SELECTED MEDICAL AND PSYCHOLOGICAL ASPECTS OF MANAGING PATIENTS WITH CHRONIC PAIN IN POLAND

WYBRANE ASPEKTY MEDYCZNE I PSYCHOLOGICZNE PROWADZENIA CHORYCH Z BÓLEM PRZEWLEKŁYM W POLSCE

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SUMMARY

The purpose of this paper is to present the necessity of interdisciplinary managing of patients with chronic pain. The article shows a complementary medical-psychological approach. The approach considers the complexity of pain and its sensory, emotional and motivational spheres. It also stresses the necessity to distinguish between acute and chronic pain, which is the basis of proper patient management. The differences include the duration of pain, functions of pain, emotional correlates. After the International Association for the Study of Pain (IASP), the paper presents chronic pain as a disease, with all of its consequences. It indicates psychological factors increasing the risk of disability of patients with chronic pain, that is depression and loss of professional activity. The paper shows fundamental problems of certification for sickness benefits and rehabilitation purposes in those patients. It also considers the assessment of readiness for professional and social activity as an essential element of rehabilitation.

Key words: pain experience, pain, stressor, chronic pain, acute pain.

STRESZCZENIE

Celem pracy było przedstawienie konieczności interdyscyplinarnego prowadzenia pacjentów z bólem przewlekłym. Artykuł prezentuje komplementarne, medyczno-psychologiczne podejście. Uwzględnia złożoność bólu i jego sfery: sensoryczną, emocjonalną oraz motywacyjną. Podkreśla konieczność rozróżnienia bólu ostrego od przewlekłego, co stanowi podstawę właściwego prowadzenia pacjenta. Różnice te obejmują czas trwania bólu, funkcje bólu, korelaty emocjonalne. Za Międzynarodowym Stowarzyszeniem Badania Bólu (International Association for the Study of Pain – IASP) praca przedstawia ból przewlekły jako chorobę, ze wszystkimi jej konsekwencjami. Wskazuje na czynniki psychologiczne, zwiększające ryzyko niepełnosprawności chorych z bólem przewlekłym – depresję i utratę aktywności zawodowej. Ukazuje zasadnicze problemy orzecznictwa do celów zasiłkowych i rehabilitacyjnych u tych chorych. Uwzględnia ocenę gotowości do aktywności zawodowej i społecznej jako ważny element rehabilitacji.

Słowa kluczowe: doświadczenie bólowe, ból, stresor, ból przewlekły, ból ostry.

INTRODUCTION

Man has been accompanied by pain since the moment of birth. As far back as about 2500 years ago, Hippocrates of Kos (460–370 B.C.), one of the most outstanding forerunners of contemporary medicine, claimed that "an hour of pain is as long as a day of pleasure". Another Greek philosopher, Epicurus (341–271 B.C.), dealing with the philosophy of life, perceiving the phenomenon of pain, stated that "freedom from pain is happiness". People experiencing that phenomenon confirm that each painful moment seems to last endlessly long.

Although we lack reliable statistics, we know that there is a huge pain burden in the word. If we took all types of chronic pain into consideration, even with a very conservative estimate of only 5% of the population having chronic pain, 250 million people in the developing world would be in pain [1].

This paper is devoted to the problem of diagnosing and treating patients experiencing chronic pain ailments. In the article, we refer to contemporary pro-

fessional literature, as well as to our own experience gained while working with patients suffering from pain, with whom we deal, considering the performed jobs of a physician and a psychologist. We base on the knowledge transferred in Poland mainly within the Polish Association for the Study of Pain, in cooperation with and under the auspices of the International Association for the Study of Pain, as well as the Polish Association of Anaesthesiology and Intensive Care (numerous trainings within seminars, conferences and symposia).

In 1974, as a result of a consensus reached by the body of interdisciplinary researchers of the International Association for the Study of Pain (IASP), the following definition of pain was announced. "Pain is an unpleasant receptor and emotional sensation which accompanies existing or threatening damage to tissues, or which is only related to such a damage" [2, 3, 4]. The basis for this individual phenomenon is made of two equivalent components: receptor (sensory) and emotional. It is widely recognized that pain is not just a sensation; it is also emotional experience. Understandably, therefore, the pain experience is dependent on the sociocultural context in which is occurs [1].

