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ATTITUDE AND BELIEF TOWARDS PHYSICAL ACTIVITY AND EXERCISE IN PATIENTS WITH CHRONIC LOW BACK PAIN A LITERATURE REVIEW

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INTRODUCTION

Chronic pain is a major public health problem all over the world.[1] The chronic low back pain is define as the chronic lower back pain is established by the persistence of pain beyond 3 month of symptoms.[1] CLBP can have a debilitating effect on patient's lives, resulting in disability and reducing their ability to carry out activities of daily living.[1] Acute low back pain is pain remains for less than 6 months.[2] Sub-acute back pain is back pain for between 6weeks and 3moths.[2]

Low back pain can affect all age and genders.[2] back pain is then further categorized into specific or non-specific back pain. Non-specific back pain refers to a pain is diagnosed when the cause of back pain is unknown. And specific back pain refers to a specific cause

for the pain, for example an infection or a fracture.[3] back pain is a major health issue in western countries and 60%-80% of adults are likely to experience low back pain[4]. Chronic pain is a significant health problem that leads to major consequences for the individuals afflicted, their families, and society.[4] Chronic pain can lead to various disabilities. Currently, there are in general no curative options for chronic pain, so treatments focus on reducing pain and disability.[4]

Physical activity and physical exercise are commonly prescribed as treatment for chronic pain. Physical activity is defined as any bodily movement produced by skeletal muscles that results in energy expenditure[5]. Physical exercise is described as a subset of physical activity characterized by planned, structured, and repetitive physical activities with an objective to maintain or improve physical fitness.[5] Because the terms physical activity and physical exercise are often used 3 interchangeably in the literature, the term physical activity and exercise (PA&E) is used in this study[6]. PA&E interventions for chronic pain patients can include aerobic exercises, strength exercises, and motor control exercises[6]. PA&E as treatment has shown significant improvements (up to medium effect sizes) for pain intensity, physical disability, and psychological distress in chronic neck pain, chronic low back pain.[6]

WHO defines physical activity as any bodily movement produced by skeletal muscles that requires energy expenditure – including activities undertaken while working, playing, carrying out household chores, travelling and engaging in recreational pursuits.[7] An increase in physical activity is one of the measures that is said to have the greatest positive effect on public health.[7] Physical activity plays an important role in the prevention and treatment of chronic musculoskeletal pain, but chronic pain may implicate a poor rehabilitation outcome.[7] PA increases the blood flow to the back which is important for the healing process of the soft tissues in the back.[7] Physical activity can reduce the risk of chronic disease including cancer, depression, cardiovascular diseases.[8] physical activity is reduced in the people who is suffered from chronic pain.[8]

Activity has been identified as the most important health-related behavior to change, the patients ask health care staff for support in making lifestyle changes.[8] Physical activity increases the blood flow to the back which is important for the healing process of the soft tissues in the back.[8]

The term "physical activity" should not be confused with "exercise", which is a subcategory of physical activity that planned, structured, repetitive, and aims to improve or maintain one or more components of physical fitness.[8] Physical activity to increase aerobic capacity and muscular strength, especially of the lumbar extensor muscles, is important for patients with CLBP in assisting them to complete activities to daily living.[8]

Pain is a subjective and personal experience, and its presence in the chronic form brings not only biological changes but emotional, cognitive and also behavioral changes.[8] The Back Pain Attitudes Questionnaire (Back-PAQ) was developed following these Interviews with people experiencing acute and chronic LBP. It aims to assess beliefs which underlie common attitudes about back pain[9]. Evidence showed that patients with chronic pain that had depression, anxiety and anguish have reported higher intensity of pain and disability.[10] A considerable body of research, based on cognitive-behavioral theory, has established the importance of individuals' pain-related cognitions and coping responses in their adaptation to chronic pain.[11] Beliefs and attitudes influence the acceptance, the results and the satisfaction

with treatment, also impacting the capacity of individuals to build an active and satisfactory life, despite the pain.[12]

For the beliefs facing pain, the Brief Pain Inventory (BPI-brief) was used, validated for the Portuguese language in 2006.[12] The purpose of this instrument is to evaluate the attitudes and beliefs facing pain in patients with non-oncologic chronic pain[12]. It has 30 items corresponding to seven domains: solicitude, emotion, medical cure, control, disability, physical damage, and medication.[12]

The "solicitude" domain relates to how much the patient believes that his/her family and other people should be more solicitous during the pain episodes. "Emotion" relates to the belief of the emotional effects, good or bad, in the painful experience."Medical Cure" relates to how much the patient believes in medicine to cure his/her pain. "Control" relates to how much the patient believes that he/she has control over his/her pain. "Disability" relates to how much the patient believes that the pain has disabled him/her. "Physical Damage" relates to how much, in the patient's point of view, the pain hurts him/herself, and because of it, exercises should be avoided."Medication" relates to how much the patient believes that drugs are the best treatment for chronic pain.[12]

Beliefs are culturally learned certainties; they are each individual's notion concerning its own reality, of the others and of the space, which interferes with the behavior[12]. Beliefs have been described as 'a cognitive process resulting in a concrete cognition of how we think things are'.[13] Attitudes are organized in affective arrangements, relatively stable, that reflect the trend to respond positively or negatively to something or some event. Both are formed from personal experiences[14]. Attitudes are 'a more complex cognitive state involving beliefs and feelings as well as values and predispositions to act in a certain way'.[15] Beliefs and attitudes influence the acceptance, the results and the satisfaction with treatment, also impacting the capacity of individuals to build an active and satisfactory life, despite the pain.[16]

Beliefs about a stressor such as pain, and in particular, appraisals of threat, influence an individual's coping responses (Lazarus, 1993). Coping has been defined as `constantly changing cognitive and behavioral efforts to manage specific external 6 and/or internal demands that are appraised as taxing or exceeding the resources of the person'[17]

Review question

- **What is the attitude and belief towards physical activity in chronic low back pain?**

- **What is the most appropriate treatment to cure the chronic low back pain?**

NEED OF STUDY

NEED OF STUDY

- To understand determinants of belief and attitude towards physical activity and exercise in patients with chronic low back pain.

