifiserende opplysninger registreres sammen med det øvrige datamaterialet.
Direkte personidentifiserende opplysninger oppbevares sammen med det øvrige materialet	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Hvorfor oppbevares direkte personidentifiserende opplysninger sammen med det øvrige datamaterialet?		
Oppbevares direkte personidentifiserbare opplysninger på andre måter?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Spesifiser		
Hvordan registreres og oppbevares datamaterialet?	<input type="checkbox"/> Fysisk isolert datamaskin tilhørende virksomheten <input type="checkbox"/> Datamaskin i nettverkssystem tilhørende virksomheten <input type="checkbox"/> Datamaskin i nettverkssystem tilknyttet Internett tilhørende virksomheten <input type="checkbox"/> Fysisk isolert privat datamaskin <input checked="" type="checkbox"/> Privat datamaskin tilknyttet Internett <input type="checkbox"/> Videopptak/fotografi <input type="checkbox"/> Lydopptak <input type="checkbox"/> Notater/papir <input type="checkbox"/> Annen registreringsmetode	Merk av for hvilke hjelpemidler som benyttes for registrering og analyse av opplysninger. sett flere kryss dersom opplysningene registreres på flere måter.
Annen registreringsmetode beskriv		
Behandles lyd-/videopptak og/eller fotografi ved hjelp av datamaskinbasert utstyr?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Kryss av for ja dersom opptak eller foto behandles som lyd-/bildefil. Les mer om behandling av lyd og bilde.
Hvordan er datamaterialet beskyttet mot at uvedkommende får innsyn?	Datamaskin er beskyttet med brukernavn og passord og står i et låsbar rom. Tilgang til det web-baserte surveyverktøyet SurveyMonkey er beskyttet med brukernavn og passord.	Er f.eks. datamaskintilgangen beskyttet med brukernavn og passord, står datamaskinen i et låsbar rom, og hvordan sikres bærbare enheter, utskrifter og opptak?
Dersom det benyttes mobile lagringsenheter (bærbar datamaskin, minnepenn, minnekort, cd, ekstern harddisk, mobiltelefon), oppgi hvilke	Det benyttes bærbar datamaskin Det benyttes ekstern harddisk for backup av passordbeskyttede excelfiler med navn og kontaktadresse og av SPSS-filer som genereres i SurveyMonkey	NB! Mobile lagringsenheter bør ha mulighet for kryptering.
Vil medarbeidere ha tilgang til datamaterialet på lik linje med daglig ansvarlig/student?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Hvis ja, hvem?		
Overføres personopplysninger ved hjelp av e-post/Internett?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	F.eks. ved bruk av elektronisk spørreskjema, overføring av data til

Hvis ja, hvilke?	Respondentene fyller ut et elektronisk spørreskjema som sendes kryptert. En liste med navn og e-postadresser som er offentlig tilgjengelig på internett blir lagt inn i surveyverktøyet SurveyMonkey	samarbeidspartner/databehandler mm.
Vil personopplysninger bli utlevert til andre enn prosjektgruppen?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Hvis ja, til hvem?		
Samles opplysningene inn/behandles av en databehandler?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	Dersom det benyttes eksterne til helt eller delvis å behandle personopplysninger, f.eks. Questback, Synovate MMI, Norfakta eller transkriberingsassistent eller tolk, er dette å betrakte som en databehandler. Slike oppdrag må kontraktreguleres
Hvis ja, hvilken?	SurveyMonkey	Les mer om databehandleravtaler her
12. Vurdering/godkjenning fra andre instanser		
Søkes det om dispensasjon fra taushetsplikten for å få tilgang til data?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	For å få tilgang til taushetsbelagte opplysninger fra f.eks. NAV, PPT, sykehus, må det søkes om dispensasjon fra taushetsplikten. Dispensasjon søkes vanligvis fra aktuelt departement.
Kommentar		Dispensasjon fra taushetsplikten for helseopplysninger skal for alle typer forskning søkes Regional komité for medisinsk og helsefaglig forskningsetikk
Søkes det godkjenning fra andre instanser?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	F.eks. søke registreier om tilgang til data, en ledelse om tilgang til forskning i virksomhet, skole, etc.
Hvis ja, hvilke?		
13. Prosjektperiode		
Prosjektperiode	Prosjektstart: 15/02/2012 Prosjektslutt: 15/02/2014	Prosjektstart Vennligst oppgi tidspunktet for når førstegangskontakten med utvalget opprettes og/eller datainnsamlingen starter. Prosjektslutt Vennligst oppgi tidspunktet for når datamaterialet enten skal anonymiseres/slettes, eller arkiveres i påvente av oppfølgingsstudier eller annet. Prosjektet anses vanligvis som avsluttet når de oppgitte analyser er ferdigstilt og resultatene publisert, eller oppgave/avhandling er innlevert og sensurert.
Hva skal skje med datamaterialet ved prosjektslutt?	<input checked="" type="checkbox"/> Datamaterialet anonymiseres <input type="checkbox"/> Datamaterialet oppbevares med personidentifikasjon	Med anonymisering menes at datamaterialet bearbeides slik at det ikke lenger er mulig å føre opplysningene tilbake til enkeltpersoner. NB! Merk at dette omfatter både oppgave/publikasjon og rådata. Les mer om anonymisering
Hvordan skal datamaterialet anonymiseres?	Undersøkelsen er anonymisert fra starten. Datamaterialet består av SPSS-filer som ikke inneholder opplysninger som kan knyttes til enkeltpersoner. Adresselistene i SurveyMonkey blir slettet ved prosjektslutt	Hovedregelen for videre oppbevaring av data med personidentifikasjon er samtykke fra den registrerte. Årsaker til oppbevaring kan være planlagte oppfølgingsstudier, undervisningsformål eller annet.
Hvorfor skal datamaterialet oppbevares med personidentifikasjon?		Datamaterialet kan oppbevares ved egen institusjon, offentlig arkiv eller annet.
Hvor skal datamaterialet oppbevares, og hvor lenge?		Les om arkivering hos NSD

14. Finansiering		
Hvordan finansieres prosjektet?		
15. Tilleggsopplysninger		
Tilleggsopplysninger	<p>Opplysninger som innhentes kan ikke knyttes til navn eller ip-adresse. Det blir ikke bedt om personlige opplysninger som navn eller e-postadresse. Undersøkelsen blir kryptert av SurveyMonkey. Det endelige datamaterialet består av en SPSS fil som blir generert i Survey Monkey.</p>	
16. Vedlegg		
Antall vedlegg	5	

APPENDIX 1b.

Approval from the Norwegian Social Data Services (NSD)



Liv Inger Strand
Institutt for samfunnsmedisinske fag
Universitetet i Bergen
Kalfarveien 31
5018 BERGEN

Vår dato: 02.01.2012

Vår ref:28806 / 3 / SSA

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 21.11.2011. All nødvendig informasjon om prosjektet forelå i sin helhet 28.12.2011. Meldingen gjelder prosjektet:

28806	<i>Attitudes and Beliefs about Low Back Pain: A Cross-Sectional Survey of Norwegian Physiotherapists</i>
Behandlingsansvarlig	Universitetet i Bergen, ved institusjonens øverste leder
Daglig ansvarlig	Liv Inger Strand
Student	Nicolaas Dingeman Eland

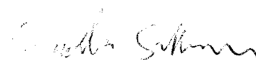
Etter gjennomgang av opplysninger gitt i meldeskjemaet og øvrig dokumentasjon, finner vi at prosjektet ikke medfører meldeplikt eller konsesjonsplikt etter personopplysningslovens §§ 31 og 33.

Dersom prosjektopplegget endres i forhold til de opplysninger som ligger til grunn for vår vurdering, skal prosjektet meldes på nytt. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/forsk_stud/skjema.html.

Vedlagt følger vår begrunnelse for hvorfor prosjektet ikke er meldepliktig.

Vennlig hilsen

Vigdis Namtvedt Kvalheim


Sondre S. Arnesen

Kontaktperson: Sondre S. Arnesen tlf: 55 58 25 83
Vedlegg: Prosjektvurdering
Kopi: Nicolaas Dingeman Eland, Postboks 522 Olsvik, 5884 BERGEN

Personvernombudet for forskning



Prosjektvurdering - Kommentar

Prosjektnr: 28806

Personvernombudet kan ikke se at det i prosjektet behandles personopplysninger med elektroniske hjelpemidler, eller at det opprettes manuelt personregister som inneholder sensitive personopplysninger. Prosjektet vil dermed ikke omfattes av meldeplikten etter personopplysningsloven.

Viser til telefonsamtale den 28.12.2011. Personvernombudet legger til grunn at man ikke registrerer opplysninger som gjør det mulig å identifisere enkeltpersoner, verken direkte gjennom e-post adresse eller IP-adresse, eller indirekte gjennom bakgrunnsvariabler. Alle opplysninger som behandles elektronisk i forbindelse med prosjektet må være anonyme. Med anonyme opplysninger forstås opplysninger som ikke på noe vis kan identifisere enkeltpersoner i et datamateriale, verken direkte gjennom navn eller personnummer, indirekte gjennom bakgrunnsvariabler eller gjennom navneliste/koblingsnøkkel eller krypteringsformel og kode.

APPENDIX 2a.

Request for approval to Dr. Ostelo to translate the
PABS-PT into Norwegian



UNIVERSITY OF BERGEN

Department of Public Health and Primary Health Care
Section of Physiotherapy Science

Bergen, June 20th 2011.

Dr. R.W.J.G. Ostelo,
EMGO Institute for Health and Care Research
VU University Medical Center,
Van der Boechorststraat 7,
1081 BT Amsterdam.
The Netherlands.

Development of a Norwegian Version of the Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT)

In connection with a cross-sectional survey of Norwegian physiotherapists and manual therapists at the Department of Public Health and Primary Health Care of the University of Bergen, the PABS-PT is considered appropriate as an assessment tool of pain attitudes and beliefs among physiotherapists. However, this instrument is not available in the Norwegian language. Therefore, we kindly ask for your permission to translate the instrument.

The translation will be done following recommended guidelines for translation and cross-cultural adaptation as described by Beaton et al.(2000)¹. Forward translation will be performed separately by two bilingual Norwegian persons who studied physiotherapy and manual therapy in the Netherlands. After consensus is reached, two blinded, bilingual Dutch physiotherapists will perform a backward translation. A committee composed of bilingual and Norwegian physiotherapists and one professional, authorized translator will comment on the translation process and the translated instrument.

The translated PABS-PT is planned to be used in a study "Attitudes and beliefs about low back pain: a cross-sectional survey of Norwegian physiotherapists" which will start in August this year. We will use the questionnaire version with 36 items, as administrated by Houben et al. (2005)², to examine the validity and factor structure of our translation and compare the results with other projects using your questionnaire.

The project will be performed by Nicolaas Eland who is a Master of Science student in Health Sciences at the University of Bergen. Main supervisor is professor Liv Inger Strand (PhD) and co-supervisor is associate professor Alice Kvåle (PhD).

We will appreciate very much your approval for translating the PABS-PT into Norwegian, adhering closely to the mother instrument, using the name: PABS-PT-NV (Norwegian version).

Yours sincerely,

Liv Inger Strand
Professor, PhD

Alice Kvåle
Associate Professor, PhD

Nicolaas Eland
PT, MT, Master of Science student

Street Address:
Kalfarveien 31

Postal address:
N-5018 BERGEN,
NORWAY

Telephone:
+ 47 55 58 61 00

Fax no, e.mail:
+ 47 55 58 61 30
liv.strand@isf.uib.no

APPENDIX 2b.

Approval of translation from Dr. Ostelo

-----Oorspronkelijk bericht-----

Van: Ostelo, R.