Depending on the reason causing pain, its duration can be diverse. The International Association for the Study of Pain divided pain, depending on its duration, into acute pain, lasting up to three months, and chronic pain, lasting over three months. It is worth emphasizing that both contemporary medicine and psychology acknowledge that pain is what a patient feels and describes, not what a physician or the environment imagine.

Acute pain is the result of the irritation caused by a damaging stimulus of **nociceptors**, that is of nerve endings in the tissues (receptors), and it is defined as the so called receptor pain. This pain plays a very important warning and defensive role. When a stimulus likely to damage tissues appears (e.g. high temperature), the feeling of pain appears, which causes instinctive moving back of the part of the body in order to avoid its damaging. Another equally important role of acute pain, is its defensive and protective function in the situation of damage to tissues, which has already occurred, e.g. a sprain or fracture. In such a case, the feeling of pain in the injured area forces limiting the movement of a limb. Acute pain is a self-limiting phenomenon. That means it recedes after any injury (including surgeries) within several days of properly proceeding recovery and effective analgesic treatment [5]. However, when acute pain remains longer because it is not properly controlled or it is not controlled at all, pain becomes established. Consequently, acute pain can switch to chronic pain.

Chronic pain is defined as "pain remaining longer than a regular three-month-long period of healing a tissue" [6]. It is persistent, long-lasting or recurring pain which demands a regular analgesic therapy. Chronic pain mechanism is complex and the pain plays neither a warning-defensive nor a defensive-protective role. Therefore, chronic pain becomes a disease in itself. Chronic pain is accompanied by a variety of somatic symptoms, e.g. sleeping disorder, reducing daily living activities, loss of appetite, constipation, worsening of sexual activity and changes in personality. Moreover, pain can be accompanied by emotional disorders (fear or anxiety) and mental disorders (depression). This pain is very often connected with at least partial immobilization, immunity decrease, eating disorders. The problem of dependence on taking medicines frequently appears in its course.

Considering the mechanism of its appearing, chronic pain is divided into receptor pain (connected with the irritation of nerve endings) and non-receptor pain. The latter is divided into neuropathic pain, arising as a result of the damage to the peripheral nervous system and/or the central nervous system, and psychogenic pain which appears without the damage to tissues, but its symptoms are typical of such damage.

Neuropathic pain is a peculiar kind of chronic pain because it develops as a result of the damage to the peripheral or the central nervous system against, for instance, malignant disease, diabetes or past zoster. Neuropathic pain also includes phantom pain and persistent postoperative pain. The nature of neuropathic pain is diversified and can be perceived as burn, penetrating, tearing, or a feeling similar to electric shock. Those kinds of pain can appear independently or are released under the influence of a minor stimulus, e.g. touch or under the influence of emotions.

The most frequent causes of chronic pain are malignant diseases, diseases of movement organs, temporomandibular joint disorder, peripheral vessel diseases, diabetes, post-zoster neuralgia, facial palsy, wrist isthmus syndrome, the state after limb amputation, especially if a patient experienced severe pain in that limb before the amputation (so called phantom pain), nerve damage as a result of surgery (so called persistent postoperative pain).

The majority of professionals dealing daily with patients undergoing painful diagnostic and medicinal procedures notice the emotional spheres of postoperative (acute) pain, as well as chronic pain. However, it must be acknowledged that there is a certain gap between the knowledge of that subject and clinical practice, especially if we consider the psychological sphere of this phenomenon [7, 8].

At present, knowledge about pain is undergoing revolutionary changes introduced thanks to the application of modern techniques of molecular, cellular and systemic neurobiology, as well as neuroimaging [9].