OBJECTIVE OF REVIEW

OBJECTIVE OF REVIEW

- To identify attitude and belief towards physical activity and exercise in chronic pain.

- To identify attitudes and beliefs about LBP in the general population to analyse their association with individual characteristics and the belief that exercise is an effective treatment for LBP.

HYPOTHESIS

- ***Null Hypothesis(H0):***

There will be no effect or zero pain relief in patient with chronic low back pain.

- ***Alternative Hypothesis(H1):***

There will be significant effect or progress in pain relief in patient with chronic low back pain.

METHODOLOGY

- **KEYWORDS USED FOR SEARCH :**
  - Chronic low back pain, Attitude and belief towards physical activity and exercise

- **SEARCH STRATEGY :**
  - For the literature review, we used standard search strategies involving the querying of online databases MEDLINE (pub med) , Google scholar using key words followed by relevant articles. We included articles in overview.
  - Eligible criteria for the articles were :

Eligible criteria for the articles were:

- Duration of publication : 2013 Onwards
- Article should be in English language
- Age criteria : 45 – 65 years
- Article that assess the physical attitude and the need of exercise
- Exclusion criteria for the articles were :
- Unpublished articles
- Article which published in another language

➢ **DATA SEARCHED** :

- To identified potentially relevant articles in the medical
- Literature, we searched MEDLINE (PUBMED), Google scholar, Sci-hub data bases

➢ **DATA SYNTHESIS :**

- Narrative synthesis of data will be done.

Prisma chart:

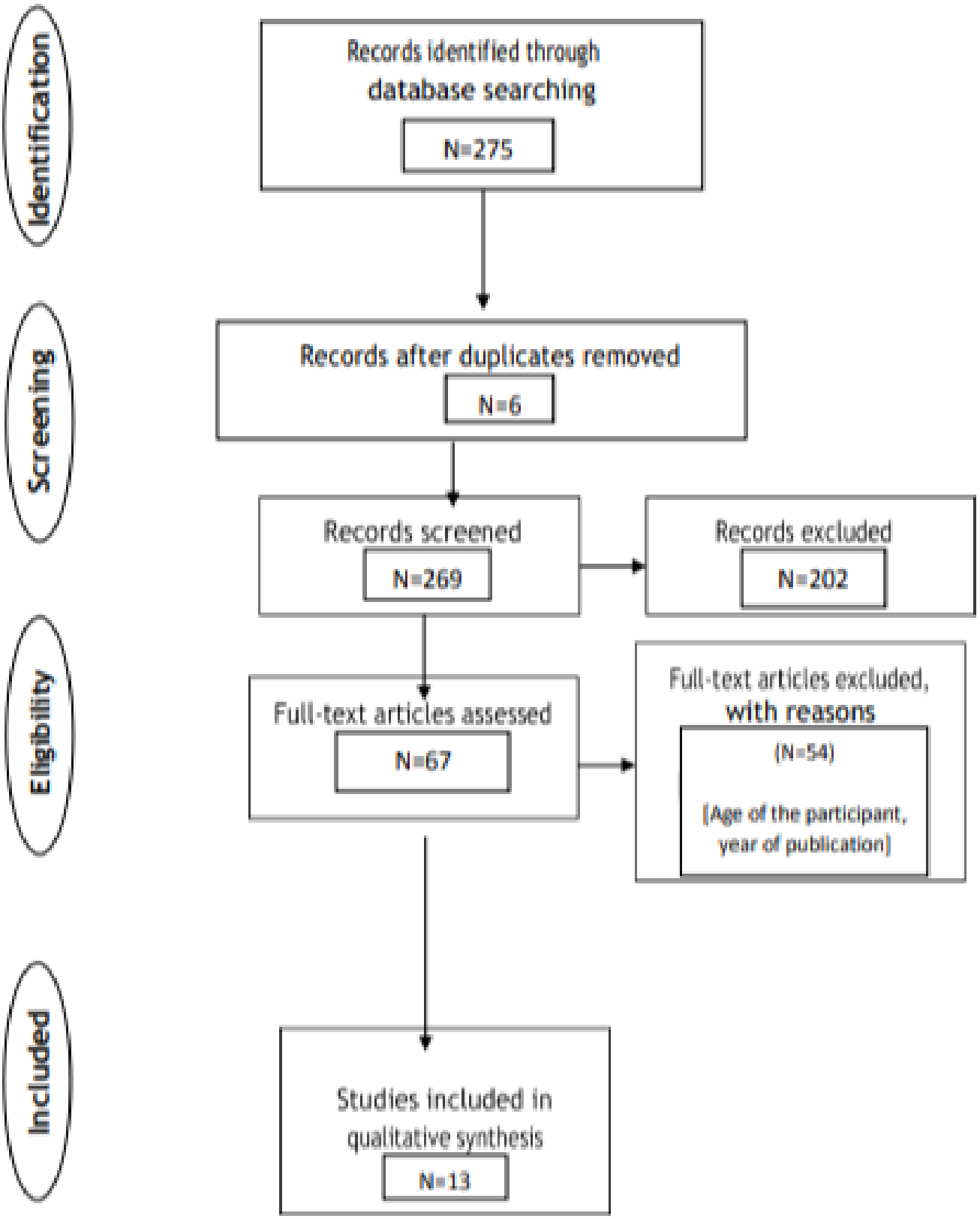

Table-1:

Sr.No..	1
AUTHORS	Anil Chankara mangala m Mathew, Rowther Shamna Safar, Thazhuth ekudiyil Sathyam Anithade vi, Moosa Saira Banu, Singanall ur Lakshma nan ,Ravi Shankar, Beliyur Krishna Dinakar Rai Thomas Vengail Chacko
YEAR	2013
STUDY DESIGN	A cross sectional study
AIM & OBJECTIVE	The aim of this study was to estimate the prevalence of low back pain and its association with height, fat distribution, reproductive history and socioeconomic influence.
OUTCOME	HEIGHT ,WEIGHT,BMI ,WEIST CIRCUM FARANCE, WEST HIP RATIO
REMARKS	The Back Pain Attitudes Questionnaire (Back-PAQ) was developed following these interviews with people experiencing acute and chronic LBP. It aims to assess beliefs which underlie common attitudes about back pain.
Sr.No.	2
AUTHORS	GARIMA GUPTA and NUPUR NANDINI
YEAR	2014
STUDY DESIGN	A cross sectional study
AIM& OBJECTIVE	The purpose of the study was to evaluate the prevalence of low back pain in non- working rural housewives w. also an attempt has been made to determine thew impact of social burden on low back pain.
OUTCOME	Nordic Musculoskeletal Questionnarie– NMQ, Oswestry Disability Index – ODI, and Zarit Burden Interview – ZBI
REMARKS	The findings of the present study suggest that 83% of the non working rural housewives have low back pain and activity restriction due to their pain
Sr.No.	3
AUTHORS	Rebecca gordon and Saul Bloxham
YEAR	2016
AIM&	This paper explores the impact of back pain on society and the role of physical