Verzonden: dinsdag 22 februari 2011 11:44

Aan: 'Liv Inger Strand'

Onderwerp: PABS-PT

Dear Liv,

Good to hear from you again, and also good that your paper is now available on PubMed!!

Of course I will 'approve' this translation. As Nicolas can read Dutch. I suggest that he use the Dutch version. Maybe he should not only focus on these 19 items, but translate the complete set as was administered by Ruud Houben. In this second version (see attachment) five additional items, aimed at enhancing the second factor, were added at to the original 31 items of the PABS-PT.

As we think this is still a questionnaire under development it would be good to translate the complete set and see if you find the same constructs (factors) after the translation. That would really strengthen the evidence regarding the PBAS. A second reason is that we don't know if they other items influence the answers on these 19 items, and therefore we recommend (so far) always to use the complete questionnaire and then calculate the sum scores per factor, but not to delete these items that do not load on a factor from the questionnaire.

I would be more than happy to answer anymore questions (if I have the answers...) and I am very interested in the outcome and see how the results are compared to some of the other international projects using this questionnaire.

Best wishes

Raymond

APPENDIX 3.

Summary of all translations of the PABS-PT.

Result of the expert committee's revision.

Translation of the PABS-PT

Result of the expert committee's revision

1. *Rugpijn betekent dat men moet stoppen met fysieke activiteit om geen letsel op te lopen*

Marianne/Jo (M/J): Ryggsmarter betyr at man må stoppe med fysisk aktivitet for å unngå skade

Nic (N): Smerter i ryggen betyr at man må stoppe med fysisk aktivitet for å unngå skade

Autorisert translatør (T): Når man får ryggsmarter, betyr dette at man må slutte med fysisk aktivitet for ikke å pådra seg skader.

English version (Eng): Back pain sufferers should refrain from all physical activity in order to avoid injury

Forslag til ekspert panel (Proposal): Når man får ryggsmarter må man slutte med fysisk aktivitet for ikke å pådra seg skader.

Consensus: **Ryggsmarter betyr at man må stoppe med fysisk aktivitet for å unngå skade**

2. *Een goede houding voorkomt rugpijn*

M/J: En god holdning forebygger ryggsmarter

N: En god holdning forebygger ryggsmarter

T: En god holdning forebygger ryggsmarter.

Eng: Good posture prevents back pain

Forslag:

Consensus: **En god kroppsholdning forebygger ryggsmarter**

3. *Kennis van de weefselschade is niet noodzakelijk om effectief te kunnen behandelen*

M/J: Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling

N: Kunnskap om vevsskaden er ikke nødvendig for en effektiv behandling

T: Kunnskap om vevsskaden er ingen betingelse for en effektiv behandling.

Eng: Knowledge of the tissue damage is not necessary for effective therapy

Forslag: Kunnskap om vevsskaden er ingen betingelse for en effektiv behandling

Consensus: **Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling**

4. *Een belangrijk middel bij de behandeling van rugpijn is verminderen van de dagelijkse fysieke belasting*

M/J: Et viktig element i behandlingen av ryggsmarter er å minske den daglige fysiske belastningen

N: Å redusere den daglige kroppslige belastningen er et viktig hjelpemiddel ved behandling av ryggsmarter

T: Reduksjon av den daglige fysiske belastningen er viktig ved behandling av ryggsmarter.

Eng: Reduction of daily physical exertion is a significant factor in treating back pain

Forslag: Reduksjon av den daglige fysiske belastningen er et viktig hjelpemiddel ved behandling av ryggsmarter

Consensus: **Reduksjon av den daglige fysiske belastningen er en viktig faktor ved behandling av ryggsmarter**

5. *Bij rugpijn wordt te weinig gezocht naar de onderliggende organische oorzaak*

M/J: Ved ryggsmarter blir det sett for lite etter de underliggende organiske årsakene

N: Ved ryggsmarter søkes for lite etter den underliggende organiske årsaken

T: Ved ryggsmarter blir det lett for lite etter den bakenforliggende årsaken.

Eng: Not enough effort is made to find the underlying organic causes of back pain

Forslag: Det letes for lite etter den underliggende organiske årsaken ved ryggsmarter

Consensus: **Ved ryggsmarter søkes det for lite etter den underliggende organiske årsaken**

6. *Psychische overbelasting leidt ook bij afwezigheid van weefselschade tot rugpijn*

M/J: Psykisk overbelastning fører også ved fravær av vevsskade til ryggsmarter

N: Psykisk overbelastning fører til ryggsmarter, også ved fravær av vevsskade

T: Psykisk overbelastning fører til ryggsmarter selv om det ikke foreligger vevsskade.

Eng: Mental stress can cause back pain even in the absence of tissue damage

Forslag: Psykisk overbelastning kan føre til ryggsmarter selv om det ikke foreligger vevsskade.

Consensus: **Mentalt stress kan føre til ryggsmarter, også ved fravær av vevsskade**

7. *De oorzaak van rugpijn is onbekend*

M/J: Årsaken til ryggsmarter er ukjent

N: Årsaken til ryggsmarter er ikke kjent

T: Årsaken til ryggsmarter er ukjent.

Eng: The cause of back pain is unknown

Forslag: Årsaken til ryggsmarter er ukjent

Consensus: **Årsak til ryggsmarter er ukjent**

8. *Eenzijdige fysieke belasting is geen oorzaak van rugpijn*

M/J: Ensidig fysisk belastning er ikke årsak til ryggsmarter

N: Ensidig kroppsbelastning er ikke årsak til ryggsmarter

T: Ensidig fysisk belastning forårsaker ikke ryggsmarter.

Eng: Unilateral physical stress is not a cause of back pain

Forslag: Ensidig kroppsbelastning er ikke årsak til ryggsmarter

Consensus: **Ensidig fysisk belastning er ikke årsak til ryggsmarter**

9. *Patiënten die rugpijn hebben gehad dienen rugbelastende activiteiten te vermijden*

M/J: Pasienter som har hatt ryggsmarter bør unngå ryggbelastende aktiviteter

N: Pasienter som har hatt ryggsmarter bør unngå ryggbelastende aktiviteter

T: Pasienter som har hatt ryggsmarter, bør unngå aktivitet som belaster ryggen.

Eng: Patients who have suffered back pain should avoid activities that stress the back

Forslag: Pasienter som har hatt ryggsmertes, bør unngå aktiviteter som belaster ryggen

Consensus: **Pasienter som har hatt ryggsmertes bør unngå aktiviteter som belaster ryggen**

10. *Pijn is het gevolg van weefselschade*

M/J: Smerter er en følge av vevsskade

N: Smerter er en følge av vevsskade

T: Smerter er en følge av vevsskade.

Eng: Pain is a nociceptive stimulus, indicating tissue damage

Forslag: Smerter innebærer at det foreligger en vevsskade

Consensus: **Smerter er en følge av vevsskade**

11. *Bij een patiënt met veel rugpijn is het juist goed om fysieke oefeningen te doen*

M/J: Hos en pasient med mye ryggsmertes er det en fordel å gjøre fysiske øvelser

N: Hos en pasient med store ryggsmertes er det helt riktig å gjøre fysiske øvelser

T: Nettopp pasienter med mange ryggsmertes har godt av å gjøre fysiske øvelser.

Eng: A patient suffering from severe back pain will benefit from physical exercise

Forslag: Nettopp pasienter med mye ryggsmertes har godt av å gjøre fysiske øvelser

Consensus: **Pasienter med mye ryggsmertes har spesielt godt av å gjøre fysiske øvelser**

12. *Functionele beperkingen bij rugpijn zijn het gevolg van psychosociale factoren*

M/J: Funksjonelle begrensninger ved ryggsmertes oppstår som følge av psykososiale faktorer

N: Funksjonelle begrensninger ved ryggplager er en følge av psykososiale faktorer

T: Funksjonelle begrensninger ved ryggsmertes er en følge av psykososiale faktorer.

Eng: Functional limitations associated with back pain are the result of psychosocial factors

Forslag: Funksjonelle begrensninger ved ryggsmertes er en følge av psykososiale faktorer

Consensus: **Funksjonelle begrensninger ved ryggsmertes er en følge av psykososiale faktorer**

13. *Bij rugpijn is het beste advies: "oppassen" en "geen onnodige bewegingen maken"*

M/J: Ved ryggsmertes er det beste rådet; " pass opp" og "ikke gjør noen unødvendige bevegelser"

N: Det beste rådet ved ryggplager er: «forsiktig» og « ikke gjør noen unødvendige bevegelser»

T: Det beste råd ved ryggsmertes er: "vær forsiktig" og "gjør ingen unødvendige bevegelser".

Eng: The best advice for back pain is: "Take care" and "Make no unnecessary movements"

Forslag: Det beste rådet ved ryggsmertes er: "vær forsiktig" og "gjør ingen unødvendige bevegelser".

Consensus: **Det beste rådet ved ryggsmertes er: "Vær forsiktig" og "Gjør ingen unødvendige bevegelser".**

14. *Patiënten met rugpijn kunnen beter alleen pijnvrije bewegingsfuncties oefenen*

M/J: Det er bedre for pasienter med rygg smerter å bare øve på smertefrie funksjonelle bevegelser

N: Pasienter med ryggplager bør kun øve på smertefrie bevegelsesfunksjoner

T: Det er best for pasienter med rygg smerter at de bare øver på smertefrie bevegelsesfunksjoner.

Eng: Patients with back pain should preferably practice only pain free movements

Forslag: Pasienter med rygg smerter bør helst kun utføre smertefrie bevegelser

Consensus: **Pasienter med rygg smerter bør helst bare øve på smertefrie bevegelser**

15. *Rugpijn betekent dat er iets gevaarlijk mis is in de rug*

M/J: Rygg smerter betyr at det er noe alvorlig galt med ryggen

N: Smerter i ryggen betyr at det er noe alvorlig galt med ryggen

T: Rygg smerter betyr at det er noe alvorlig i veien med ryggen.

Eng: Back pain indicates that there is something dangerously wrong with the back

Forslag: Smerter i ryggen betyr at det er noe alvorlig i veien med ryggen.

Consensus: **Rygg smerter betyr at det er noe alvorlig galt med ryggen**

16. *Hoe patiënten denken over hun pijn heeft invloed op het verloop van de klachten*

M/J: Hvordan pasientene tenker om sine rygg smerter har innflytelse på forløpet av plagene

N: Hvordan pasienter tenker om sine smerter har innflytelse på forløpet av symptomene.

T: Pasientenes måte å tenke på sine smerter på, påvirker forløpet symptomene får.

Eng: The way patients view their pain influences the progress of the symptoms

Forslag: Måten hvordan pasienter tenker over sine smerter, påvirker forløpet av plagene.

Consensus: **Måten pasienter tenker om sin smerte, påvirker forløpet av plagene.**

17. *Ondanks blijvende pijn kan een behandeling toch geslaagd zijn*

M/J: Selv om smertene fortsetter kan en behandling likevel være vellykket

N: En behandling kan være vellykket, selv om smertene ikke forsvinner

T: Selv om smerten vedvarer, kan en behandling være vellykket

Eng: Therapy may have been successful even if pain remains

Forslag: En behandling kan være vellykket, selv om smertene ikke er forsvunnet

Consensus: **Selv om smerten vedvarer, kan en behandling være vellykket**

18. *De functionele klachten ten gevolge van rugpijn kunnen door behandeling volledig verdwijnen*

M/J: De funksjonelle plagene som følge av rygg smerte kan ved hjelp av behandling forsvinne fullstendig

N: De funksjonelle plagene som følge av ryggplager kan forsvinne helt ved hjelp av behandling

T: De funksjonelle plager som følge av rygg smerter kan forsvinne fullstendig ved hjelp av behandling.

