

Musculoskeletal Physiotherapy and Perceptions on Lifestyle Interventions: A Review

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ABSTRACT

Musculoskeletal pain treatments are widespread in the clinical practice of physiotherapists. A multifaceted biopsychosocial approach should guide modern pain therapy. The study aimed to investigate the association of musculoskeletal problems with lifestyle behaviors. The study adopted a qualitative literature review methodology. About 200 papers have been reviewed for this study. The categories of the study had been classified according to the factors that are interconnected to the life intervention. The inclusion criteria of the selected literature depend upon the data received. This is a review-based study. The results of cross-sectional and correlational analysis dominated the literature on lifestyle implications on musculoskeletal health, which included pain and its correlated inflammation. Long-term prospective studies, however, are difficult to enroll in due to ethical concerns about denying patients' therapies shown to benefit them, notably lifestyle behavior modification. By conducting intervention studies, it determines lifestyle modifications that determine the beneficial aspects. These aspects are avoiding and reducing pain by increasing exercise capacity. The study concluded that the quantity of beneficial health practices boosted the health-related quality of life. To achieve long-term health, the complexity of the behaviour change needs to be supported by the individual's lifestyle pattern and the support of the data. Therefore, in this century characterized by chronic lifestyle-related illnesses, various health behavior modifications may be claimed to be a primary therapeutic skill of health professionals (individually and collectively).

KEYWORDS: *Chronic illness, lifestyle behaviors, musculoskeletal physiotherapy, therapeutic skills*

Received:
04-Dec-2022;
Revision:
18-Mar-2023;
Accepted:
10-Apr-2023;
Published:
19-Jun-2023

INTRODUCTION

Musculoskeletal pain treatments are widespread in the clinical practice of physiotherapists. A multifaceted biopsychosocial approach should guide modern pain therapy.^[1] Physiotherapists explore variants of “behavioral and cognitive components” in research on musculoskeletal pain, and long-term evidence has grown over the last decade.^[2]

The present represents that there is sufficient evidence for clinical practice for screening a patient’s lifestyle choices. The behaviour of life brings changes in the management of the musculoskeletal system by the indication of the symptoms and the signs given by the body. These signs can be managed by healthy clinical

practices. The improvement in health and quality of the life can be implemented by the low erring of the disease with the dose dependency.

LITERATURE REVIEW


The management adopted by musculoskeletal pain recommends following the guideline which is efficiently practised in clinics under the approach of biopsychosocial parameters. This management of

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How to cite this article: Ahmed H. Musculoskeletal physiotherapy and perceptions on lifestyle interventions: A review. Niger J Clin Pract 2023;26:531-7.

Access this article online	
Quick Response Code: 	Website: www.njcponline.com
	DOI: 10.4103/njcp.njcp_852_22

conditions reported that many physiotherapists are not adequately trained and lack the confidence of dealing the patients who are suffering from psychosocial subjects. To manage the behavior and the technological issues of the human body, medical implications on the psychology and behavior of patients are deeply concerned.

Impact of behavioral medicine

The definition of Behavioural medicine is presented by the International society which has all the affiliations related to behavioural medicine.^[3] The statement is that "it is the combined representation of the behavior, psychosocial impacts with the analyses of the biomedical information. These parameters affect the behavior of the patient's activities and considering the participation of the patient is very important. Therefore some treatment methods are applied for the evaluation of behavior change outcomes.^[4] All these guidelines help to integrate the improvement of the anatomical knowledge related to behavioural, and psychosocial conditions. Patients suffering from musculoskeletal pain need to train themselves in self-management, adjust their behaviour when necessary, and lessen reliance on the health care system, according to the behavioural medicine approach.^[5]

Clinical behavior of physiotherapists

Furthermore, Fritz *et al.*^[6] investigated the several multiple strategic executions on influencing the clinical behaviour of physiotherapists in the condition and the treatment of musculoskeletal pain. The conclusion which is identified was obtaining the approaches for the short-term changes needed by the patient. All these changes are needed to be sustained using alternative procedures and/or dosages than those utilized in the study. As a result, knowledge of evidence-based behaviour modification approaches assures the requirement of the technology which need successful installation in term of behavioural, psychosocial, and biological information. All these categories are not equally integrated with physiotherapy,^[7] especially in the study of musculoskeletal management.^[8]

Few studies address the integrated idea of behavior medicine in physiotherapy,^[9] and even fewer detail its application.^[8] Individuals undergoing rehabilitation following an injury or surgery have not just physical but also psychological difficulties, according to research.^[10] Various symptoms, including rage, sadness, and low self-esteem, have been observed^[11] and have been documented to occur in both the general population^[12] and athletes. The value of detecting such psychological problems is generally acknowledged among physiotherapists, with the Chartered Society of Physiotherapy (CSP) characterizing physiotherapy as a profession that "takes a 'whole person' approach to health and wellness."^[13]

Physical activity and the disease condition of the musculoskeletal body have been identified as an important constituent for the development of lifestyle intervention and health perception. The treatments have been required for their healthy development, proper management, and proper function. The life intervention covers the area of weight management, exercise, stress management, and all the factors including these management parameters.