OBJECTIVE	activity for treatment of non-specific low back pain.
REMARKS	Exercise intervention programmes involving either muscular strength, Flexibility, aerobic, fitness is beneficial for NSCLBP but not acute low back pain. Non- specific acute low back pain patients recover in 4–6 weeks with or without a treatment , and exercising should be avoided to reduce the swelling of the affected area.
Sr.No.	4
AUTHORS	Linn Karlsson Björn Gerdle Esa- Pekka Takala Gerhard Andersso n Britt Larsson
YEAR	2018
STUDY DESIGN	Qualitative interview study
AIM& OBJECTIVE	The purpose of this study was to describe how patients with chronic pain experience physical activity and exercise (PA&E).
OUTCOME	International Physical Activity Question naire (IPAQ) Hospital, Anxiety and Depressio n Scale (HADS), Pain Self- Efficacy Questionnarie (PSEQ), Fear Avoidance Beliefs Questionnarie(FABQ), Psychological.
REMARKS	Physical activity was highly valued in daily life although experiences of PA&E were characterized by difficulties and failure. A will to engage in desired PA&E was apparent, but it was seldom successful even though the participants tried a variety of strategies. This intention– behavior gap identified might be related to the pain condition as well as to motivational aspects, self- efficacy, and action-control, a conclusion that requires careful analysis and support when PA&E is applied as treatment for chronic pain.
Sr.No.	5
AUTHORS	Gerthi Persson, Annika Brorsson , Eva Ekvall Hansson, Margaret a Troein and Eva Lena Strandber g.
YEAR	2013
STUDY DESIGN	Qualitative study
AIM& OBJECTIVE	The aim of the study was to explore and understand the meaning of prescribing physical activity from the general practitioner' s perspective
REMARKS	There is uncertainty about using PAP as a treatment since physicians lack education in non- pharmaceutical methods. the GPs do not regard the written refferal as a prioritized task and rather refer to other professionals in the health care system to prescribe PAP.
Sr.No.	6
AUTHORS	Monica Joelssona , Susanne Bernhard ssona and Maria E. H.

YEAR	2017
STUDY DESIGN	Qualitative study
AIM& OBJECTIVE	The objective of this study was to describe the experiences of and thoughts about receiving a prescription for physical activity of people with chronic Musculoskeletal pain.
REMARKS	This study suggests that patients with chronic musculoskeletal pain have a greater need for information and extra support to overcome existing barriers, before or when physical activity is prescribed.
Sr.No.	7
AUTHORS	Fernanda Martins Barbosa, Érica Brandão de Moraes Vieira , JoãoBatista Santos Garcia
YEAR	2018
STUDY DESIGN	Cross sectional study , Quantative study
AIM& OBJECTIVE	The objective of this study was to evaluate the behavior of beliefs and attitudes inchronic low back pain and to correlate them with the intensity of pain, disability, anxiety, and depression
OUTCOME	NPRS, BPI, ODI, HADS
REMARKS	It was observed in this study that patient with chronic low back pain often present dysfunctional beliefs in relation to pain and that such beliefs showed, in many cases, an association with the intensity of pain, anxiety, depression and mainly disability, with probable consequences in the therapeutic management of these patients.
Sr.No.	8
AUTHORS	D.W. Griffin a, D.C. Harmon b, N.M. Kennede
YEAR	2012
STUDY DESIGN	Systemic review
AIM & OBJECTIVE	The aim of this systematic review was to determine, based on the current body of evidence, if patients with chronic low back pain have a lower level and/or alteredpattern of physical activity compared with asymptomatic,healthy individuals.
OUTCOME	Newcastle Ottawa Scale (NOS)
REMARKS	There is no conclusive evidence that patients either CLBP are less active than healthy individuals. based on limited number of studies , there is some evidence that the distribution of activites over the course of a day is different between patients with CLBP and controls.

Sr.No.	9
AUTHORS	Janet K. Freburge rGeorge M. Holmes, Robert P. Agans, Anne M. Jackman, Jane D. Darter, Andrea S. Wallace, Liana D. Castel, William D. Kalsben and Timothy S. Carey,
YEAR	2009
STUDY DESIGN	Cross sectional , telephone survey
AIM& OBJECTIVE	The objective of this study was to determine whether the prevalenceof chronic LBP, and the demographic, health- related, andcare- seeking characteristi cs of individuals with the condition have changed over the past 14 years.
REMARKS	The prevalence of chronic, impairing LBP has risen significantly in NC, with continuing high levels of disability and care utilization. A substantial portion of the rise in LBP care costs overthe past two decades may be related to this rising prevalence.
Sr.No.	10
AUTHORS	Elin Dysvik, Torill Christine Lindstrøm, Ole- Johan Eikeland, and Gerd Karin Natvig
YEAR	2004
STUDY DESIGN	Survey design
AIM& OBJECTIVE	The present study focused on HRQL as measured by the Medical Outcomes Survey- Short Form (SF-36) and addressed possible relationship s between pain beliefs as measured by the Pain Beliefs and Perceptions Inventory (PBAPI).
OUTCOME	.VAS, SF-36, PBAPI, HRQL
REMARKS	According to CBT altering pain beliefs and improving coping skills may modified the pain experiences and there by improve the health related quality of life.
Sr.No.	11
AUTHORS	Tom Mayer, Robert J. Gatchel, and Trent Evans
YEAR	2000