Eng: Therapy can completely alleviate the functional symptoms caused by back pain
Forslag: De funksjonelle plagene som følge av ryggsmarter kan forsvinne fullstendig ved hjelp av behandling

Consensus: **De funksjonelle plagene som følge av ryggsmarter kan forsvinne fullstendig ved hjelp av behandling**

19. *Als ADL activiteit tot meer rugpijn leidt is dat niet gevaarlijk*

M/J: Hvis ADL aktiviteter gir mer smerter er ikke det farlig

N: Det er ikke farlig hvis ADL aktiviteter gir økte smerter i ryggen

T: Hvis aktivitetene i dagliglivet fører til større ryggsmarter, er ikke dette farlig.

Eng: If ADL activities cause more back pain, this is not dangerous

Forslag: Hvis ADL aktiviteter forårsaker økte smerter i ryggen, er ikke dette farlig

Consensus: **Hvis aktiviteter i dagliglivet fører til økte ryggsmarter, er ikke dette farlig.**

20. *Rugpijn betekent dat er sprake is van organisch letsel*

M/J: Ryggsmarter betyr at det er organisk skade

N: Smerter i ryggen betyr at det foreligger organisk skade

T: Når man får ryggsmarter, betyr dette at det foreligger organisk skade.

Eng: Back pain indicates the presence of organic injury

Forslag: Når man har ryggsmarter, betyr dette at det foreligger organisk skade

Consensus: **Ryggsmarter betyr at det foreligger organisk skade**

21. *Voor patiënten met rugpijn is het af te raden om te sporten*

M/J: For pasienter med ryggsmarter er det ikke å anbefale å trene

N: For pasienter med ryggplager er det ikke å anbefale å drive med idrett

T: Pasienter med ryggsmarter må frarådes å drive med sport.

Eng: Sport should not be recommended for patients with back pain

Forslag: Pasienter med ryggsmarter bør frarådes å drive med sport.

Consensus: **Pasienter med ryggsmarter bør frarådes å drive med sport.**

22. *Bij toename van rugpijn pas ik de fysieke oefeningen in mijn behandeling onmiddellijk aan*

M/J: Ved økning av ryggsmarter tilpasser jeg de fysiske øvelsene i behandlingen min umiddelbart

N: Hvis ryggsmertene blir verre, tilpasser jeg umiddelbart øvelsene i min behandling

T: Når ryggsmertene øker, tilpasser jeg umiddelbart de fysiske øvelsene i min behandling.

Eng: If back pain increases in severity, I immediately adjust the intensity of my treatment accordingly

Forslag: Hvis ryggsmertene øker, tilpasser jeg umiddelbart intensiteten av min behandling

Consensus: **Hvis ryggsmertene øker, tilpasser jeg umiddelbart intensiteten av øvelsene i min behandling**

23. *Als de behandeling niet leidt tot een afname van rugpijn is er op termijn een groot risico op ernstige beperkingen*

M/J: Hvis behandlingen ikke fører til en reduksjon av ryggsmertene er det på sikt en stor fare for alvorlig funksjonsnedsettelse

N: Hvis behandling ikke resulterer i mindre smerter i ryggen, er det på sikt stor fare for alvorlig nedsatt funksjonsevne

T: Hvis behandlingen ikke fører til en lindring av ryggsmertene, er det på lang sikt stor fare for alvorlige begrensninger.

Eng: If therapy does not result in a reduction in back pain, there is a high risk of severe restrictions in the long term

Forslag: Hvis behandling ikke resulterer i mindre smerter i ryggen, er det på lang sikt stor fare for alvorlig nedsatt funksjonsevne

Consensus: **Hvis behandling ikke fører til mindre ryggsmertene, er det på lang sikt stor fare for alvorlig nedsatt funksjonsevne**

24. *Pijnvermindering is een voorwaarde om tot functieherstel te komen*

M/J: Smertereduksjon er en forutsetning for å oppnå en funksjonsbedring

N: Smertereduksjon er en forutsetning for å kunne oppnå normal funksjon

T: Smertelindring er en betingelse for å oppnå funksjonsbedring.

Eng: Pain reduction is a precondition for the restoration of normal functioning

Forslag: Smertelindring er en betingelse for å oppnå funksjonsbedring

Consensus: **Smertereduksjon er en forutsetning for å oppnå funksjonsbedring**

25. *Toename van pijnklachten betekent dat sprake is van nieuwe weefselschade of uitbreiding hiervan*

M/J: Smerteøkning betyr at det er snakk om ny vevsskade eller ekspansjon av denne

N: Økte smerter betyr at det foreligger ny vevsskade eller at vevsskaden er blitt større

T: En økning av smertesymptomer betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt større.

Eng: Increased pain indicates new tissue damage or the spread of existing damage

Forslag: En smerte økning betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt verre

Consensus: **Smerteøkning betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt større**

26. *De taak van de behandelaar is om de oorzaak van rugpijn weg te nemen*

M/J: Oppgaven til behandleren er å fjerne årsaken til ryggsmertene

N: Oppgaven til behandleren er å ta bort årsaken til ryggsmertene

T: Det er behandlerens oppgave å fjerne årsaken til ryggsmertene.

Eng: It is the task of the physiotherapist to remove the cause of back pain

Forslag: Det er behandlerens oppgave å ta bort årsaken til ryggsmertene.

Consensus: **Det er behandlerens oppgave å fjerne årsaken til ryggsmertene**

27. *Er bestaat geen effectieve behandeling die de rugpijn wegneemt*

M/J: Det består ingen effektiv behandling som fjerner rygg smerter

N: Det finnes ingen effektiv behandling som kan ta bort rygg smerter

T: Det finnes ingen effektiv behandling som fjerner rygg smerter.

Eng: There is no effective treatment to eliminate back pain

Forslag: Det finnes ingen effektiv behandling som kan ta bort rygg smerter

Consensus: **Det finnes ingen effektiv behandling som kan fjerne rygg smerter**

28. *Pijnverminderende middelen zoals TENS en/of rugbraces ondersteunen het functioneel herstel*

M/J: Smertelindrende middel som TENS og/eller ryggbracer støtter opp om den funksjonelle bedringen

N: Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til en funksjonsbedring

T: Smertelindrende midler som TENS og/eller ryggbraces [skinner?] støtter funksjonsbedringen [evt.: funksjonell restitusjon].

Eng: TENS and/or back braces support functional recovery

Forslag: Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til funksjonell restitusjon

Consensus: **Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til funksjonell bedring**

29. *Ook al is de pijn toegenomen, de patiënt kan toch fysieke oefeningen doen*

M/J: Selv om smertene har tiltatt, kan pasienten likevel gjøre fysiske øvelser

N: Selv om smertene er blitt verre, kan en pasient få treningsterapi

T: Pasienten kan gjøre fysiske øvelser selv om smerten har økt.

Eng: Even if the pain has worsened, the intensity of the next treatment can be increased (avviker med hensyn til innhold fra den ned. versjonen)

Forslag: En pasient kan gjøre fysiske øvelser, selv om smertene har tiltatt siden den forrige behandlingen

Consensus: **En pasient kan gjøre fysiske øvelser, selv om smertene har økt siden forrige behandling**

30. *Als patiënten pijn aangeven tijdens oefenen en/of fysieke activiteiten maak ik mij zorgen dat er iets wordt beschadigd*

M/J: Om pasientene angir smerte under øvelser og /eller fysisk aktivitet er jeg redd for at noe blir skadet

N: Hvis pasienter angir smerter ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe blir skadet

T: Når pasienten nevner at de har smerter under øving og/eller fysisk aktivitet, er jeg bekymret for at det oppstår en skade.

Eng: If patients complain of pain during exercise, I worry that damage is being caused

Forslag: Hvis pasienter angir smerter ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe kan bli skadet

Consensus: **Hvis pasienter angir smerte ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe blir skadet**

31. *De ernst van de weefselschade bepaalt de hoeveelheid pijn*

M/J: Alvorligheten i vevsskaden bestemmer graden av smerte

N: Alvorlighetsgrad av vevsskaden bestemmer hvor mye smerter en pasient har

T: Vevsskadens alvorlighetsgrad bestemmer hvor store smerter pasienten får.

Eng: The severity of tissue damage determines the level of pain

Forslag: Vevsskadens alvorlighetsgrad bestemmer hvor store smerter en pasient får

Consensus: **Vevsskadens alvorlighetsgrad bestemmer smertenivå**

32. *Een belangrijk doel van de behandeling is het zo snel mogelijk hervatten van de dagelijkse activiteiten*

M/J: Et viktig mål med behandlingen er å gjenoppta de daglige aktivitetene så fort som mulig

N: Et viktig mål med behandling er at pasienten gjenopptar de daglige aktiviteter så snart som mulig

T: Et viktig formål med behandlingen er at pasienten snarest mulig gjenopptar sin daglige aktivitet.

Eng: A rapid resumption of daily activities is an important goal of the treatment

Forslag: Et viktig formål med behandlingen er at pasienten snarest mulig gjenopptar sine daglige aktiviteter.

Consensus: **Et viktig mål med behandlingen er at pasienten snarest mulig gjenopptar sine daglige aktiviteter.**

33. *Leren omgaan met stress bevordert het herstel van rugpijn*

M/J: Å lære å omgå stress fremskynder tilhelingen av ryggsmarter

N: Læring av stressmestring fremmer tilheling av ryggsmarter

T: Når man lærer å takle stress, fører dette til at ryggsmertenivået blir lavere.

Eng: Learning to cope with stress promotes recovery from back pain

Forslag: Når man lærer å takle stress, medvirker dette til reduserte ryggsmarter

Consensus: **Læring av stressmestring fremmer tilheling av ryggsmarter**

34. *In de behandeling moeten oefeningen die de rug belasten niet geschuwd worden*

M/J: I behandlingen må øvelser som belaster ryggen ikke unngås

N: Øvelser som belaster ryggen må ikke unngås i behandlingen

T: Under behandlingen behøver man ikke å unngå øvelser som belaster ryggen.

Eng: Exercises that may be back straining should not be avoided during the treatment

Forslag: Øvelser som er belastende for ryggen bør ikke unngås i behandlingen

Consensus: **Øvelser som belaster ryggen må ikke unngås i behandlingen**

35. *Rugpijnpatiënten lopen een groter risico om op den duur rugafwijkingen op te lopen*

M/J: Ryggsmertepasienter løper en større risiko i å utvikle varige skader på sikt

N: På lengre sikt har pasienter med ryggsmarter større risiko for å utvikle varige skader

T: Ryggsmertepasienter løper en større risiko for med tiden å pådra seg avvik i ryggen.

Eng: In the long run, patients with back pain have a higher risk of developing spinal impairments

Forslag: På lengre sikt har pasienter med ryggsmarter større risiko for å utvikle varige skader i ryggen

Consensus: **På lang sikt har pasienter med ryggsmarter større risiko for å utvikle skade eller dysfunksjon i ryggen**

36. Bij rugpijn is beeldvormende diagnostiek overbodig

M/J: Ved ryggsmarter er billeddiagnostikk unødvendig

N: Ved ryggsmarter er billeddiagnostikk unødvendig

T: Bildedannende diagnostikk er overflødig ved ryggsmarter.

Eng: In back pain, imaging tests are unnecessary

Forslag: Ved ryggsmarter er billeddiagnostikk unødvendig

Consensus: **Ved ryggsmarter er billeddiagnostikk unødvendig**

APPENDIX 4.

Letter to the president of the Norwegian Association for
Physiotherapists (NFF).