The healthy life intervention includes happiness, a stress-free environment, a healthy diet, and a healthy routine. In parallel, unhealthy life or imbalance life intervention includes stress, excessive obesity, or associating multiple diseases.^[2] By reviewing the literature, it has been suggested that intervention in lifestyle represents a significant role in maintaining the condition of musculoskeletal system by performing exercises by healthy people and by delivering physiotherapies to patients.^[6]

Musculoskeletal pain

The part of muscles and bones is the main support of the human skeleton. As it has been considered to be the most functional and movable supporting system, people usually neglect this system in terms of care and health. Musculoskeletal pain is common in both developed and developing nations, and its consequences can have a significant influence on the quality of life.^[14] According to estimates, 10.6 million individuals in the United States have high-impact pain problems that cause significant impairment.^[15] Musculoskeletal problems such as low back pain, neck discomfort, and lower extremity osteoarthritis are among the leading causes of disability years lived.^[16] The expenses of controlling chronic pain outweigh those of illnesses such as heart disease and cancer.^[17] Psychological issues are regarded as key risk factors for the consequences of disability and suffering.^[18]

Significant constraints, such as access and expense, may prohibit certain patients from getting this sort of therapy.^[19] To address these obstacles, current initiatives have focused on teaching non-psychologist practitioners to integrate psychological techniques into primary care for chronic pain prevention and management.^[20]

The pain initiated in the musculoskeletal framework provides difficulties in the body. These difficulties lie in the inability to physically work and exercise which is associated with the several practices of the lifestyle relating to noncommunicable illnesses.^[21]

The high ratio of awareness in lifestyle behaviour leads to preventive action for the strategy of chronic pain and the method developed by the multidisciplinary

teams to concentrate more on the appropriateness of patients. The physical work involves required patterns of movement which are acceptable to achieve rehabilitation function.^[22]

The trained staff and the health professional are more reliable with the treatment of the patient health education. In comparison to other established health practitioners, their practice style often necessitates extended patient contact time and visits. They are very knowledgeable about physical activity advice.^[23]

The policy statement given by the World's Physical therapy confederation identifies that the physical treatment of the individual is intended at promoting and maintaining fitness in all ages and the quality of health. This parameter includes all the demographics of the practices of physical therapy.^[24] It has been identified that patient mostly arrives at physiotherapist clinics with severe diagnosis and musculoskeletal problems causing the multiple risk factors associated with lifestyle diseases.^[25] Addressing health behaviour improvements such as smoking cessation, appropriate diet, proper sleep, regular physical activity, healthy weight, and less excessive stress is highlighted as a focus for physical therapists in the twenty-first century.^[26]

The concept of self-management in physical therapy

Physical therapists can help to lessen or avoid the detrimental effects of musculoskeletal problems.^[27] The most successful self-management interventions include offering self-management assistance for patients with specific diseases as part of normal health care and interactive online self-management programs.^[28] Adherence may be improved through individual sessions or delivered in a clinical environment. The following are the behaviors that can be changed.

Smoking

Smoking is harmful to your musculoskeletal system.^[29] Tobacco use slows recovery and raises the risk of complications from fractures and injuries. High coffee and alcohol usage, which frequently accompany smoking, exacerbates bone loss.^[30] Tobacco use causes inflammation of the musculoskeletal system According to the research, the patient suffering from epicondylitis is one of the independent factors and has reached up to 6,000 individuals.^[31]

Painful impact of smoking

The relationship develops between smoke and musculoskeletal pain has been acknowledged for a long time. Smoke is responsible for bringing discomfort in the back and suffering from arthritis^[29] and therefore some smokers complain about less pain tolerance and suffer greater pain as compared to non-smokers.^[31]

The improved documentation of the pulmonary and cardiovascular system presented that the healing and nourishment of the bone can be done by the perfusion of vascular muscle. This also increases the responses of the inflammatory action produced in the local and systematic system.^[32]

Furthermore, results following orthopedic surgery are enhanced in ex-smokers resulting in faster recovery of functional ability.^[33]

Unhealthy diet and obesity

The risk factor for the cause of cardiovascular disease is the determination of bone mineral density at a low level. It has mainly focused on the body's physical exercise and the treatment of severe back pain in the region.^[34]