STUDY DESIGN	Prospective cohort study
AIM& OBJECTIVE	To assess the association between age and objective psychosocio economic treatment outcomes for work- related spinal disorders undergoing functional restoration
OUTCOME	VAS, DALLAS BACK PAIN INVENT ORY
REMARKS	Age does not affect additional surgery rates, subsequent injuries, or delays in settling financial disputes.
Sr.No.	12
AUTHORS	Ivan P.J. Huijnen a,*, Jeanine A. Verbunt a,b,c, Madelon L. Peters d, Philippe Delespau l e,Hanne P.J. Kinderm ans d , Jeffrey Roelofs d, Marielle Goossens d,Henk A.M. Seelen
YEAR	2000
STUDY DESIGN	Cohort study
AIM& OBJECTIVE	This study evaluates whether patients with Chronic Low Back Pain (CLBP) who are more depressed and/or report more pain indeed have a lower objectively assessed daily life activity level or whether they only perceive their activity level as lower
OUTCOME	Roland Disability Question naire (RDQ) Baecke Physical Activity Question naire (BPAQ) VAS Beck Depressio n Inventory II (BDI- II)
REMARKS	The patients with CLBP, who had a higher level of depression, underestimated their daily activity level, although their actual activity level did not differ
Sr. No.	13
AUTHORS	Judith A. Turnera, Mark P. Jensenb, Joan M.Romanao
YEAR	1999
STUDY DESIGN	Cross sectional study
OUTCOME	NPRS
REMARKS	This result of the study confirm that beliefs, coping, and catastrophizing would each be associated significantly with physical disability and depression in patients beginning a multidisciplinary pain treatment program.
Sr. No.	14

AUTHORS	Gur Prasad Dureja, Paraman and N. Jain ,Naresh Shetty, Shyama Prasad Mandal, Ram Prabhoo, Murlidhar Joshi, Subrata Goswami, Karthic Babu, Natarajan, Rajgopalan Iyer, D. Tanna ; Pahari Ghosh Ashok Saxena, Ganesh Kadhe, Abhay A Phansalkar
YEAR	2013
STUDY DESIGN	Epidemiological telephonic survey
AIM& OBJECTIVE	The present epidemiological study identified point prevalence of chronic pain in India, impact on individual's QoL, unveiling current pain treatment practices, and levels of satisfaction with treatment.
REMARKS	A significant population of India suffers from chronic pain, and their QoL is affected leading to disability. A proportion of respondents receiving pain treatment were taking nonprescription medications with a majority of respondents on NSAIDs. A very few were consulting pain management specialists.
Sr. No.	15
AUTHORS	S. Slade, S. Patel, M. Underwo od,J. Keating
YEAR	2015
STUDY DESIGN	Systematic review
AIM& OBJECTIVE	To identify and synthesize qualitative empirical studies that explored what peoplewith non-specific chronic low back pain believe about exercise therapy and physical activity or training for the management of their condition and make recommendations for clinical practice and research.
REMARKS	People are likely to prefer and participate in exercise or training programs and activities that are designed with consideration of their preferences, circumstances, fitness levels and exercise experiences. In the area ofexercise and low back pain research there is a paucity of qualitative data.
Sr.No.	16
AUTHORS	Geneen LJ, Moore RA, Clarke C, Martin D, Colvin LA, Smith BH
YEAR	2020
STUDY DESIGN	Cochrain review
AIM& OBJECTIVE	To provide an overview of Cochrane Reviews of adults with chronic pain to determinethe eIectiveness of diIerent physical activity and exercise intervention s in reducing pain severity and its impact on function, quality of life, and healthcare use & the evidence for any adverse eIects or harm associated with physical activity and exercise interventions.
OUTCOME	NPRS,SF36

REMARKS	There is limited evidence of improvement in pain severity as a result of exercise. Thereis some evidence of improved physical function and a variable effect on both psychological function and quality of life. physical activity and exercise is an intervention with few adverse events that may improve pain severity and physical function, and consequent quality of life. physical activity and exercise is an intervention with few adverse events that may improve pain severity and physical function, and consequent quality of life.
Sr.No.	17
AUTHORS	Melda Soysal,Bi lge Kara, M. Nuri Arda2
YEAR	2012
AIM& OBJECTIVE	To investigate physical activity level in patients with chronic low back and neck pain
OUTCOME	Oswestry Disability Index (ODI), Physical Activity Question naire (IPAQ), (SF-36), Sleep Quality Index (PSQI) , Beck Depressio n Inventory
REMARKS	Physical activity modification was found in patients with chronic low back and neck pain. Physical activity level, disability, sleep, depression and quality of life scores of preoperative patients with low back pain more affected than neck patients.
Sr.No.	18
AUTHORS	Tania Gardner, Kathryn Refshaug e , Lorraine Smith , James McAuley c,Markus Hübscher c, Stephen Goodall
YEAR	2017
STUDY DESIGN	SYSTEMATIC REVIEW
AIM& OBJECTIVE	What influence do physiotherapist' s beliefs and attitudes about chronic low back pain have on their clinical management of people with chronic low back pain
OUTCOME	PABS-PT SCORE FEAR AVOIDANCE
REMARKS	Both quantitative and qualitative studies showed a relationship between treatment orientation and clinical practice. The inclusion of qualitative studies captured the influence of patient factors in clinical practice in chronic low back pain. There is a need to recognize that both beliefs and attitudes regarding treatment orientation of physiotherapists, and therapist-patient factors need to be considered when introducing new clinical practice models, so that the adoption of new clinical practice is maximised