UNIVERSITETET I BERGEN

Institutt for samfunnsmedisinske fag
Forskningsgruppe i fysioterapi

Bergen, 30. august 2011

Til Norsk fysioterapeutforbund
v/ forbundsleder Eilin Ekeland
Postboks 2704, St Hanshaugen,
0131 OSLO

Vi viser til en hyggelig, men kort samtale på WCPT i Amsterdam om en planlagt studie for å undersøke holdninger relatert til korsryggsmarter blant fysioterapeuter. Manuellterapeut Nic Eland ønsker å gjennomføre studien som sin masteroppgave, og vi skal være hans veiledere. Til studien trenger han svar på et spørreskjema fra et stort antall fysioterapeuter. Vi henvender oss til deg for å undersøke muligheten til å få tilgang til e-post adresser til medlemmer i NFF i forbindelse med studien. Under gjør vi kortfattet rede for den.

Prosjekttittel:

ATTITUDES AND BELIEFS ABOUT LOW BACK PAIN: A CROSS-SECTIONAL SURVEY OF NORWEGIAN PHYSIOTHERAPISTS

Hensikt

Hensikten med studien er å oversette og validere spørreskjemaet Pain Attitude and Beliefs Scale for Physiotherapists (PABS-FT) som ble utviklet av Raymond Ostelo m.fl. i 2005 i Nederland (skjema er vedlagt) (Ostelo vil også bidra i studien). Gjennom spørreskjemaet kartlegges fysioterapeutenes holdninger og antagelser om sammenheng mellom korsryggsmarter og funksjonsproblemer. Fysioterapeutenes holdninger og antagelser kan ha innflytelse på deres kliniske praksis, og eventuelt ha sammenheng med deres alder, kjønn og (etter)utdanning.

Relevans for fysioterapifaget

Spørreskjemaet identifiserer både biomedisinske og biopsykososiale tilnæringsmåter blant behandlere. Kliniske retningslinjer anbefaler en overveiende biopsykososial tilnærming med identifisering av psykososiale faktorer som hindrer tilbakevending til normal aktivitet og deltakelse i samfunnet. Derimot har behandlernes anbefalinger om å unngå smerter og normal aktivitet, samt passive behandlingsstrategier og henvisning til unødvendige undersøkelser, vist seg å bidra til en kronifisering av ryggsmarter.

Forskningsgruppen i fysioterapi ved Universitetet i Bergen mener at studien kan bidra til en kvalitetssikring av fysioterapipraksis og klinisk kompetanseheving blant fysioterapeuter. En norsk versjon av PABS-FT gjør oss i stand til å få kunnskap om norske fysioterapeuters holdninger og antagelser og evaluere effekten av tiltak og informasjon med sikte på å implementere forskningsbasert kunnskap om ryggsmarter i daglig praksis. PABS-FT er blitt brukt i flere studier i Nederland, Tyskland, Storbritannia, Irland og Brasil, blant annet ved å måle endringer i holdninger over tid hos fysioterapistudenter. Spørreskjemaet er også blitt

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brukt til å kartlegge legers holdninger. Vi har dermed et sammenligningsgrunnlag for våre resultater.

Materiale og metode

Prosjektet planlegges som en internettbasert spørreskjemaundersøkelse med et tverrsnittsdesign. Et utvalg av fysioterapeuter og manuellterapeuter som bor og praktiserer i Norge blir bedt om sin mening angående ryggsmarter ved hjelp av Pain Attitude and Beliefs Scale for Physiotherapists.

Til prosjektet trenges e-postadresser til fysioterapeuter i tre eller fire fylker for å gjøre utvalget tilnærmet representativt for norske fysioterapeuter.

Prosjektet forutsetter godkjenning av Regional Komité for Medisinsk og Helsefaglig Forskningsetikk (REK) og av Norsk Samfunnsvitenskapelig Datatjeneste (NSD).

Vi håper på positivt bidrag til studien fra NFF!

Vennlig hilsen



Liv Inger Strand
Professor
Forskningsgruppen i fysioterapi



Alice Kvåle
Førsteamanuensis

Nic Eland
Manuellterapeut og masterstudent
(sign.)

Vedlegg: Kopi av PABS-FT spørreskjema

Pain Attitude and Beliefs Scale for Physiotherapists (PABS-FT)

The purpose of this list is to help us analyse how you, the therapist, approach the most common forms of back pain. We do not mean back pain resulting from a radicular syndrome, cauda equina syndrome, fractures, infections, inflammation, a tumour or metastasis. It is not our intention to test your knowledge of back pain. We would simply like to know how you approach the treatment of back pain. We are looking for your opinion; the opinions of others are not relevant. We would like you to indicate the level to which you agree or disagree with each statement. 1='totally disagree', 2='largely disagree', 3='disagree to some extent', 4='agree to some extent', 5='largely agree', and 6='totally agree'.

- 1 Back pain sufferers should refrain from all physical activity in order to avoid injury
- 2 Good posture prevents back pain
- 3 Knowledge of the tissue damage is not necessary for effective therapy
- 4 Reduction of daily physical exertion is a significant factor in treating back pain
- 5 Not enough effort is made to find the underlying organic causes of back pain
- 6 Mental stress can cause back pain even in the absence of tissue Damage
- 7 The cause of back pain is unknown
- 8 Unilateral physical stress is not a cause of back pain
- 9 Patients who have suffered back pain should avoid activities that stress the back
- 10 Pain is a nociceptive stimulus, indicating tissue damage
- 11 A patient suffering from severe back pain will benefit from physical exercise
- 12 Functional limitations associated with back pain are the result of psychosocial factors
- 13 The best advice for back pain is: "Take care" and "Make no unnecessary movements"
- 14 Patients with back pain should preferably practice only pain free movements
- 15 Back pain indicates that there is something dangerously wrong with the back
- 16 The way patients view their pain influences the progress of the symptoms
- 17 Therapy may have been successful even if pain remains
- 18 Therapy can completely alleviate the functional symptoms caused by back pain
- 19 If ADL activities cause more back pain, this is not dangerous
- 20 Back pain indicates the presence of organic injury
- 21 Sport should not be recommended for patients with back pain
- 22 If back pain increases in severity, I immediately adjust the intensity of my treatment accordingly
- 23 If therapy does not result in a reduction in back pain, there is a high risk of severe restrictions in the long term
- 24 Pain reduction is a precondition for the restoration of normal functioning
- 25 Increased pain indicates new tissue damage or the spread of existing damage
- 26 It is the task of the physiotherapist to remove the cause of back pain
- 27 There is no effective treatment to eliminate back pain
- 28 TENS and/or back braces support functional recovery
- 29 Even if the pain has worsened, the intensity of the next treatment can be increased
- 30 If patients complain of pain during exercise, I worry that damage is being caused
- 31 The severity of tissue damage determines the level of pain
- 32 A rapid resumption of daily activities is an important goal of the treatment
- 33 Learning to cope with stress promotes recovery from back pain
- 34 Exercises that may be back straining should not be avoided during the treatment
- 35 In the long run, patients with back pain have a higher risk of developing spinal impairments
- 36 In back pain, imaging tests are unnecessary

APPENDIX 5.

Copy of e-mail invitation to participants as sent by the
Norwegian Association of Physiotherapists (NFF)

Fra: Rekve Vidar< vr@fysio.no>
Sendt: 7. februar 2012 14:23
Til: Rekve Vidar
Kopi: Rekve Vidar
Emne: Forskningsgruppe i fysioterapi (UiB) inviterer til deltagelse i undersøkelse

(Vær vennlig å ikke sende svar til avsender av denne e-posten. Kontaktperson for eventuelle spørsmål om undersøkelsen er oppgitt nedenfor.)

* * *

Invitasjon

Norsk Fysioterapeutforbund har fått forespørsel fra Forskningsgruppe i Fysioterapi ved Institutt for samfunnsmedisinske fag ved Universitetet i Bergen om å sende følgende invitasjon til et utvalg av sine medlemmer. NFF oppfordrer medlemmer som har anledning til det, til å delta i undersøkelsen.

Kjære kollega,

Forskningsgruppe i Fysioterapi inviterer NFFs medlemmer til å delta i en spørreundersøkelse om behandling av korsryggplager. Forskningsgruppen utfører denne undersøkelsen for å finne ut hvilke oppfatninger klinikere har, og hvilke kriterier de bruker ved behandling av pasienter med ryggplager. Resultatene fra undersøkelsen blir brukt til å utvikle og validere et norsk måleinstrument av behandlingsorienteringer blant helsepersonell.

Din mening er viktig for oss! Vi ber deg fylle ut et kort spørreskjema om dine synspunkter og hvordan du i din kliniske praksis tilnærmer deg korsryggplager. Besvarelsen tar omtrent 15 min.

Trykk på denne linken for å delta i undersøkelsen:

<https://www.surveymonkey.com/s/2KSFW65>

Tusen takk for at du er med i undersøkelsen! Med din besvarelse bidrar du til utvikling av anbefalinger for fremtidig forskning og klinisk praksis. Har du spørsmål til undersøkelsen, kan du kontakte Nic Eland per e-post: nic@eland.no

Med vennlig hilsen,

Forskningsgruppe i Fysioterapi Universitetet i Bergen

Nic Eland
Liv Inger Strand
Alice Kvåle

* * *

APPENDIX 6.

Copy of an e-mail invitation to specialist participants as sent by the researchers.

Fra: survey-noreply@smo.surveymonkey.com på vegne av Nicolaas.Eland@student.uib.no via surveymonkey.com <member@surveymonkey.com>

Sendt: 20. februar 2012 21:29

Til: nico

Emne: Forskningsgruppe i Fysioterapi- UiB inviterer til deltagelse i undersøkelse

Kjære kollega,

Forskningsgruppe i Fysioterapi ved Institutt for samfunnsmedisinske fag ved Universitetet i Bergen inviterer deg til å delta i en spørreundersøkelse om behandling av korsryggplager. Forskningsgruppen utfører denne undersøkelsen for å finne ut hvilke oppfatninger klinikere har og hvilke kriterier de bruker ved behandling av pasienter med ryggplager. Resultatene fra undersøkelsen blir brukt til å utvikle og validere et nytt norsk måleinstrument av behandlingsorienteringer blant helsepersonell.

Din mening er viktig for oss! Vi ber deg derfor fylle ut en kort spørreundersøkelse om dine synspunkter og hvordan du i din kliniske praksis tilnærmer deg korsryggplager. Besvarelsen tar omtrent 15 min.

Klikk på denne linken for å delta i undersøkelsen:

https://www.surveymonkey.com/s.aspx?sm=SWRdK8ODGGG5jllcHtAHA_3d_3d

Denne linken er knyttet unikt til denne undersøkelsen og e-postadressen din. Vennligst ikke videresend denne meldingen. Dine svar blir behandlet med full anonymitet og kan ikke knyttes til ditt navn og e-postadresse. Undersøkelsen er kryptert og linkene til undersøkelsen er sikre. Det er selvsagt helt frivillig å delta.

Tusen takk for at du er med i vår undersøkelse! Med din besvarelse bidrar du til utvikling av anbefalinger for fremtidig forskning og klinisk praksis. Hvis du allerede har besvart undersøkelsen (på forespørsel fra NFF) ber vi deg se bort fra denne invitasjonen. Har du spørsmål til undersøkelsen, vennligst kontakt Nic Eland per e-post: nic@eland.no.

Med vennlig hilsen,

Forskningsgruppe i Fysioterapi Universitetet i Bergen

Nic Eland

Liv Inger Strand

Alice Kvåle

Hvor fikk vi din e-post adresse fra?

Denne utsendelsen er basert på lister som er offentlig tilgjengelig på websidene til Norsk Fysioterapeuters Forbund og Manuellterapeuters Servicekontor. Vår liste blir slettet når studien er fullført. Dersom du ikke ønsker å motta e-post fra oss, kan du klikke linken nedenfor. Da fjernes du automatisk fra vår liste.

https://www.surveymonkey.com/optout.aspx?sm=SWRdK8ODGGG5jllcHtAHA_3d_3d

APPENDIX 7a.