Adaptation to a Western lifestyle

The adaptation of the western lifestyle includes the intake of Caffeine and the consumption of alcohol, the intake of animal protein, and smoking, and they are not appreciated nor they are addressed to adopt such policies in their health care documentation.^[35] Bone loading is caused by increased body weight and it is not responsible for the protection of the demineralization of the bone and may even contribute to fractures and fragility of bones. The bone components of the body degrade the mass of the high body which is the most critical for providing strength to the bone and playing a role to prevent fracture.^[35]

Obese persons have been advised to adjust their lifestyle habits to enhance not only their health results but also their movement and better classification of life.^[36] Obesity and other chronic lifestyle-related diseases are linked to persistent systemic low-grade inflammation.^[37]

Discoveries of obesity and epicondylitis

The findings of Shiri *et al.*^[38] lend credence to this notion of the term epicondylitis, which is the specific pain initiated by the epicondyle region having strain in the extensor and the flexor muscle of the wrist due to physical work-related factors. Obesity has been linked to several musculoskeletal problems that influence functional ability. Aside from back pain, obese adults are more likely to develop hyperuricemia, gout, and osteoarthritis.^[39]

Immobility

The pattern of sedentary lifestyles is recognized to be linked to non-communicable illnesses such as high blood pressure, heart disease, stroke, type 2 diabetes mellitus, and several malignancies, which describe well the ailment related to the lifestyle cluster.^[40] People with chronic diseases, such as those who walk less or with back pain are considered to be physically less active in

general those who are not in pain. This methodology might be muddled by pain aversion and neglecting behaviour towards physical activities.^[41]

McDonough and colleagues^[42] recently revealed that a pedometer-driven walking program can not only help persons with low back pain enhance their walking capacity while reducing disability and discomfort, but it also has no negative side effects.

Lack of sleep

The western population have been observed more sleep deprivation which is affecting both cognitive and physical efficiency.^[43] It is reported that the average sleep of the individual has been shortened by around two hours since the beginning of the twentieth century. The recommended count for the quality of sleep varies from 8 to 10, however, most of the population have reported sleeping patterns which are less than six to seven hours per night.

Deprived Sleep patterns

Sleep deprivation, which has mostly been researched by shift workers, is widely recognized to be connected with higher rates of sickness and injury, It is directly associated with the increased ratio of the disease related to the heart and blood pressure.^[44] Insomnia is related to tiredness, cognitive disruption, mood disturbance, anxiety, and depression,^[45] the combination of multiple factors leads to chronic pain. The observed behaviour for the people who are having proper sleep report less discomfort when their sleep is better.

Furthermore, the capability and the ability of sleeplessness added pain and impair the person's threshold.^[46] even in those who do not have a health problem. Even when pain intensity is managed, emotional pain rating and health anxiety are the strongest predictors of sleeplessness severity.^[47] Many types of research have been done that show that in animals that the irritation and tissue damage can be controlled by regular sleep which is responsible to reduce the generation of free radicals.^[48]

Link between musculoskeletal and mental health

Musculoskeletal health and functional ability are directly influenced by mental health. The connection of mental health with health of musculoskeletal is comprised of two-way. Therefore the health-related mental aspects are more concerned with the issues which are related to physical health which are symptoms generated by depression and uncontrolled stress and anxiety and major problem of the musculoskeletal system.^[49]

Such mental health concerns might lower one's pain tolerance and have a negative influence on physical capability and handicap.^[50] People who suffer from

mental illness have inferior lifestyle habits than those who do not; for example, people who are more smoking, obese, improper sleeping pattern and eat a less healthy diet seem to be more worried and stressed.^[51] People with persistent musculoskeletal difficulties are known to suffer from mental health concerns such as anxiety, stress, and depression.^[52]

There are many strategies which are required to be implemented for the betterment of the mental health of a patient. These strategies are constituted in the primary and secondary regions. The secondary strategy is also known as the independent factor which includes the problem of the musculoskeletal system. This also improves resilience, a resource to manage short and long-term complaints, improve functional self-efficacy and control the perceived signals. Thereby all these improvements bring the recovery of the special complaint and the therapeutic outcome.^[53]

It has been observed that people who have better physical activities and fitness programs are suffering less from mental illness. They have a low level of anxiety and depression symptoms as compared to those who are not active in physical activities.^[54]

Therefore, this research supports the management of healthy life by encouraging physical activity in all age groups and relating the causes of the interconnection of diseases with each other. People who are having chronic back pain usually have upset and effective mental health. Therefore it is important for better cognitive health it is important to reduce musculoskeletal pain as both management is indirectly linked together.

METHODS

The study adopted a qualitative literature review methodology. The research has included the different forms of mixed methodologies with full-text included studies in the native language for the researchers to investigate the better approach of the learners and the intervention. About 200 papers have been reviewed for this study. The categories of the study had been classified according to the factors that are interconnected to the life intervention. The inclusion criteria of the selected literature depend upon the data received.