Sr.No.	19
AUTHORS	Tomoko Fujii, Hiroyuki Oka, Kenichir o Takano2, Fuminari Asada3, Takuo Nomura4 , Kayo Kawamat a1,Hiros hi Okazaki5 , Sakae Tanaka6 and Ko Matsudai
YEAR	2015
STUDY DESIGN	Cross sectional study
AIM& OBJECTIVE	High prevalence of low back pain (LBP) in nurses has been reported globally. Ergonomic factors and work- related Psychosocial factors have been focused on as risk factors.
OUTCOME	Fear- Avoidanc e Beliefs Question naire (FABQ), Kessler Psycholo gical Distress Scale (K-6)
REMARKS	A small number of nurses had chronic disabling LBP that interfered with their work. In the nurses who had any type of LBP, high FABs were significantly associated with experiencing chronic disabling LBP. FABs about physical activity might be a potential target for LBP management in nurses.
Sr.No.	20
AUTHORS	Wing S. Wong and Richard Fieldingy
YEAR	2011
STUDY DESIGN	Cross sectional study
AIM& OBJECTIVE	prevalence of chronic pain in the general population of Hong Kong; evaluate the relationship of chronic pain with sociodemographic and life-style factors;
OUTCOME	NPRS, HADS, SF-36
REMARKS	chronic pain is common in the general population of Hong Kong, and the prevalence is highest among women and middle-aged adults.
Sr.No.	21
AUTHORS	Ben Darlow, Meredith Perry, James Stanley, FionaMathieso n,Markus Melloh, G David Baxter, Anthony Dowell
YEAR	2014
STUDY DESIGN	Cross sectional study
AIM& OBJECTIVE	To explore the prevalence of attitudes and beliefs about backpain in New Zealand and compare certain beliefs based on back pain history or health professional exposure.

OUTCOME	.Back Pain Attitudes questionnaire (Back- PAQ).
REMARKS	A large proportion of respondents believed that they needed to protect their back to prevent injury; we theorise that this belief may result in reduced confidence to use the back and contribute to fearavoidance. Uncertainty regarding what is a safe level of activity during an episode of back pain may limit participation
Sr.No.	22
AUTHORS	Corinna Leonhard t,Dirk Lehr,Judi th Luckman n,Heinz-Dieter Basler Erika Baum,Mi chael Pfingsten Jan 36ildebran dt Michael M. Kochen, Annette Becker
YEAR	2009
STUDY DESIGN	Across- lagged panelanalysis
AIM& OBJECTIVE	The assumption that low back pain (LBP) patientssuffer from "disuse" as a consequence of high fear avoidance beliefs is currently Corinna Leonhardt Dirk Lehr under debate
OUTCOME	International physical activity questionnaire, FBQ
REMARKS	study demonstrate demonstrated that a fear- avoidance based physical therapy only showed beneficial effectsin patients who scored high on a FAB- scale at the beginning
Sr.No.	23
AUTHORS	Jeanine A. Verbunt, Klaas R. Westerter p, Geert J. van der Heijden, Henk A. Seelen, Johan W. Vlaeyen, J. Andre Knottnerus
YEAR	2001
STUDY DESIGN	Cross sectional study
AIM& OBJECTIVE	To evaluate disuse (ie, a decreased Daily physical activity level) in patients with chronic low Back pain(LBP) and to evaluate the construct validity of accelerometrv 36inesio phobi physical activity in daily life
OUTCOME	Roland Disability Questionnaire (RDQ), scoring low back disability, Tampa Scale for 36inesio phobia (TSK), VAS
REMARKS	Decrease physical activity levels in this sample of chronic LBP patients was not confirmed. The tracmor is a valid instrument for measuring daily activity in LBP patients.
Sr.No.	24
AUTHORS	Richard MH Evering, Marit GH van Weering, Karin CGM Groothui s-

	Oudshoo rn,Miria
YEAR	2010
AIM& OBJECTIVE	To give an overview of the physical activity level of patients with chronic fatigue syndrome in comparison with asymptomatic controls.
OUTCOME	IPAQ
REMARKS	Patients with chronic fatigue syndrome appear to be less physically active compared with asymptomatic controls. There is no difference in variation of physical activity levels between patients with chronic fatigue syndrome and healthy control subjects, butthe validity and reliability of some methods of measuring Physical activity is questionable or unknown.
Sr.No.	25
AUTHORS	R A Iles, M Davidson , N F Taylor
YEAR	2008
STUDY DESIGN	Systematic review
AIM& OBJECTIVE	To identify psychosocia l predictors of failureto return to work in non-chronic (lasting less than3 months) non-specific low back pain (NSLBP)
REMARKS	To predict work outcome in non-chronic NSLBP, psychosocial assessment should focus on recovery expectation and fear avoidance.The importance of fear avoidance beliefs in chronic pain has been established and it appears these beliefs and behaviours also play an important role in the non-chronic phase of NSLBP and can assist in predicting work outcome.

RESULT

RESULT

275 records were identified using databases searching. Duplicates screening was performed and 6 articles were removed in duplicates screening and than 3 reviews independently scanned the abstract and title or both and determined which studies were to be assessed further and if there were any discrepancies it were then further remove by the supervisor. Prisma flowchart was adapted for the study selection. Following it 275 studies were screened after the duplicates were removed out of which 6 studies were screened after the duplicates were removed. Furthermore excluded as full texts of 67 articles were screened out of which studies were excluded due to many reasons as mentioned in prisma flowchart of study selection. At last we included 13 studies in our data synthesis. The detail of study used in the data synthesis were be mentioned I the data extraction table which include the following detailed: author and year of publication, study design, aim and objective, outcome measure and remarks.

In this study we have observed that chronic low back pain often present dysfunction belief and attitude in relation to pain and that such belief showed in many cases, an association with intensity of pain anxiety and depression. A large proportion of respondents believed that they needed to protect their back to prevent injury; we theorise that this belief may result in reduced confidence to use the back and contribute to fear avoidance. People experiencing back pain may benefit from more targeted information about the positive prognosis. The provision of clear guidance about levels of activity may enable confident participation in an active recovery. According to cognitive behavior therapy altering pain beliefs and improving coping skills may modified the pain. experiecnces and thereby improve the health related quality of life

A very high proportion of respondents believed they should stay active when they have back pain. Among from all the people who are suffering from chronic low back pain, women are having a increasing complain of low back pain in compare of men. If we look most specifically than we found that age group of 41-50 years are those who are suffering from chronic low back pain. In addition to that smoking in men had no significant relationship with low back pain, because those who were found positive chronic low back pain where non smoker. The assosiation of low back pain with reproductive history is found significantly. According to that those women who has history of caesarean section more prone to have a low back pain later a time. Even those who have history of sterilization.

Some study also shows that both men and women who where household and in lower socio economical status reported more back pain than those who were in higher socio economic status. We have found that low back pain in ruler housewifes is around 83%, out of those more than 50% of housewife have severe disability with low back pain. They have also significant impact of social burden on their daily life.