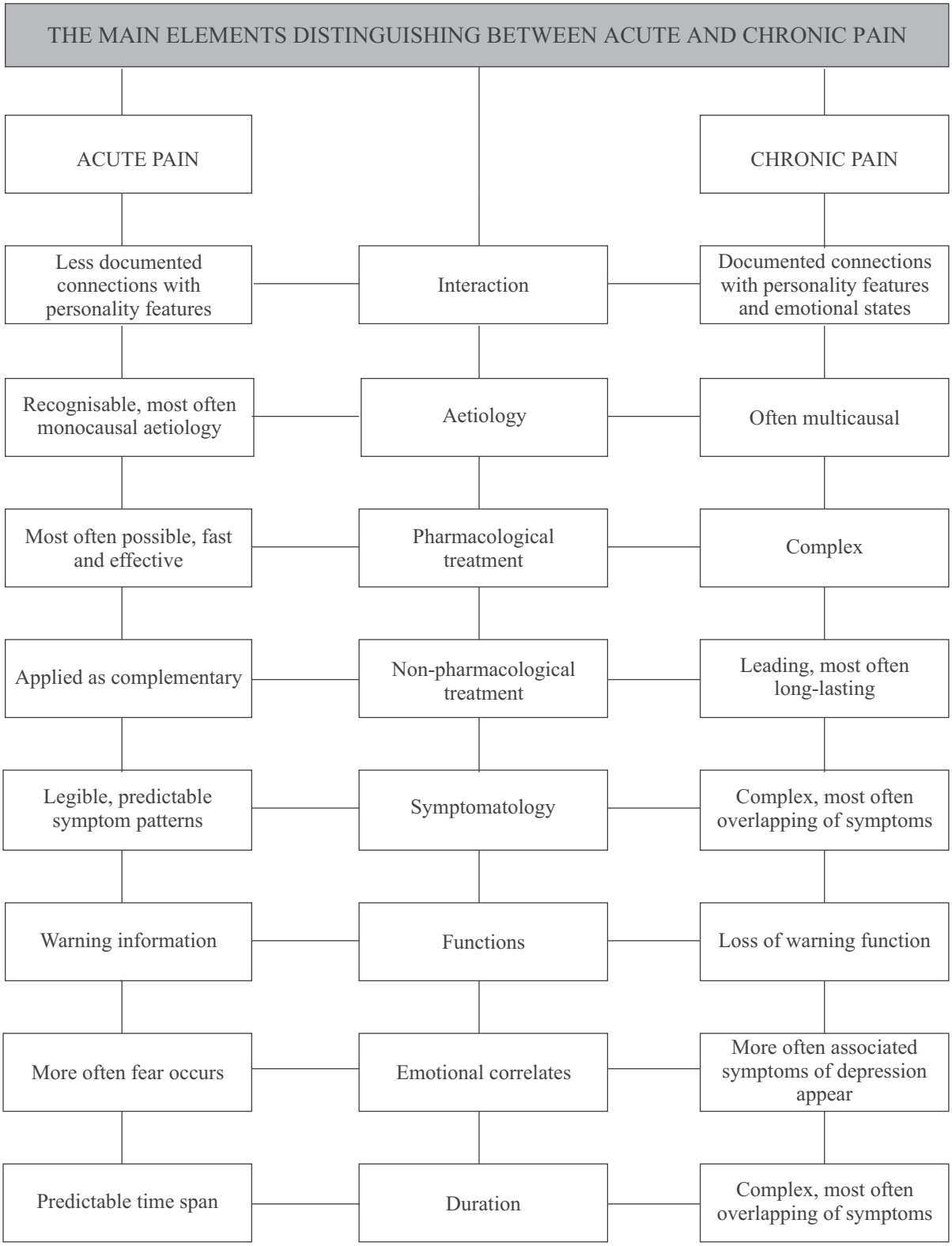

Diagram 1. The main elements distinguishing between acute and chronic pain [8, 10]

The majority of conducted examinations concerned the physiology of pain perception (nociception), new pain-relieving agents (analgesics), as well as other techniques of pain control and new means and ways of administering well-known agents. Technological progress is accompanied by a relatively new, comprehensive way of understanding the phenomenon of pain. Suffice it to remind the concepts to which the scientists refer while describing neurobiological bases of contemporary psychological thought.

In connection with the issues discussed in the paper, we present a comparison of the basic elements distinguishing between acute and chronic pain. They are expressed in the publications on health psychology [10, 8].