The comprehensive research data have been extracted from multiple electronic databases (Medical Literature Analysis and Retrieval System Online (MEDLINE), Excerpta Medica Database (EMBASE), Education Resources Information Center (ERIC), PsycINFO, and SPORTDiscus with another identifiable abstract). According to these databases and literature, data extraction has been shaped into a more organized and presentable

form.^[55] Many studies have been utilized to present the main finding of the research to fulfill the requirement of the study. Due to the long-term prospective studies, participants are difficult to enroll due to ethical concerns about denying patients' therapies shown to benefit them, notably lifestyle behavior modification.

We selected study topics to make the connection with the modern influences for the clinical practice to advocate at least screening of lifestyle adopted by the patient. All these choices are highly considered to minimize the indications and the symptoms of the musculoskeletal system.^[56]

The impact of health education

The value of broadening the variety of education interventions employed by physical therapists has been recognized.^[57] Bodner and Dean studied smoking cessation tactics and found that these could be easily implemented into physical therapy practice. Regulations are required to assess the effectiveness of present methods by evaluating teaching tactics during therapy sessions.^[23]

Counseling and media promotion

The research on health behavior changes, in general, might provide significant evidence based on different ways for practitioners, especially physical therapists, to influence the patient for expeditious behaviour change in their busy practices schedules. Brochures have been recognized as typical instructional techniques used by physical therapists.^[58] Motivational interviewing is one evidence-based technique for conducting consistent in-clinic interviews with patients to impact changes in a variety of health behaviors.^[59]

Basic requirements for a healthy lifestyle intervention

Ford and his colleagues^[61] discovered that over 8 years of the study the sample size of 23,000 people ranging the age from 35 to 65 years. The BMI of people who did not smoke is less than 30, and they are active with the physical movement for about 3.5 hours per week. These people have the habit to follow nutritional principles for a healthy outcome. This category is having a lower risk of a chronic condition and about 78% do not suffer from disease outcomes. Other diseases such as the risk for cancer-based disease can be reduced by 36%, the ratio of myocardial infarction can be reduced by 81%, the ratio of heart stroke can be reduced by 50%, and Type 2 diabetes mellitus can be lowered by 93%.^[60] these are the main four characteristics of health if any one of them is present then there is a chance of having chronic illnesses and it is reduced according to the number of good lifestyle factors present. The change in human behavior, particularly health behaviors, has been generally acknowledged to be difficult.^[56]

The study of Blanchard and colleagues^[61] reported that about 83-92 % of cancer survivors were non-smokers. (15-19%) had 5 times the organic nutrient intake per day, as well as the physical activity recommended (30–47%). The quantity of beneficial health practices boosted the health-related quality of life.

RESULT AND DISCUSSION

Musculoskeletal pain is common in both developed and developing nations, and its consequences can have a significant influence on the quality of life. The better modifications for avoiding and reducing pain, hence increasing exercise capacity, in which patients at what time, and how these advantages may supplement the benefits of physical therapy. Such research would aid physical therapists in their full patient examination and evaluation of lifestyle habits, as well as in the development of behavior modification techniques that may be quickly implemented in practice.^[57]

Wilson *et al.*^[61] suggested lifestyle modification or, at the very least, management of lifestyle variables in antihypertensive medication studies to tease out these associations. Major changes have been recommended in health behaviour modification for all recognized healthcare practitioners based on such findings.^[62] Modern research with retrospective and prospective analyses has been required to determine negative factors which are adversely affecting musculoskeletal behaviours and their impairments. The change in strategies for mitigating pain and normal functionality.^[62]

This study highlighted the numerous areas to help physical therapists better link their abilities with healthcare needs. The teaching tactics and the accountability of the therapist's behavior play very important roles. The friendly use of techniques has been guided by evidence-based treatments and behaviour change theory.^[63] Much of the literature supported that the abilities of physical therapists need modern applications and training to enhance the version of physical activity principles and education on smoking cessation, dietary control and medical treatment.^[63]

CONCLUSION

Cross-sectional research and correlational analysis have dominated the literature on lifestyle implications on the health of the musculoskeletal system, comprising pain and resultant soreness. Long-term prospective studies, however, are difficult due to ethical concerns about denying patients' therapies shown to benefit them, notably lifestyle behavior modification. According to the studies, the focus of the personal and educational practice would be more helpful to diversify the learners'

needs and styles, particularly in multicultural settings, Consequently, it will be time resource effective.

Acknowledgement

The authors are thankful to the Deanship of Scientific Research at Najran University for funding this work under the Research Priorities and Najran Research Funding Program (NU/NRP/MRC/12/5).

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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