Chronic fatigue syndrome is characterized by severe, disabling chronic fatigue lasting for at least six months. Other symptoms can include musculoskeletal pain, sleep disturbances, impaired concentration and headaches. Patients with chronic fatigue syndrome appear to be less physically active compared with asymptomatic controls.

There is no difference in variation of physical activity levels between patients with chronic fatigue syndrome and healthy control subjects, but the validity and reliability of some methods of measuring physical activity is questionable or unknown.

DISCUSSION

DISCUSSION

The present review was intended to understand determinants of belief and attitude towards physical activity and exercise in patients with chronic low back pain. Main aim of the review was to identify what are the multiple dimension bother the patient to perform physical activity and exercise in chronic low back pain[1]. As well as the review suggests belief may result in reduced confidence to use the back and contribute to fear avoidance[2].

We have found that the prevalence of chronic low back pain more common in aged population (41-50years). In general the prevalence of LBP was higher in women (52.9%) compared to men (28.4%). The alterations in sleep due to the chronic low back pain are very common results and show the impact of this painful syndrome on the quality of life and disability of the individual[4]. Study has also showed that a reduce the level of basic activity in patient with chronic low back pain, whereas increased their sportive and leisure time activities.

There are several studies that conform to the pattern that height is not correlated with the occurrence of low back pain in women, though in men many studies reported a positive correlation[15,17,18]. This study has also examined the association between low back pain and weight. The results conform to the pattern wherein weight does not correlate with the occurrence of low back pain and is consistent with previous studies.[24] These findings provide no evidence that a greater body mass index and waist-hip ratio is associated with an increased risk of low back pain.

The current review found that treatment orientation and fear avoidance beliefs of the physiotherapist had an influence on clinical practice and advice given to patients. A therapist with higher biomedical orientation and fear avoidance beliefs towards chronic low back pain was associated with advice to restrict return to work duties and restrict return to activity, a higher perception of risk associated with work or activity, and increased certification of sick leave. Healthcare professionals' beliefs about chronic low back pain have been shown to have an influence on patient beliefs.

The findings of the present study suggest that 83% of the non working rural housewives have low back pain and activity restriction due to their pain. They have significant impact of social burden on their low back pain. High prevalence (83%) of low back pain among rural housewives is an alarming sign for our society. Better health-care measures to enhance rural housewives education about good posture, ergonomic measures, health schemes, health awareness, and activity pacing could help rural housewives.

In this study, women who have undergone caesarean section or sterilization reported more low back pain than who have not undergone these procedures. This may be due to the sedentary life style after the caesarean section. Nevertheless, it was also observed that women who have occupation described as “Physically demanding” also have higher risk of low back pain suggesting that extremes of activity are probably not ideal.

CONCLUSION

CONCLUSION

Majority of available literature review suggest that patient with chronic low back pain often present dysfunctional beliefs and attitude in relation to pain. A large population subjects believed that they need to protect their back to prevent injury: Which shows that this belief may result in reduce confidence to use the back and contribute to fear avoidance.

Key findings of this literature review are:

- The reason for chronic low back pain are multi factorial which include reduce physical activity, food habit, occupation, under lying disease.
- Patient with low back pain often present that dysfunctional belief and attitude in relation to pain.
- Chronic pain often may lead to disability.

LIMITATIONS

Limitations

- Our review includes limited number of articles so some of the causes of attitude and belief might be missed
- Number of article were very less