The complete questionnaire.

Forskningsgruppe i Fysioterapi - Institutt for samfunnsmedisinske fag -

1. INTRODUKSJON

Kjære kollega,

Vi ber deg besvare denne spørreundersøkelsen for å hjelpe oss med å kartlegge klinikernes oppfatninger om uspesifikke korsryggplager.

Klinikere må vanligvis ta hensyn til mange forskjellige faktorer hos pasienter og behandlingstilnærmingene er således varierende. Vår hensikt er å kartlegge hvordan de forskjellige behandlere vektlegger disse faktorene.

Spørsmålene i undersøkelsen er blitt brukt i flere internasjonale surveys. Vårt mål er å utvikle og validere et norsk måleinstrument som kan brukes i framtidig forskning om ryggsmarter og klinisk praksis i Norge.

Undersøkelsen består av to deler:

Del 1 ber deg om opplysninger om din bakgrunn og praksis

Del 2 etterspør dine oppfatninger som kliniker.

Dine svar blir naturligvis behandlet konfidensielt. Svarene kan ikke knyttes til ditt navn eller e-postadresse. Din deltakelse er helt frivillig. Norsk Samfunnsvitenskapelig Datatjeneste (NSD) har godkjent datainnsamling til denne undersøkelsen.

Takk for at du bruker tid til å bidra til vår ryggforskning!

Med vennlig hilsen,

Forskningsgruppe i Fysioterapi Universitetet i Bergen,

Nic Eland
Liv Inger Strand
Alice Kvåle

Vennligst besvar undersøkelsen ved å klikke på et svaralternativ. Første spørsmål må besvares før du kan fortsette. Dersom du svarer "nei" på dette spørsmålet, blir spørreundersøkelsen avsluttet.

*** 1. Har du undersøkt eller behandlet minst én pasient med korsryggsmarter i løpet av de siste 6 måneder?**

- Ja
 Nei

2. DEL 1. Dine demografiske opplysninger

2. Er du mann eller kvinne?

- mann
 kvinne

Forskningsgruppe i Fysioterapi - Institutt for samfunnsmedisinske fag -

3. Din alder?

- 20-25 år 41-45 år 60-67 år
- 26-30 år 46-50 år over 67 år
- 31-35 år 51-55 år
- 36-40 år 56-60 år

4. Hva er din profesjonelle bakgrunn? Velg ett svaralternativ.

- Fysioterapeut Mensendiecker Spesialist i fysioterapi (allmen, idrett, rehabilitering, ortopedisk, reumatologisk, neurologi, osv)
- Kiropraktor Osteopat
- Manuellterapeut Psykomotoriker

Annet (vennligst spesifiser)

5. Hvor mange år har du praktisert?

- 1-5 år 21-25 år
- 6-10 år 26-30 år
- 11-15 år 30-40 år
- 16-20 år mer enn 40 år

6. Med hensyn til din aktuelle arbeidssituasjon, i hva slags praksis jobber du?

- Solopraksis Rehabiliteringsklinikk
- Gruppepraksis 2-5 personer Smerteklinikk
- Gruppepraksis 6-10 personer Sykehus
- Gruppepraksis mer enn 10 personer Treningssenter

Annet (vennligst spesifiser)

7. Hvordan vil du beskrive din profesjonelle interesse for korsryggplager?

- Betydelig interesse
- Ryggplager er ett av flere interesseområder
- Interessert på lik linje med andre fagområder

3. DEL 1. Din behandling av pasienter med ryggplager

8. Hvor mange pasientkonsultasjoner har du anslagsvis per uke?

Totalt antall konsultasjoner
per uke

Forskningsgruppe i Fysioterapi - Institutt for samfunnsmedisinske fag -

9. Hvor mange pasienter med ryggplager konsulterer deg per uke?

antall ryggpasienter per uke

10. Har du fulgt kurs eller etterutdanning i en eller flere av de følgende behandlingsmåter for ryggplager?

- | | | |
|---|---|--|
| <input type="checkbox"/> McKenzie | <input type="checkbox"/> Medisinsk treningsterapi | <input type="checkbox"/> Pilates |
| <input type="checkbox"/> Manuellterapi (f.e. Maitland/Mulligan) | <input type="checkbox"/> Akupunktur/IMS | <input type="checkbox"/> Laser/shockwave |
| <input type="checkbox"/> Redcord concept | <input type="checkbox"/> klassifikasjonsbasert kognitiv funksjonell terapi (O'Sullivan) | <input type="checkbox"/> Core stability retraining/motorisk kontroll |
| <input type="checkbox"/> Ortopedisk medisin (Cyriax)concept | <input type="checkbox"/> Basal kroppsbevissthet | |
| <input type="checkbox"/> Kognitiv adferdsterapi | <input type="checkbox"/> Feldenkrais | |

Annet (vennligst spesifiser)

4. DEL 1. Dine egne erfaringer og fremgangsmåte

11. Har du eller har du selv hatt korsryggplager?

- Nei
- Ja, jeg har (hatt) akutte ryggplager
- Ja, jeg har (hatt) ryggplager som varte lenger enn 14 dager, men mindre enn 3 måneder
- Ja, jeg har (hatt) kroniske ryggplager (lenger enn 3 måneder)

12. Hvordan vil du beskrive din fremgangsmåte ved behandling av uspesifikke korsryggplager?

- Jeg behandler til pasienten er (tilnærmet) smertefri eller tilfreds med resultatet
- Jeg avtaler et bestemt antall behandlinger eller en bestemt tidsramme for behandlingen
- Jeg behandler til pasient mestrer sine ADL-aktiviteter eller arbeidsoppgaver
- Jeg behandler til pasienten har oppnådd tilstrekkelig styrke, bevegelighet og motorisk kontroll

Annet (vennligst spesifiser)

13. I hvilken grad er du kjent med de nasjonale kliniske retningslinjene for behandling av korsryggsmarter fra Formidlingsenheten for muskel-og skjelettlidelser (FORMI)?

- Jeg har lest retningslinjene
- Jeg kjenner retningslinjene i store trekk
- I liten grad kjent med retningslinjene
- Jeg har ikke lest retningslinjene

5. DEL 2 av spørreskjemaet: Behandlerens tilnærming skala

Forskningsgruppe i Fysioterapi - Institutt for samfunnsmedisinske fag -

I del 2 av spørreskjemaet ønsker vi å kartlegge klinikernes oppfatninger om uspesifikke korsryggplager. Med uspesifikke ryggplager mener vi ryggplager som IKKE skyldes radikulær syndrom, cauda equina syndrom, frakturer, infeksjoner, betennelser, tumorer eller metastaser.

Det er ikke vår hensikt å teste din kunnskap om ryggplager eller kliniske retningslinjer. Vi ønsker bare å vite hva du mener om behandling av korsryggplager. Det handler altså om DINE synspunkter; hva andre mener er ikke relevant.

Spørreskjemaets del 2 består av 36 påstander. Vi ber deg angi i hvilken grad du er uenig eller enig i hver påstand. Det er viktig for vår analyse at du markerer din mening ved alle påstander, selv om noen er vanskelige å besvare eller synes å overlape hverandre.

14. Ryggsmarter betyr at man må stoppe med fysisk aktivitet for å unngå skade

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

15. En god kroppsholdning forebygger ryggsmarter

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

16. Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

17. Reduksjon av den daglige fysiske belastningen er en viktig faktor ved behandling av ryggsmarter

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

18. Ved ryggsmarter søkes det for lite etter den underliggende organiske årsaken

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

19. Mentalt stress kan føre til ryggsmarter, også ved fravær av vevsskade

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

20. Årsak til ryggsmarter er ukjent

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

21. Ensidig fysisk belastning er ikke årsak til ryggsmarter

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

22. Pasienter som har hatt ryggsmarter bør unngå aktiviteter som belaster ryggen

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

Forskningsgruppe i Fysioterapi - Institutt for samfunnsmedisinske fag -

23. Smerter er en følge av vevsskade

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

24. Pasienter med mye ryggsmarter har spesielt godt av å gjøre fysiske øvelser

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

25. Funksjonelle begrensninger ved ryggsmarter er en følge av psykososiale faktorer

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

26. Det beste rådet ved ryggsmarter er: "Vær forsiktig" og "Gjør ingen unødvendige bevegelser"

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

27. Pasienter med ryggsmarter bør helst bare øve på smertefrie bevegelser

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

28. Ryggsmarter betyr at det er noe alvorlig galt med ryggen

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

29. Måten pasienter tenker om sin smerte, påvirker forløpet av plagene

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

30. Selv om smerten vedvarer, kan en behandling være vellykket

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

31. De funksjonelle plagene som følge av ryggsmarter kan forsvinne fullstendig ved hjelp av behandling

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

6. DEL 2 av spørreskjemaet: Behandlerens tilnærming skala

32. Hvis aktiviteter i dagliglivet fører til økte ryggsmarter, er ikke dette farlig

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

Forskningsgruppe i Fysioterapi - Institutt for samfunnsmedisinske fag -

33. Ryggsmertes betyr at det foreligger organisk skade

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

34. Pasienter med ryggsmertes bør frarådes å drive med sport

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

35. Hvis ryggsmertene øker, tilpasser jeg umiddelbart intensiteten av øvelsene i min behandling

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

36. Hvis behandling ikke fører til mindre ryggsmertes, er det på lang sikt stor fare for alvorlig nedsatt funksjonsevne

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

37. Smertereduksjon er en forutsetning for å oppnå funksjonsbedring

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

38. Smerteøkning betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt større

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

39. Det er behandlerens oppgave å fjerne årsaken til ryggsmerten

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

40. Det finnes ingen effektiv behandling som kan fjerne ryggsmertes

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

41. Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til funksjonell bedring

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

42. En pasient kan gjøre fysiske øvelser, selv om smertene har økt siden forrige behandling

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

Forskningsgruppe i Fysioterapi - Institutt for samfunnsmedisinske fag -

43. Hvis pasienter angir smerte ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe blir skadet

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

44. Vevsskadens alvorlighetsgrad bestemmer smertenivå

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

45. Et viktig mål med behandlingen er at pasienten snarest mulig gjenopptar sine daglige aktiviteter

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

46. Læring av stressmestring fremmer tilheling av ryggsmarter

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

47. Øvelser som belaster ryggen må ikke unngås i behandlingen

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

48. På lang sikt har pasienter med ryggsmarter større risiko for å utvikle skade eller dysfunksjon i ryggen

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

49. Ved ryggsmarter er billeddiagnostikk unødvendig

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

7. AVSLUTNINGSSIDEN

Takk for at du tok deg tid til å besvare vår undersøkelse! Vi setter stor pris på din bidrag!

Når du trykker på FERDIG knappen, blir du videreført til forskningsgruppens webside, der du finner informasjon om våre interessefelt og pågående prosjekter.

Med vennlig hilsen,

Forskningsgruppe i Fysioterapi ved Universitetet i Bergen,

Nic Eland
Liv Inger Strand
Alice Kvåle

50. Eventuelle bemerkninger til spørreskjemaet kan du skrive i boksen nedenfor.

APPENDIX 7 b.

The questionnaire; English translation

4Forskningsgruppe i Fysioterapi - Institutt for Samfunnsmedisinske fag -

1. INTRODUCTION

Dear Colleague,

We kindly ask you to complete this questionnaire to help us explore clinicians' cognitions on nonspecific low back pain.

Usually, clinicians have to consider many different factors in examining and treating patients with low back pain and treatment orientations are often diverging. The purpose of our study is to find out how therapists assess these factors.