In the paper, we highlight the issue which is of both humanitarian and practical importance. The knowledge of pain treatment, medicine and psychology contribute greatly to vocational rehabilitation of patients experiencing chronic pain. When analysing the problem of pain-related disability, at least two essential issues must be emphasized. On the one hand, it must be remembered that the factors connected with workplace can contribute to muscular-skeletal disorders and, secondarily, deteriorate an employee's health as a result of pain aggravation. On the other hand, complete abandonment of professional activity means premature loss of professional satisfaction, a decrease of wealth, a drop in spirit [11].

In the article we discuss three main aspects of chronic pain, which include:

1. Psychological conditionings of pain-related disability.
2. Selected certification problems.
3. Readiness for professional and social activity as a part of rehabilitation in patients with chronic pain.

Psychological conditionings of chronic pain-related disability

The processes of arising, conducting and suppressing pain impulses leading to chronic pain syndromes are complex and still not recognized well enough.

The after-effects of chronic pain syndromes include established, unfavourable changes within the systems which are basic for life: nervous (sleep and wakefulness phases disorders, changes in behaviour, depression), respiratory (arrhythmia and shallow respiration) and circulatory (cardiac arrhythmia, blood pressure increase in the vascular system).

Ineffective defence mechanisms lead to increased myogenic tone in skeletal muscles and, consequently, to the decrease in general activity which, in turn, frequently generates symptoms of depression in those patients [12, 13]. Moreover, the problem of necessity of taking medicines and sometimes drug dependence, the increase in dependence on family, carers, difficulties or inability to perform a job, and social isolation arise. Secondarily, all of those factors increase isolation, anxiety, fear, bitterness and frustration.

The researchers indicate the existing connections in the form of separate psycho-pathological systems which frequently occur in patients suffering from chronic pain [14, 15, 16].

The correlation between experiencing chronic pain and the occurrence of psychological problems is multidimensional and complicated. Herein, we only signal that problem. Suffice is to remind that the pain itself is a major stressor which can cause adaptation disorders.

According to many authors, pain itself is a risk factor in the process of development of deep depression in a suffering person [17, 18]. Creating a vicious circle of interaction and interdependence, both pain and depression, driving each other, become the cause of many losses, such as, among others, limiting job opportunities, decreasing the freedom of activity and independence, and often resulting in income decrease and loss of financial status. It can be stated that to learn living with pain at the same time means learning to deal with frustration, irritation, tiredness, and lack of hope, simply, with suffering in a creative way.

As we have said before, patients suffering from chronic pain often face many real life problems. They can cause escalation of helplessness against the barriers which would be absent if patients did not complain about nagging pain and other ailments, e.g. those connected with the necessity of long lasting analgesics intake (excessive sleepiness, persistent nausea, constipation) [19, 20].

Some researchers compared the frequency of chronic pain occurrence in the whole population with its frequency in the population of people suffering from mental disorders – there was no difference [21, 22, 23, 24, 25]. According to other researchers, patients in psychiatry clinics complained about chronic pain as often as patients in general medicine wards [22].

In other studies, conducted by Large, 94% of patients of the Pain Treatment Clinic had both physical and mental symptoms. High intensity of anxiety, sleeping disorders and pain ailments were the factors which prevailed among his patients.

A very interesting study was presented by Aigner and Bach [26], who revealed the lack of statistical differences, as far as the duration and degree of disability in two compared types of patients goes. Similar ailments characterized those patients who were diagnosed with disability connected with physical problems causing pain, and those patients whose pain was connected "solely" with psychological factors. This confirms the view, more and more frequently expressed by specialists, that in contemporary analgesia practice, the attempts of fixed dualistic division (into *soma* and *psyche*) are not justified any longer. There is the need to include both equivalent dimensions – physical and mental in the diagnosis of disability being the result of chronic pain syndrome [27, 28, 29, 30, 31]. The connection between depression disorders and experiencing persistent chronic pain is widely known [32]. The symptoms of depression, prevalent in patients with chronic pain, can themselves be a secondary-acting, pain-increasing factor [17, 33].