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ANNEXURE

	AUTHORS	YEAR	STUDY DESIGN	AIM & OBJECTIVE	OUTCOME	REMARKS
1	1. Anil Chankaramangalam Mathew, Rowther Shamna Safal, Thazhuthekudiyil Sathyam Anthadan, Moosa Saira Banu, Singarajur Lakshmanan, Ravi Shankar, Bellyur Krishna Dinakar Rai, Thomas Vengall Chacko	2013	A cross sectional study	The aim of this study was to estimate the prevalence of low back pain and its association with height, fat distribution, reproductive history and socioeconomic infl uence.	HEIGHT WEIGHT BMI WEIST CIRCUMFARANCE, WEST HIP RATIO	The Back Pain Attitudes Questionnaire (Back-PAQ) was developed following these interviews with people experiencing acute and chronic LBP.23 It aims to assess beliefs which underlie common attitudes about back pain.
2	2. GARIMA GUPTA and NUPUR NANDINI	2014	A cross sectional study	The perpose of the study was to evaluate the prevalence of low back pain in non-working rural housewivesw. also an attempt has been made to determine thew impact of social burden on loe back pain.	Nordic Musculoskeletal Questionnaire – NMQ, Oswestry Disability Index – ODI, and Zarit Burden Interview – ZBI	The findings of the present study suggest that 83% of the non working rural housewives have low back pain and activity restriction due to their pain
3	6. Rebecca gordon and Saul Bloxham	2016	Systematic Review	This paper explores the impact of back pain on society and the role of physical activity for treatment of non-specific low back pain.		Exercise intervention programmes involving either muscularstrength,flexibility, aoxercoic, fitness is beneficial for NSCLBP but not acute low back pain. Non-specific acute low back pain patients recover in 4–6 weeks with or without a treatment , and exercising should be avoided to reduce the swelling of the affected area.
4	4. Linn Karlsson Björn Gerdle Ewa-Pekka Takala Gerhard Andersson Britt Larsson	2018	qualitative interview study	The purpose of this study was to describe how patients with chronic pain experience physical activity and exercise (PASE).	International Physical Activity Questionnaire (IPAQ) Hospital Anxiety and Depression Scale (HADS), Pain Self-Efficacy Questionnaire (PSEQ), Fear Avoidance Beliefs Questionnaire (FABQ), Psychological Inflexibility in Pain Scale (PIPS)	Physical activity was highly valued in daily life although experiences of PASE were characterized by difficulties and failure. A will to engage in desired PASE was apparent, but it was seldom successful even though the participants tried a variety of strategies. This intention–behavior gap identified might be related to the pain condition as well as to motivational aspects, self-efficacy, and action-control, a conclusion that requires careful analysis and support when PASE is applied as treatment for chronic pain.
5	5.Gerthi Persson,Annika Brörsson , Eva Ekvall Hansson,Margareta Troein and Eva Lena Brandberg	2013	qualitative study	The aim of the study was to explore and understand the meaning of prescribing physical activity from the general practitioner's perspective		There is uncertainty about using PAP as a treatment since physicians lack education in non-pharmaceutical methods, the GPs do not regard the written referral as a prioritized task and rather refer to other professionals in the health care system to prescribe PAP
7	6.Monica Joessona , Susanne Bernhardssona and Maria E. H. Larsson.	2017	qualitative study	The objective of this study was to describe the experiences of and thoughts about receiving a prescription for physical activity of people with chronic musculoskeletal pain.		There is uncertainty about using PAP as a treatment since physicians lack education in non-pharmaceutical methods, the GPs do not regard the written referral as a prioritized task and rather refer to other professionals in the health care system to prescribe PAP
8	7.Fernanda Martins Barbosa, Erica Brandão de Moraes Vieira , João Batista Santos Garcia	2018	cross-sectional , quantitative study	The objective of this study was to evaluate the behavior of beliefs and attitudes in chronic low back pain and to correlate them with the intensity of pain, disability, anxiety, and depression	NPRS, BPI, CDI, HADS	This study suggests that patients with chronic musculoskeletal pain have a greater need for information and extra support to overcome existing barriers, before or when physical activity is prescribed.
9	8.D.W. Griffin a, D.C. Harmon b, N.M. Kennede	2012	systematic review	The aim of this systematic review was to determine, based on the current body of evidence, if patients with chronic low back pain have a lower level and/or altered pattern of physical activity compared with asymptomatic, healthy individuals.	Newcastle Ottawa Scale (NOS)	there is no conclusive evidence that patients eith CLBP are less active than health individuals, based on limited number of studies , there is some evidence that the distribution of activites over the course of a day is different between patients with CLBP and controls.
10	9.Janet K. FreburgerGeorge M. Holmes, Robert P. Agans, Anne M. Jackman, Jane D. Darter, Andres S. Wallace, Liana D. Castel, William D. Kaiser and Timothy S. Carey,	February, 2009	cross-sectional, telephone survey	The objective of this study was to determine whether the prevalence of chronic LBP, and the demographic, health-related, and care-seeking characteristics of individuals with the condition have changed over the past 14 years.		The prevalence of chronic, impairing LBP has risen significantly in NC, with continuing high levels of disability and care utilization. A substantial portion of the rise in LBP care costs over the past two decades may be related to this rising prevalence
11	10.Elin Dysvik, Torill Christine Lindstrøm, Ole-Johan Eikeland, and Gerd Karin Natvig	2004	survey design	The present study focused on HRQL as measured by the Medical Outcomes Survey-Short Form (SF-36) and addressed possible relationships between pain beliefs as measured by the Pain Beliefs and Perceptions Inventory (PBAPI).	,VAS, SF-36, PBAPI, HRQL	according to CBT altering pain beliefs and improving coping skills may modified the pain exeperiences and there by improve the health related quality of life.
12	12.Ivan P.J. Huijnen a,*, Jeanine A. Verbunt a,b,c, Madelon L. Peters d, Philippe Delespaul e,Hanne P.J. Kindermans d , Jeffrey Roelofs d, Marielle Goossens d,Henk A.M. Seelen	2010	cohort study	This study evaluates whether patients with Chronic Low Back Pain (CLBP) who are more depressed and/or report more pain indeed have a lower objectively assessed daily life activity level or whether they only perceive their activity level as lower	Roland Disability Questionnaire (RDQ) Baecke Physical Activity Questionnaire (BPAQ) VAS Beck Depression Inventory II (BDI-II)	the patients with CLBP, who had a higher level of depression, underestimated their daily activity level, although their actual activity level did not differ.
13	13.Judith A. Turnera, Mark P. Jensenb, Joan M. Romanoa	October 1999			NPRS	This result of the study confirm that beliefs, coping, and catastrophizing would each be associated significantly with physical disability and depression in patients beginning a multidisciplinary pain treatment program.
14	14.Gur Prasad Dureja, Paramanand N. Jain,Naresh Shetty,Bhyana Prasad Mandal, Ram Prabhoo Murallidhar Joshi, Subrata Goswami, Karthic Babu Natarajan, Rajagopalan Iyer, D. Tahina, Pahari Ghosh Ashok Saxena, Ganesh Kadhe, Abhay A. Phansalkar	2013	epidemiological telephonic survey	The present epidemiologic study identified point prevalence of chronic pain in India, impact on individual's QoL, unveiling current pain treatment practices, and levels of satisfaction with treatment.		A signiTcant population of India suffers from chronic pain, and their QoL is affected leading to disability. A proportion of respondents receiving pain treatment were taking nonprescription medications with a majority of respondents on NSAIDs. A very few were consulting pain management specialists.
15	15.B. Slade, S. Patel, M. Underwood J. Keating	May, 2015	systmetic review	To identify and synthesize qualitative empirical studies that explored what people with non-specific chronic low back pain believe about exercise therapy and physical activity or training for the management of their condition and make recommendations for clinical practice and research.		People are likely to prefer and participate in exercise or training programs and activities that are designed with consideration of their preferences, circumstances, fitness levels and exercise experiences. In the area of exercise and low back pain research there is a paucity of qualitative data
16	16.Geneen LJ, Moore RA, Clarke C, Martin D, Colvin LA, Smith BH	2020	cochrain review	To provide an overview of Cochrane Reviews of adults with chronic pain to determine the electiveness of different physical activity and exercise interventions in reducing pain severity and its impact on function, quality of life, and healthcare use & the evidence for any adverse elects or harm associated with physical activity and exercise interventions.	NPRS, SF-36	There is limited evidence of improvement in pain severity as a result of exercise. There is some evidence of improved physical function and a variable effect on both psychological function and quality of life. physical activity and exercise is an intervention with few adverse events that may improve pain severity and physical function, and consequent quality of life. physical activity and exercise is an intervention with few adverse events that may improve pain severity and physical function, and consequent quality of life.
17	17.Melda Boysal,Bilge Kara, M. Nuri Arda2	2012		To investigate physical activity level in patients with chronic low back and neck pain.	Oswestry Disability Index (ODI), Physical Activity Questionnaire (IPAQ), (SF-36), Sleep Quality Index (PSQI) , Beck Depression Inventory	Physical activity modification was found in patients with chronic low back and neck pain. Physical activity level, disability, sleep, depression and quality of life scores of preoperative patients with low back pain more affected than neck patients.
18	18.Tania Gardner, Kathryn Refshauge , Lorraine Smith , James McAuley c,Markus Hübscher c, Stephen Goodall	2017	systmetic review	What influence do physiotherapists' beliefs and attitudes about chronic low back pain have on their clinical management of people with chronic low back pain	FABB-PT SCORE FEAR AVOIDANCE	Both quantitative and qualitative studies showed a relationship between treatment orientation and clinical practice. The inclusion of qualitative studies captured the influence of patient factors in clinical practice in chronic low back pain. There is a need to recognise that both beliefs and attitudes regarding treatment orientation of physiotherapists, and therapist-patient factors need to be considered when introducing new clinical practice models, so that the adoption of new clinical practice is maximised.
19	19.Tomoko Fujii, Hiroyuki Oka, Kenichiro Takano2, Fuminori Asada3, Takuo Nomura4, Kayo Kawamata1, Hiroshi Okazaki5, Sakae Tanaka6 and Ko Matsudaira	June 2015	cross-sectional study	High prevalence of low back pain (LBP) in nurses has been reported globally. Ergonomic factors and work-related psychosocial factors have been focused on as risk factors.	Fear-Avoidance Beliefs Questionnaire (FABQ), Kessler Psychological Distress Scale (K-6)	A small number of nurses had chronic disabling LBP that interfered with their work. In the nurses who had any type of LBP, high FABs were significantly associated with experiencing chronic disabling LBP. FABs about physical activity might be a potential target for LBP management in nurses.
20	20.Wing S. Wong and Richard Fielding	Feb 2011	cross-sectional study	prevalence of chronic pain in the general population of Hong Kong; evaluate the relationship of chronic pain with sociodemographic and life-style factors;	NPRS, HADS, SF-36	
21	21.Ben Darlow,Meredith Perry, James Stanley, Fiona Mathieson,Markus Melloh, G David Baxter, Anthony Dowell	2014	cross-sectional study	To explore the prevalence of attitudes and beliefs about back pain in New Zealand and compare certain beliefs based on back pain history or health professional exposure.	Back Pain Attitudes Questionnaire (Back-PAQ).	A large proportion of respondents believed that they needed to protect their back to prevent injury; we theorise that this belief may result in reduced confidence to use the back and contribute to fear avoidance. Uncertainty regarding what is a safe level of activity during an episode of back pain may limit participation
22	22.Corinna Leonhardt,Dirk Lehr, Judith Luckmann,Heinz-Dieter Basler Erika Baum,Michael Pfingsten Jan Hildebrandt Michael M. Kochen,Annette Becker	2009	Across-lagged panelanalysi	The assumption that low back pain (LBP) patients suffer from 'disuse' as a consequence of high fear avoidance beliefs is currently Corinna Leonhardt Dirk Lehr under debate	international physical activity questionnaire, FBQ	study demonstrate demonstrated that a fear-avoidance based physicaltherapyonlyshowedbeneficialeffectsinpatients who scored high on a FAB-scale at the beginning