The questions in this investigation have been used in several international surveys. The aim of our study is to develop and validate a Norwegian measurement tool that can be used in future research on back pain and clinical practice in Norway.

The survey comprises two parts:

In part one, you are asked for information on your professional background and practice

In part two, you are asked for your opinion as a clinician

Of course, your answers are handled confidentially. Answers cannot be linked to your name or email address. Participation is voluntary. The project has been reviewed and approved by the Norwegian Data Protection Official for Research (NSD).

Thank you for spending your time to participate in our research!

Kind regards,

Research group in physiotherapy, University of Bergen

Nic Eland
Liv Inger Strand
Alice Kvåle

To answer, please tick on an alternative. The first question must be answered before you can continue. If you answer "No" to this question, the survey will be ended.

***1. Have you examined or treated at least one patient suffering from low back pain during the last 6 months?**

- Yes
 No

2. Part 1. Your demographic information

2. Are you male or female?

- male
 female

4Forskningsgruppe i Fysioterapi - Institutt for Samfunnsmedisinske fag -

3. Your age?

- 20-25 years 41-45 years 60-67 years
- 26-30 years 46-50 years over 67 years
- 31-35 years 51-55 years
- 36-40 years 56-60 years

4. What is your professional background? Please choose an alternative

- Chiropractor Osteopath Psychomotor physiotherapist
- Manual therapist Physiotherapist
- Mensendieck therapist Physiotherapy specialist(allmen, idrett, rehabilitering, ortopedisk, reumatologisk, neurologi, osv)

Other(please specify)

5. How many years have you been practicing?

- 1-5 years 21-25 years
- 6-10 years 26-30 years
- 11-15 years 30-40 years
- 16-20 years more than 40 years

6. With regard to your present job, in what kind of practice do you work?

- Solo practice Rehabilitation Clinic
- Group practice 2-5 therapists Pain Clinic
- Group practice 6-10 therapists Hospital
- Group practice, more than 10 therapists Gym Studio

Annet (vennligst spesifiser)

7. How would you describe your interest in low back pain?

- Considerable interest
- Back pain is one of my fields of interest.
- interested alike with other fields of interest

3. PART 1. Your treatment of patients with back pain

8. How many patient consultations do you have in one week?

Number of consultations a week

4 Forskningsgruppe i Fysioterapi - Institutt for Samfunnsmedisinske fag -

9. How many patients with low back pain do consult you in one week?

number of patients with
back pain in one week

10. Have you been following postgraduate courses in one of the listed treatment methods for back pain?

- | | | |
|--|---|--|
| <input type="checkbox"/> McKenzie | <input type="checkbox"/> Medical training therapy | <input type="checkbox"/> Pilates |
| <input type="checkbox"/> Manual therapy (e.g. Maitland, Mulligan etc.) | <input type="checkbox"/> Acupuncture/IMS | <input type="checkbox"/> Laser/shockwave |
| <input type="checkbox"/> Redcord concept | <input type="checkbox"/> Classification based cognitive functional therapy (O'Sullivan) | <input type="checkbox"/> Core stability retraining/motor control |
| <input type="checkbox"/> Orthopaedic medicine (Cyriax)concept | <input type="checkbox"/> Basic Body Awareness | |
| <input type="checkbox"/> Cognitive behavioral therapy | <input type="checkbox"/> Feldenkrais | |

Annet (vennligst spesifiser)

4. Part 1. Your own experiences and treatment approach

11. Do you have or have you had low back pain?

- No
- Yes, I have (had) acute low back pain
- Yes, I have (had) back pain that lasted longer than 2 weeks, but shorter than 3 months.
- Yes, I have (had) chronic back pain (lasting longer than 3 months)

12. How would you describe your treatment approach?

- I treat until the patient is (largely) pain free, or until the patient is satisfied with the result
- I prearrange a certain number of treatment sessions or a certain time frame for treatment.
- I treat until the patient can manage his ADL-activities or functional work tasks
- I treat until the patient has achieved sufficient strength, mobility and/or motor control.

Annet (vennligst spesifiser)

13. To what degree are you familiar with the national clinical guidelines for treatment of low back pain from the Formidlingsenheten for muskel-og skjelettlidelser (FORMI)?

- I have read the guidelines
- I know the guidelines in broad outline
- I have a nodding acquaintance with the guidelines
- I have not read the guidelines

5. PART 2 of the questionnaire: Health providers pain & orientation scale

4Forskningsgruppe i Fysioterapi - Institutt for Samfunnsmedisinske fag -

The purpose of part 2 of the questionnaire is to analyse how clinicians approach so-called nonspecific back pain. By nonspecific low back pain we mean back pain that is NOT the result of a radicular syndrome, cauda equina syndrome, fractures, infections, inflammation, tumours or metastasis.

It is not our intention to test your knowledge of back pain or clinical guidelines. We would simply like to know what you think about the treatment of low back pain. We are looking for YOUR opinion; the opinions of others are not relevant.

Part 2 of the questionnaire comprises 36 statements. We would like you to indicate the level to which you agree or disagree with each statement. It is important for our analysis that you mark your opinion on each statement, even when some statements are difficult to answer or seem to overlap with other statements.

14. Ryggsmertes betyr at man må stoppe med fysisk aktivitet for å unngå skade

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

15. En god kroppsholdning forebygger ryggsmertes

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

16. Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

17. Reduksjon av den daglige fysiske belastningen er en viktig faktor ved behandling av ryggsmertes

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

18. Ved ryggsmertes søkes det for lite etter den underliggende organiske årsaken

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

19. Mental stress kan føre til ryggsmertes, også ved fravær av vevsskade

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

20. Årsaken til ryggsmertes er ukjent

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

21. Ensidig fysisk belastning er ikke årsak til ryggsmertes

- Helt uenig I stor grad uenig Litt uenig Litt enig I stor grad enig Helt enig

APPENDIX 8.

The Pain Attitudes and Beliefs Scale for Physiotherapists (Norwegian version)

Behandlerens tilnærming skala

I del 2 av spørreskjemaet ønsker vi å kartlegge klinikernes oppfatninger om uspesifikke korsryggplager. Med uspesifikke ryggplager mener vi ryggplager som IKKE skyldes radikulær syndrom, cauda equina syndrom, frakturer, infeksjoner, betennelser, tumorer eller metastaser.

Det er ikke vår hensikt å teste din kunnskap om ryggplager eller kliniske retningslinjer. Vi ønsker bare å vite hva du mener om behandling av korsryggplager. Det handler altså om DINE synspunkter; hva andre mener er ikke relevant.

Spørreskjemaets del 2 består av 36 påstander. Vi ber deg angi i hvilken grad du er uenig eller enig i hver påstand:

1=helt uenig, 2= i stor grad uenig, 3= litt uenig, 4= litt enig, 5= i stor grad enig, 6= helt enig

Det er viktig for vår analyse at du markerer din mening ved alle påstander, selv om noen er vanskelige å besvare eller synes å overlappe hverandre.

-
- 1. Ryggsmerter betyr at man må stoppe med fysisk aktivitet for å unngå skade**
 - 2. En god kroppsholdning forebygger ryggsmerter**
 - 3. Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling**
 - 4. Reduksjon av den daglige fysiske belastningen er en viktig faktor ved behandling av ryggsmerter**
 - 5. Ved ryggsmerter søkes det for lite etter den underliggende organiske årsaken**
 - 6. Mentalt stress kan føre til ryggsmerter, også ved fravær av vevsskade**
 - 7. Årsak til ryggsmerter er ukjent**
 - 8. Ensidig fysisk belastning er ikke årsak til ryggsmerter**
 - 9. Pasienter som har hatt ryggsmerter bør unngå aktiviteter som belaster ryggen**
 - 10. Smerter er en følge av vevsskade**
 - 11. Pasienter med mye ryggsmerter har spesielt godt av å gjøre fysiske øvelser**
 - 12. Funksjonelle begrensninger ved ryggsmerter er en følge av psykososiale faktorer**

13. Det beste rådet ved ryggsmarter er: "Vær forsiktig" og "Gjør ingen unødvendige bevegelser"
14. Pasienter med ryggsmarter bør helst bare øve på smertefrie bevegelser
15. Ryggsmarter betyr at det er noe alvorlig galt med ryggen
16. Måten pasienten tenker om sin smerte, påvirker forløpet av plagene
17. Selv om smerten vedvarer, kan en behandling være vellykket
18. De funksjonelle plagene som følge av ryggsmarter kan forsvinne fullstendig ved hjelp av behandling
19. Hvis aktiviteter i dagliglivet fører til økte ryggsmarter, er ikke dette farlig
20. Ryggsmarter betyr at det foreligger organisk skade
21. Pasienter med ryggsmarter bør frarådes å drive med sport
22. Hvis ryggsmertene øker, tilpasser jeg umiddelbart intensiteten av øvelsene i min behandling
23. Hvis behandling ikke fører til mindre ryggsmarter, er det på lang sikt stor fare for alvorlig nedsatt funksjonsevne
24. Smertereduksjon er en forutsetning for å oppnå funksjonsbedring
25. Smerteøkning betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt større
26. Det er behandlerens oppgave å fjerne årsaken til ryggsmerten
27. Det finnes ingen effektiv behandling som kan fjerne ryggsmarter
28. Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til funksjonell bedring
29. En pasient kan gjøre fysiske øvelser, selv om smertene har økt siden forrige behandling
30. Hvis pasienter angir smerte ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe blir skadet
31. Vevsskadens alvorlighetsgrad bestemmer smertenivå

32. Et viktig mål med behandlingen er at pasienten snarest mulig gjenopptar sine daglige aktiviteter

33. Læring av stressmestring fremmer tilheling av rygg smerter

34. Øvelser som belaster ryggen må ikke unngås i behandlingen

35. På lang sikt har pasienter med rygg smerter større risiko for å utvikle skade eller dysfunksjon i ryggen

36. Ved rygg smerter er billeddiagnostikk unødvendig

Utviklet av Ostelo R W, Stomp-van den Berg SG, Vlaeyen J W, Wolters P M, de Vet H C. (2003)
Oversatt til norsk av L I Strand, A Kvåle, N Eland 2013 UiB.

APPENDIX 9.

Back Translation of the Norwegian version of the
Pain Attitudes and Beliefs Scale for Physiotherapists

O; original Dutch version, H; Back translator 1, C; Back translator 2

1. Rygg smerter betyr at man må stoppe med fysisk aktivitet for å unngå skade

O1. Rugpijn betekent dat men moet stoppen met fysieke activiteit om geen letsel op te lopen

H1. Rugpijn wil zeggen dat men moet stoppen met activiteit om blessures te voorkomen.

C1. Rugpijn houdt in dat men moet stoppen met lichamelijke activiteit om schade te voorkomen.

2. En god kroppsholdning forebygger rygg smerter

O2. Een goede houding voorkomt rugpijn

H2. Een goede lichaamshouding voorkomt rugpijn.

C2. Een goede lichaamshouding voorkomt pijn in de rug.

3. Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling

O3. Kennis van de weefselschade is niet noodzakelijk om effectief te kunnen behandelen

H3. Kennis van de blessure is niet nodig om een effectieve behandeling te geven

C3. Kennis van weefselschade is niet noodzakelijk om een effectieve behandeling te kunnen geven.

4. Reduksjon av den daglige fysiske belastningen er en viktig faktor ved behandling av rygg smerter

O4. Een belangrijk middel bij de behandeling van rugpijn is verminderen van de dagelijkse fysieke belasting

H4. Vermindering van de dagelijkse belasting is een belangrijke factor bij de behandeling van rugpijn.

C4. Vermindering van de dagelijkse lichamelijke belasting is een belangrijke factor bij behandeling van rugpijn.