All in all, it is worth stressing once again that the connection between mental disease and pain is com-

plex, complicated and dependent on many factors (e.g. the kind of mental disease, the nature of pain, others).

Selected certification problems

Vegetative, endocrine, somatic and mental changes connected with chronic pain lead to hypoimmunity. In native and foreign literature we find the descriptions of psychophysical interactions between the sensory – nociceptive system, that is the system of ways engaged in conducting pain stimuli, and the immune system. Permanent activation of the psychophysical interactions increases incidence of a variety of infections.

Numerous research results indicate that particular groups of pain (e.g. low back pain) have fixed dynamics and their intensity is time-changeable. More or less half of the population in industrialized countries suffer from this ailment at least once a year. Each recurrence of those ailments increases the probability of the next one, worsening the prospects of health improvement and leading to disability.

In the socio-economic prospect, pain consumes a lot of money on analgesia counselling, and social benefits for the people incapable of performing a job due to chronic ailments [34].

The definition of chronic pain implies that it is a nociceptive pathological state which remains after the regression of its established or supposed source [9]. Considering the fact that pain is always an individual feeling, certification for both sickness benefit and rehabilitation purposes encounters a peculiar problem. In both of the systems, the emphasis is put on proving clinical deviations in a patient. Lack of clinically ascertainable deviations (e.g. deformations, degenerative osteoarticular changes, muscular dystrophy, others) constitutes a basic difficulty in this certification, despite a major degree of disability. It is in contradiction with the notion of disability defined by the European Disability Forum. Moreover, both systems of certification differ from each other as far as the ways of assessment of a person's self-service ability, and as far as time factor in the assessment of incapacity for work, but in a similarly restrictive way they refer to the problem of lack of physical deviations in an organ or systemic range. In the light of the data obtained from the register of specialist analgesic treatment institutions in Poland, in the majority of cases, pain syndromes are not considered disability. Two aspects of rightness are discussed: patient's individual feelings and rightness dictated by public welfare.

Such a state occurs contrary to the definition of disability which implies that chronic pain syndromes are in many cases a form of disability. There are barriers, impossible to overcome in the way accessible to other people, and the number of those barriers shows growing tendency. It is growing alongside the increase in algological subdimension index values of chronic pain, that is of persistence of the ailment and its current intensity in the time unit.

Analgesic treatment specialists (mainly anaesthesiologists, neurologists, oncologists, as well as a growing number of specialists in palliative care and in pain medicine) stress that there is a relatively small number of chronic pain syndromes which undergo effective treatment. More often, the situation occurs when the ailment increases and, consequently, it is impossible for a person to play a professional and social role [35].

The literature of health psychology discusses extensively those problems, as well as the tools for measuring variables, for example, personality factors, emotions, the feeling of effectiveness and others [36, 37]. A multidimensional analysis of those issues can be found in "Health Psychology" [8], the book which is based on Polish reality. The author presents studies and theories important for research into psychological factors equally essential in diagnosis and in pain pharmacotherapy [36]. In the branch of clinical health psychology, psychological mechanisms of diseases and dysfunctions are still being discussed.

Chronic pain is called a silent epidemic. We cannot omit the fact that the lack of proper analgesic care also has its economic dimension in the form of costs of sickness benefits, besides its ethical aspect.

Chronic pain is the source of suffering of a large part of the population and it is a challenge to the health care organizers and institutions professionally concerned with social policy and legislation in this field.

Readiness for professional and social activity as part of rehabilitation of patients with chronic pain

Measurement of readiness for activity and of subjective assessment of one's own abilities plays a vital role in professional activity. The measurement result of perceived functioning ability of a person with chronic pain can indicate the ways of preventing the person from withdrawing from professional and social life. Such withdrawal is unfavourable to the overall psychophysical efficiency level and it leads to the phenomenon of the "vicious circle". Disbelief in one's own abilities limits the person's activity, and inaction reduces the capacity to handle successfully the situation of resuming professional and social activity. The research shows that the longer the person is unemployed, the less likely his/her resumption of professional activity is [38]. However, there are hardly any employment offers for people with specific professional qualifications, who are unable to pursue a previous career due to pain. Simultaneously, in the case of people suffering from chronic pain, their awareness

of how difficult it is to cope with professional duties, as well as interrupting employment for a longer period of time, negatively influence their functioning in the society in the future.