21 Ben Darlow,Meredith Perry, James Stanley, Fiona Mathieson,Markus Mellish, G David Baxter, Anthony Dowell	2014	cross-sectional study	To explore the prevalence of attitudes and beliefs about back pain in New Zealand and compare certain beliefs based on back pain history or health professions exposure.	Back Pain Attitudes Questionnaire (Back-PAQ).	A large proportion of respondents believed that they needed to protect their back to prevent injury; we theorise that this belief may result in reduced confidence to use the back and contribute to fear avoidance. Uncertainty regarding what is a safe level of activity during an episode of back pain may limit participation
22 Corinna Leonhardt,Dirk Lehr,Judith Luckmann,Heinz-Dieter Basler Erika Baum,Michael Pfingsten,Jan Hildebrandt Michael M. Kochen,Annette Becker	2009	Across-lagged panelanalysi	The assumption that low back pain (LBP) patients suffer from 'disuse' as a consequence of high fear avoidance beliefs is currently Corinna Leonhardt Dirk Lehr under debate	International physical activity questionnaire. FBQ	study demonstrate demonstrated that a fear-avoidance based physicaltherapyonlyshowedsomebeneficialeffectsinpatients who scored high on a FAB-scale at the beginning
23 Jeanine A Verbunt, Klaas R. Westerterp, Geert J. van der Heijden, Henk A. Seelen, Johan W. Vlaeyen,J. André Knottnerus	Jun 2001	cross-sectional study	To evaluate disuse (ie, a decreased daily physical activity level) in patients with chronic low back pain (LBP) and to evaluate the construct validity of accelerometry formeasuring physical activity in daily life.	Roland Disability Questionnaire (RDQ), scoring low back disability, Tampa Scale for Kinesiophobia (TSK), VAS	Decrease physical activity levels in this sample of chronic LBP patients was not confirmed. the tracmor is a valid instrument for measuring daily activity in LBP patients.
24 Richard MH Bleijenberg, Marit GH van Weering, Karin CGM Groothuis-Oudshoorn,Miriam MR Vollenbroek-Hutten	Jun 2010	systmetic review	To give an overview of the physical activity level of patients with chronic fatigue syndrome in comparison with asymptomatic controls.	IPAQ	Patients with chronic fatigue syndrome appear to be less physically active compared with asymptomatic controls. There is no difference in variation of physical activity levels between patients with chronic fatigue syndrome and healthy control subjects, but the validity and reliability of some methods of measuring physical activity is questionable or unknown.
25 R A Iles, M Davidson, N F Taylor	April 2008	systmetic review	To identify psychosocial predictors of failureto return to work in non-chronic (lasting less than3 months) non-specific low back pain (NSLBP)		To predict work outcome in non-chronic NSLBP, psychosocial assessment should focus on recovery expectation and fear avoidance.The importance of fear avoidance beliefs in chronic pain has been established and it appears these beliefs and behaviours also play an important role in the non-chronic phase of NSLBP and can assist in predicting work outcome.