5. Ved rygg smerter søkes det for lite etter den underliggende organiske årsaken

O5. Bij rugpijn wordt te weinig gezocht naar de onderliggende organische oorzaak

H5. Bij rugpijn wordt de organische oorzaak (van onderliggende organen) te weinig onderzocht.

C5. Bij rugpijn wordt er te weinig naar onderliggende organische oorzaken gezocht.

6. Mental stress kan føre til rygg smerter, også ved fravær av vevsskade

O6. Psychische overbelasting leidt ook bij afwezigheid van weefselschade tot rugpijn

H6. Mentale stress kan ook zonder blessure tot rugpijn leiden

C6. Mentale stress kan leiden tot rugpijn, ook als er geen weefselschade is.

7. Årsaken til ryggsmarter er ukjent

O7. De oorzaak van rugpijn is onbekend

H7. De oorzaak van rugpijn is onbekend

C7. De oorzaak van rugpijn is onbekend.

8. Ensidig fysisk belastning er ikke årsak til ryggsmarter

O8. Eenzijdige fysieke belasting is geen oorzaak van rugpijn

H8. Eenzijdige lichamelijke belasting is niet de oorzaak van rugpijn

C8. Eenzijdige fysieke belasting is geen oorzaak voor rugpijn.

9. Pasienter som har hatt ryggsmarter bør unngå aktiviteter som belaster ryggen

O9. Patiënten die rugpijn hebben gehad dienen rugbelastende activiteiten te vermijden

H9. Patiënten die rugpijn hebben gehad moeten activiteiten die de rug belasten mijden.

C9. Patienten die rugpijn hebben gehad, horen activiteiten te vermijden die de rug belasten.

10. Smarter er en følge av vevsskade

O10. Pijn is het gevolg van weefselschade

H10. Pijn is een gevolg van een blessure van het weefsel.

C10. Pijn is een gevolg van weefselschade.

11. Pasienter med mye ryggsmarter har spesielt godt av å gjøre fysiske øvelser

O11. Bij een patiënt met veel rugpijn is het juist goed om fysieke oefeningen te doen

H11. Patiënten met erge rugpijn doen er goed aan om lichamelijke oefeningen te doen.

C11. Patienten met veel rugpijn hebben er in het bijzonder baat bij lichamelijke oefeningen te doen.

12. Funksjonelle begrensninger ved ryggsmarter er en følge av psykososiale faktorer

O12. Functionele beperkingen bij rugpijn zijn het gevolg van psychosociale factoren

H12. Begrenzing van de functie is met rugpijn een gevolg van psycho-sociale factoren.

C12. Funktionele beperkingen bij rugpijn zijn een gevolg van psychosociale factoren.

13. Det beste rådet ved ryggsmarter er: "Vær forsiktig" og "Gjør ingen unødvendige bevegelser"

O13. Bij rugpijn is het beste advies: "oppassen" en "geen onnodige bewegingen maken"

H13. Voor rugpijn is het beste advies : "Wees voorzichtig" en "Doe geen onnodige bewegingen"

C13. Het beste advies bij rugpijn is: "Wees voorzichtig" en "Maak geen onnodige bewegingen".

14. Pasienter med ryggsmarter bør helst bare øve på smertefrie bevegelser

O14. Patiënten met rugpijn kunnen beter alleen pijnvrije bewegingsfuncties oefenen

H14. Patiënten met rugpijn moeten eigenlijk alleen maar pijnloze bewegingen oefenen

C14. Patienten met rugpijn behoren het liefst alleen op pijnvrije bewegingen te oefenen

15. Ryggsmarter betyr at det er noe alvorlig galt med ryggen

O15. Rugpijn betekent dat er iets gevaarlijk mis is in de rug

H15. Rugpijn wil zeggen dat er iets ernstigs met de rug aan de hand is

C15. Pijn in de rug geeft aan dat er met de rug iets ernstig verkeerd is

16. Måten pasienter tenker om sin smerte, påvirker forløpet av plagene

O16. Hoe patiënten denken over hun pijn heeft invloed op het verloop van de klachten

H16. Hoe patiënten over de pijn denken beïnvloed het verloop van de klachten.

C16. De manier waarop patienten over hun pijn denken, beïnvloedt het genezingsproces.

17. Selv om smerten vedvarer, kan en behandling være vellykket

O17. Ondanks blijvende pijn kan een behandeling toch geslaagd zijn

H17. Ook al houdt de pijn aan kan een behandeling goed gelukt zijn

C17. Een behandeling kan gelukt zijn, ook al houdt de pijn aan.

18. De funksjonelle plagene som følge av ryggsmarter kan forsvinne fullstendig ved hjelp av behandling

O18. De functionele klachten ten gevolge van rugpijn kunnen door behandeling volledig verdwijnen

H18. Door behandeling kunnen de functionele klachten ten gevolge van (de) rugpijn, helemaal overgaan

C18. De functionele klachten als gevolg van rugpijn kunnen volledig door de behandeling verdwijnen.

19. Hvis aktiviteter i dagliglivet fører til økte ryggsmarter, er ikke dette farlig

O19. Als ADL activiteit tot meer rugpijn leidt is dat niet gevaarlijk

H19. Als de dagelijkse activiteit tot meer rugpijn leidt, is dat niet erg

C19. Als activiteiten in het dagelijkse leven tot verhoogde rugpijn leiden, is dat niet gevaarlijk.

20. Ryggsmarter betyr at det foreligger organisk skade

O20. Rugpijn betekent dat er sprake is van organisch letsel

H20. Rugpijn houdt in dat er een organische blessure is

C20. Rugpijn houdt in dat er organisch letsel is.

21. Pasienter med ryggsmarter bør frarådes å drive med sport

O21. Voor patiënten met rugpijn is het af te raden om te sporten

H21. Sport moet voor patiënten met rugpijn worden afgeraden

C21. Aan patienten met rugpijn hoort het bedrijven van sport te worden afgeraden.

22. Hvis ryggsmertene øker, tilpasser jeg umiddelbart intensiteten av øvelsene i min behandling

O22. Bij toename van rugpijn pas ik de fysieke oefeningen in mijn behandeling onmiddellijk aan

H22. Als de rugpijn toeneemt pas ik meteen de intensiteit van de oefeningen in de behandeling aan

C22. Als de rugpijn verergert, pas ik onmiddellijk de intensiteit van de oefeningen in mijn behandeling aan.

23. Hvis behandling ikke fører til mindre rygg smerter, er det på lang sikt stor fare for alvorlig nedsatt funksjonsevne

O23. Als de behandling niet leidt tot een afname van rugpijn is er op termijn een groot risico op ernstige beperkingen

H23. Mocht de behandeling niet tot vermindering van (de) rugpijn leiden is er op den duur grote kans op een ernstig gereduceerde functie

C23. Als behandeling niet tot minder rugpijn leidt, is er op den duur groot gevaar voor ernstig verlaagd functievermogen.

24. Smertereduksjon er en forutsetning for å oppnå funksjonsbedring

O24. Pijnvermindering is een voorwaarde om tot functieherstel te komen

H24. Vermindering van pijn is een voorwaarde om verbetering van de functie te bereiken

C24. Pijnvermindering is noodzakelijk om functieverbetering te bereiken.

25. Smerteøkning betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt større

O25. Toename van pijnklachten betekent dat sprake is van nieuwe weefselschade of uitbreiding hiervan

H25. Meer pijn betekent een nieuwe blessure of dat de blessure groter is geworden.

C25. Pijnverhoging betekent dat er nieuwe weefselschade is of dat de weefselschade is toegenomen.

26. Det er behandlerens oppgave å fjerne årsaken til rygg smerten

O26. De taak van de behandelaar is om de oorzaak van rugpijn weg te nemen

H26. De opgave van de behandelaar is de oorzaak van (de) rugpijn te bestrijden

C26. Het is de taak van de behandelaar om de oorzaak van de rugpijn weg te nemen.

27. Det finnes ingen effektiv behandling som kan fjerne rygg smerter

O27. Er bestaat geen effectieve behandeling die de rugpijn wegneemt

H27. Er is geen effectieve behandeling om rugpijn over te laten gaan/(te laten verdwijnen)

C27. Er bestaat geen effectieve behandeling die rugpijn kan wegnemen.

28. Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til funksjonell bedring

O28. Pijnverminderende middelen zoals TENS en/of rugbraces ondersteunen het functioneel herstel

H28. Pijnstillende behandeling, zoals TENS en/of steun van de rug, draagt bij om de functie te verbeteren.

C28. Pijnverlichtende hulpmiddelen zoals TENS en / of rugsteunen dragen tot functionele verbetering bij.

29. En pasient kan gjøre fysiske øvelser, selv om smertene har økt siden forrige behandling

O29. Ook al is de pijn toegenomen, de patiënt kan toch fysieke oefeningen doen

H29. Ook al is de pijn verergerd sinds de vorige behandeling kan de patiënt lichamelijke oefeningen doen

C29. Een patient kan lichamelijke oefeningen doen, zelfs al zou de pijn sinds de vorige behandeling zijn toegenomen.

30. Hvis pasienter angir smerte ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe blir skadet

O30. Als patiënten pijn aangeven tijdens oefenen en/of fysieke activiteiten maak ik mij zorgen dat er iets wordt beschadigd

H30. Als de patiënt bij het oefenen en/of fysieke activiteit pijn aangeeft ben ik bang dat er een blessure ontstaan is

C30. Als patienten pijn aangeven tijdens oefeningen en /of lichamelijke activiteiten, ben ik er bang voor dat er iets wordt beschadigd.

31 Vevsskadens alvorlighetsgrad bestemmer smertenivå

O31. De ernst van de weefselbeschade bepaalt de hoeveelheid pijn

H31. De ernst van de weefselblessure geeft de pijngrens aan.

C31. De ernst van een weefselbeschadiging bepaalt het niveau van de pijn.

32. Et viktig mål med behandling er at pasienten snarest mulig gjenopptar sine daglige aktiviteter

O32. Een belangrijk doel van de behandeling is het zo snel mogelijk hervatten van de dagelijkse activiteiten

H32. Het doel van de behandeling is dat de patiënt zo snel mogelijk zijn dagelijkse activiteiten weer op kan nemen

C32. Een belangrijk doel van de behandeling is dat de patient zo spoedig mogelijk zijn dagelijkse activiteiten hervat.

33. Læring av stressmestring fremmer tilheling av ryggmerter

O33. Leren omgaan met stress bevordert het herstel van rugpijn

H33. Het leren van het beheersen van stress bevordert de genezing van (de) rugpijn

C33. Bij rugpijn bevordert het leren beheersen van stress het genezingsproces.

34. Øvelser som belaster ryggen må ikke unngås i behandlingen

O34. In de behandeling moeten oefeningen die de rug belasten niet geschuwd worden

H34. Oefeningen die de rug belasten moeten niet in de behandeling worden weggelaten

C34. Oefeningen die de rug belasten, moeten niet in de behandeling worden vermeden.

35. På lang sikt har pasienter med ryggmerter større risiko for å utvikle skade eller dysfunksjon i ryggen

O35. Rugpijnpatiënten lopen een groter risico om op den duur rugafwijkingen op te lopen

H35. Patiënten met rugpijn hebben op den duur een groter risico blessures of een slechte functie van de rug te ontwikkelen

C35. Op den duur hebben patienten met rugpijn groter risico om letsel of dysfunctie in de rug te ontwikkelen.

36. Ved ryggmerter er billeddiagnostikk unødvendig

O26. Bij rugpijn is beeldvormende diagnostiek overbodig

H36. Bij rugpijn is beelddiagnostiek niet nodig

C36. Bij rugpijn is fotodiagnostiek onnodig.

APPENDIX 10.