As any disease, chronic pain accumulates costs, not only personal but also social, that is, long-lasting sick leaves or even pension. Therefore, any form of support in resuming professional activity is valuable.

Vocational rehabilitation of patients with chronic pain is of great importance. In the process, both the patient and a variety of professionals such as a physicians who help to control pain, physiotherapists, psychologists, vocational therapists and vocational advisers play an essential role. Resuming professional activity (e.g. in an alternative position) is an important way of counteracting the increase in functional inefficiency. According to Gibson and Strong (1998), the way of spending free time (active or passive) and the conviction that one's own life influences everyday life have an essential connection with the person's readiness to act for the sake of continuing (even part time) professional activities.

Professional literature describes a variety of methods of the Direct Assessment of Functional Abilities (DAFA). The methods are partially encompassed in the list of physical requirements for a given job and elaborated for the people with pain (Table 1).

When we look at the problem of disability resulting from pain, we can see that such a person faces difficulties in many fields. Obviously, pain limits physical abilities, which arouses anxiety about how a patient is going to deal with professional duties. Current knowledge of numerous conditionings, as far as changing pain from the acute (informative) into the chronic stage, shows yet another aspect of disability.

Professional duties set requirements not only in the physical sphere. They also concern sensomotor and psychological abilities. The latter also include psychosocial (e.g. interpersonal contacts), cognitive (e.g. concentration skills) and perceptive aspects.

According to Jacobs, it is essential to assess, among others, pointed above, psychosocial requirements for a given job and establish their influence on the person. Why? The author cites the data indicating that a particular profession can be an additional stimulus intensifying pain. This is the case in professions based on numerous social contacts, for example with strict customers (shop assistant, travelling salesman, waiter, receptionist) (1999).

From the medical point of view, it is obvious that taking medicine by patients with chronic pain can influence cognitive abilities. Consequently, it can influence greatly the person's own safety, as well as the person's colleagues' safety.

Therefore, the diagnosis of functional abilities and psychological features is a part of vocational rehabilitation.

Readiness to continue professional and social activity is an important part of rehabilitation. For this reason, the assessment of functional abilities (DAFA), as well as providing help with professional activation requires a careful approach, an individual diagnosis and considering the physiological, cognitive and psychosocial factors influencing each other (undergoing interactions).

Regardless of the reasons, chronic pain is real, persistent and it disrupts human activity. Chronic pain covers every sphere of human functioning and changes the patient's and patient's family's lives. The pain also leads to gradual degradation not only of health state but also of social life, economic status and the standard of living of a suffering person and their relatives worsens. Financial burden connected with medical service expenses, nursing expenses and cost of drugs appears. Absence from work results in the loss of income, as well as in the feeling of unproductiveness, and being a physical and financial burden to the family and friends.

Table 1. Physical requirements connected with performing professional activity by people with chronic pain constructed by the United States Department of Labor (1991)

Endurance requirements	Other physical requirements	Sensory and communications requirements
Body position: Standing Walking Sitting	Climbing	Touch
Weight/strength: Lifting weight and carrying Pushing weight and other loads Pulling a load	Keeping balance	Speaking
–	Bending Kneeling Squatting	Hearing Taste Smell
–	Reaching Holding Using Fingers (precise finger movement)	Vision: Acute near Acute far (proper accommodation) Seeing and distinguishing colours Proper visual area

All-social costs include damages, pension and social benefits which have to be paid. Another problem is that even when it is available, pain management is usually not multidisciplinary. Thus, pain tends to be managed as a sensation rather than emotional experience. In the absence of a multidisciplinary approach, psychological issues are ignored. If the approach to the problem of pain were to be based purely on the physical domain, it is doubtful if the same results could be obtained. Counselling, screening of depression or anxiety, social support, and rehabilitation are parts of the management process [1]. This confirms the necessity for elaborating an interdisciplinary approach to pain treatment [39]. This paper, written from the perspective of medical and psychological knowledge, can be an example of such an approach.

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