Tables of loading. Extraction Method: Principal Axis
Factoring.

Table of loadings. Extraction Method: Principal Axis Factoring

	Factor							
	1	2	3	4	5	6	7	8
2 En god kroppsholdning forebygger ryggsmerter	0.080	0.347	0.053	-0.260	-0.259	0.141	0.101	-0.083
3 Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling	-0.216	-0.170	0.372	-0.020	-0.114	0.177	0.211	-0.091
4 Reduksjon av den daglige fysiske belastningen er en viktig faktor ved behandling av ryggsmerter	0.427	0.082	0.177	-0.237	0.024	-0.006	0.129	0.440
5 Ved ryggsmerter søkes det for lite etter den underliggende organiske årsaken	0.380	0.035	-0.256	0.026	0.049	0.012	0.141	0.159
7 Årsak til ryggsmerter er ukjent	-0.263	-0.009	0.387	0.203	0.070	0.093	-0.038	0.021
8 Ensidig fysisk belastning er ikke årsak til ryggsmerter	-0.161	-0.173	0.154	0.180	0.167	0.146	0.082	0.071
10 Smerter er en følge av vevsskade	0.470	0.172	-0.172	0.304	-0.015	0.118	0.008	-0.010
12 Funksjonelle begrensninger ved ryggsmerter er en følge av psykososiale faktorer	-0.143	0.310	0.374	0.159	0.098	0.036	0.181	-0.036
11 Pasienter med mye ryggsmerter har spesielt godt av å gjøre fysiske øvelser	-0.157	0.472	-0.095	0.000	0.011	0.118	0.011	-0.141
17 Selv om smerten vedvarer, kan en behandling være vellykket	-0.360	0.258	0.019	-0.016	-0.151	-0.081	-0.042	0.164
19 Hvis aktiviteter i dagliglivet fører til økte ryggsmerter, er ikke dette farlig	-0.427	0.064	-0.206	0.115	0.128	0.100	0.072	0.119
20 Ryggsmerter betyr at det foreligger organisk skade	0.600	0.096	-0.111	0.378	-0.015	0.101	-0.005	0.144
22 Hvis ryggsmertene øker, tilpasser jeg umiddelbart intensiteten av øvelsene i min behandling	0.314	0.068	0.103	-0.398	0.076	0.323	-0.200	0.010
23 Hvis behandling ikke fører til mindre ryggsmerter, er det på lang sikt stor fare for alvorlig nedsatt funksjonsevne	0.463	0.222	0.237	0.036	0.110	-0.287	0.030	-0.018
24 Smertereduksjon er en forutsetning for å oppnå funksjonsbedring	0.553	0.082	0.007	-0.061	0.362	-0.029	-0.188	-0.049
25 Smertøkning betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt større	0.711	0.080	-0.018	0.200	-0.131	0.081	0.001	-0.086
26 Det er behandlerens oppgave å fjerne årsaken til ryggsmerter	0.456	-0.075	-0.174	0.021	0.130	0.089	0.251	-0.062

	Factor							
	1	2	3	4	5	6	7	8
27 Det finnes ingen effektiv behandling som kan fjerne ryggsmarter	-0.184	0.100	0.327	0.335	-0.107	0.031	-0.297	0.121
28 Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til funksjonell bedring	0.142	0.224	0.076	-0.123	-0.115	0.099	-0.040	0.033
29 En pasient kan gjøre fysiske øvelser, selv om smertene har økt siden forrige behandling	-0.494	0.303	-0.208	0.081	-0.059	0.058	0.044	0.044
30 Hvis pasienter angir smerte ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe blir skadet	0.628	-0.028	0.230	0.073	-0.214	-0.047	0.104	-0.010
31 Vevsskadens alvorlighetsgrad bestemmer smertenivå	0.569	0.058	-0.035	0.141	-0.046	0.084	-0.076	-0.092
35 På lang sikt har pasienter med ryggsmarter større risiko for å utvikle skade eller dysfunksjon i ryggen	0.268	0.312	0.101	-0.021	0.034	-0.244	0.036	-0.107
36 Ved ryggsmarter er billediagnostikk unødvendig	-0.254	-0.160	0.131	0.139	0.209	0.059	0.100	-0.067
33 Læring av stressmestring fremmer tilheling av ryggsmarter	-0.272	0.406	0.081	-0.082	0.224	-0.054	0.074	-0.003
34 Øvelser som belaster ryggen må ikke unngås i behandlingen	-0.360	0.309	-0.128	0.085	0.151	0.098	-0.031	0.018
14 Pasienter med ryggsmarter bør helst bare øve på smertefrie bevegelser	0.459	-0.035	0.176	-0.176	0.198	0.101	-0.027	-0.014

Loadings. Forced two factor structure. Extraction Method: Principal Axis Factoring

	Factor	
	1	2
2 En god kroppsholdning forebygger ryggsmarter	0.076	0.303
3 Kunnskap om vevsskaden er ikke nødvendig for å kunne gi en effektiv behandling	-0.206	-0.176
4 Reduksjon av den daglige fysiske belastningen er en viktig faktor ved behandling av ryggsmarter	0.401	0.053
5 Ved ryggsmarter søkes det for lite etter den underliggende organiske årsaken	0.375	0.060
7 Årsak til ryggsmarter er ukjent	-0.253	-0.040
8 Ensidig fysisk belastning er ikke årsak til ryggsmarter	-0.158	-0.176
10 Smerter er en følge av vevsskade	0.462	0.179
12 Funksjonelle begrensninger ved ryggsmarter er en følge av psykososiale faktorer	-0.137	0.235
11 Pasienter med mye ryggsmarter har spesielt godt av å gjøre fysiske øvelser	-0.160	0.484
17 Selv om smerten vedvarer, kan en behandling være vellykket	-0.361	0.245

	Factor	
	1	2
20 Ryggsmerter betyr at det foreligger organisk skade	0.580	0.099
22 Hvis ryggsmertene øker, tilpasser jeg umiddelbart intensiteten av øvelsene i min behandling	0.293	0.050
23 Hvis behandling ikke fører til mindre ryggsmerter, er det på lang sikt stor fare for alvorlig nedsatt funksjonsevne	0.450	0.184
24 Smertereduksjon er en forutsetning for å oppnå funksjonsbedring	0.535	0.078
25 Smertøkning betyr at det foreligger en ny vevsskade eller at vevsskaden er blitt større	0.711	0.091
26 Det er behandlerens oppgave å fjerne årsaken til ryggsmerten	0.448	-0.048
27 Det finnes ingen effektiv behandling som kan fjerne ryggsmerter	-0.172	0.055
28 Smertelindrende tiltak som TENS og/eller ryggstøtter bidrar til funksjonell bedring	0.141	0.216
29 En pasient kan gjøre fysiske øvelser, selv om smertene har økt siden forrige behandling	-0.497	0.316
30 Hvis pasienter angir smerte ved øvelser og/eller fysisk aktivitet, er jeg bekymret for at noe blir skadet	0.620	-0.036
31 Vevsskadens alvorlighetsgrad bestemmer smertenivå	0.573	0.072
35 På lang sikt har pasienter med ryggsmerter større risiko for å utvikle skade eller dysfunksjon i ryggen	0.265	0.291
36 Ved ryggsmerter er billeddiagnostikk unødvendig	-0.250	-0.168
33 Læring av stressmestring fremmer tilheling av ryggsmerter	-0.272	0.378
34 Øvelser som belaster ryggen må ikke unngås i behandlingen	-0.362	0.316
14 Pasienter med ryggsmerter bør helst bare øve på smertefrie bevegelser	0.453	-0.044

APPENDIX 11.

Pattern and Structure Matrix for Principal Axis Factor
Analysis (PAF) with Oblique rotation of the Two Factor
Solution of the PABS-PT

Pattern and Structure Matrix for Principal Axis Factor Analysis (PAF) with Oblique rotation of the Two Factor Solution of the PABS-PT.

No.	Item	Pattern coefficients		Structure coefficients	
		Factor 1	Factor 2	Factor 1	Factor 2
25	Increased pain indicates new tissue damage or the spread of existing damage	0.699	-0.098	0.710	-0.179
20	Back pain indicates the presence of organic injury	0.579	-0.057	0.586	-0.124
30	If patients complain of pain during exercise, I worry that damage is being caused	0.566	-0.198	0.589	-0.263
31	The severity of tissue damage determines the level of pain	0.563	-0.081	0.572	-0.146
24	Pain reduction is a precondition for the restoration of normal functioning	0.530	-0.065	0.537	-0.126
10	Pain is a nociceptive stimulus, indicating tissue damage	0.499	0.053	0.492	-0.005
23	If therapy does not result in a reduction in back pain, there is a high risk of severe restrictions in the long term	0.490	0.061	0.483	0.004
14	Patients with back pain should preferably practice only pain free movements	0.407	-0.162	0.425	-0.208
26	It is the task of the physiotherapist to remove the cause of back pain	0.401	-0.165	0.420	-0.211
4	Reduction of daily physical exertion is a significant factor in treating back pain	0.395	-0.054	0.401	-0.099
5	Not enough effort is made to find the underlying organic causes of back pain	0.372	-0.041	0.377	-0.084
35	In the long run, patients with back pain have a higher risk of developing spinal impairments	0.357	0.213	0.332	0.172
22	If back pain increases in severity, I immediately adjust the intensity of my treatment accordingly	0.293	-0.028	0.296	-0.062
28	TENS and/or back braces support functional recovery	0.213	0.173	0.193	0.149
11	A patient suffering from severe back pain will benefit from physical exercise	0.032	0.513	-0.027	0.509
33	Learning to cope with stress promotes recovery from back pain	-0.113	0.439	-0.164	0.452

No.	Item	Pattern coefficients		Structure coefficients	
		Factor 1	Factor 2	Factor 1	Factor 2
29	Even if the pain has worsened, the intensity of the next treatment can be increased	-0.347	0.438	-0.397	0.478
34	Exercises that may be back straining should not be avoided during the treatment	-0.221	0.402	-0.267	0.428
17	Therapy may have been successful even if pain remains	-0.246	0.333	-0.284	0.361
2	Good posture prevents back pain	0.184	0.275	0.153	0.254
12	Functional limitations associated with back pain are the result of psychosocial factors	-0.040	0.265	-0.071	0.269
19	If ADL activities cause more back pain, this is not dangerous	-0.369	0.182	-0.390	0.224
27	There is no effective treatment to eliminate back pain	-0.140	0.099	-0.151	0.115
7	The cause of back pain is unknown	-0.251	0.028	-0.254	0.057
36	In back pain, imaging tests are unnecessary	-0.297	-0.097	-0.286	-0.063
3	Knowledge of the tissue damage is not necessary for effective therapy	-0.258	-0.117	-0.245	-0.087
8	Unilateral physical stress is not a cause of back pain	-0.214	-0.129	-0.199	-0.105

Items are sorted in descending order based on the factors loadings on factor 1 and factor 2, respectively. Item in bold indicate major loadings for each item included in the scale.

Inspection of the pattern matrix showed a relatively clear two factor solution. Biomedical Item 35 showed crossloading on the behavioral factor, but the difference is 1.44, thus >1.0. Behavioral item 2 showed crossloading on the biomedical factor and the difference is 0.091.

Analysis of the structure matrix indicated good discrimination between the factors. For the biomedical factor the lowest factor loading for biomedical items was 0.296 (item 22) which is still higher than the highest loading (item 12, loading at 0.017) on the biomedical factor of a behavioral item. The behavioral factor also showed good discrimination: the lowest loading behavioral item (item 12, loading at 0.269) was still higher than the highest loading biomedical item onto the behavioral factor (item 23, loading at 0.004) (or item 35, loading at 0.172).