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Knowledge, attitudes and practices of neurologists regarding the management of chronic non-cancer pain in the Republic of Moldova

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Abstract

Background: Chronic pain is a public health problem due to its high prevalence, disability, and associated comorbidities. In the Republic of Moldova, there are no health policies or strategies regarding chronic pain, and the burden on the population is not known because it is not registered nor monitored by the state. The aim was to analyze the knowledge, attitudes, and practices of neurologists regarding the management of chronic pain in the Republic of Moldova.
Material and methods: Mixed observational study (qualitative and quantitative) was designed and carried out using a Knowledge, Attitudes, Practices research questionnaire. The study includes 50 neurologists, average age of 47.4±9.52 years, women (82%), and urban area (80%), interacting with chronic pain patients on a daily basis (86%).
Results: 42% of neurologists know about pain measurement tools, 40% of them use these pain measurement tools, 40% of neurologist know clinical guidelines, 92% of them practice pharmacological and non-pharmacological treatments. The neurologists (62%) presented negative attitudes about chronic pain patients. Just 18% of them have sufficient knowledge and skills to deal with such a patient, 64% of neurologists received training on chronic pain issues.
Conclusions: Neurologists have little knowledge of pain measurement tools and guidelines and don't use them, which makes chronic pain poorly addressed, evaluated, and treated at the national level. They recognize the right of the patient to live without suffering and to benefit from quality services focused on their needs, but consider patients difficult to approach, communicate and work with.
Key words: chronic pain, knowledge-attitudes-practices research, neurologists.

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Introduction

Chronic pain is a public health problem due to its high prevalence, disability and associated comorbidities. The prevalence of pain varies from one country to another, being between 2-40% [1]. It is considered that globally 10% of the population are affected by chronic pain, it is around 60 million people that suffer, but national and regional studies indicate a prevalence of 20-25% [2].

A recent analysis demonstrated the pain prevalence in the USA of 12-20%, and in Europe – of 20% [3]. Prevalence greater than 40% was reported by studies conducted in Italy, France and Ukraine [3]. Pain brings suffering to individuals and challenges health systems, the economy and society: every year 1 in 5 Europeans is affected by chronic pain. This includes 153 million people with migraine or other chronic headaches, 200 million with musculoskeletal disorders and 100 million with chronic pain. The American Academy of Pain Management reports that 57% of American adults have experienced chronic or recurrent pain in the past year. Of these, 62% suffer from pain for more than 1 year and 40% mention that they have permanent pain [4]. For these reasons, the American Congress declared 2001-2010 "The Decade of Pain Control and Research" and the Joint Commission for Accreditation and Attestation of Medical Organizations requires specialists to consider pain as the fifth vital sign, therefore mandatory to be measured and recorded [5].

In the Republic of Moldova, there is no health policy or strategy regarding chronic pain, the burden on the population is not known because it is not registered nor monitored by the state. Following the joint efforts of non-governmental organizations and specialists in the field, remarkable scientific progress was made: clinical research and PhD theses, monographs were edited, the national guideline on cancer pain was published, the law was

amended for increasing access to opioid medications and changing university curricula to introduce palliative care [6-8]. At the Institute of Neurology and Neurosurgery, the pain centers were developed and professional societies, such as the Headache Society of the Republic of Moldova and the Moldovan Society for the Study and Management of Pain try to promote the problem of pain at the state and society level. For these reasons the proposed research is considered necessary.

The purpose of the research was to analyze the knowledge, attitudes and practices of neurologists regarding the management of patients with chronic non-cancer pain in the healthcare system of the Republic of Moldova.

Material and methods

In accordance with the aim and objectives outlined, mixed observational research (qualitative and quantitative) was designed and carried out. The knowledge and practices of neurologists regarding pain management and the attitude towards the patient with chronic non-cancer pain were evaluated using the structured questionnaire developed by the authors according to the criteria for KAP research (Knowledge, Attitudes, Practices) [9]. Quantitative study – a structured questionnaire with closed questions for self-completion was developed to conduct the study. The questionnaires were pretested and validated prior to the research. Qualitative study – in-depth interviews were conducted for the preliminary study and focus group to analyze the results. Two focus groups of 10 neurologists each were formed. For qualitative research there is no need for sampling, the number of people included in the research is determined by the purpose of the research.

Inclusion criteria: neurologists that give consent to participate in the study and treat patients with chronic non-cancer pain.

Exclusion criteria: neurologists not willing to consent for participation in study.

The questionnaire consists of 21 closed and open questions, with simple and multiple compliments. At the beginning of the questionnaire there is a preamble explaining the definition of chronic non-cancer pain and why that person is invited for the research. The questionnaire is structured in several compartments that aim to elucidate important aspects of the management of patients with chronic non-cancer pain in the healthcare system of the Republic of Moldova and are as follows: Frequency of consultations of patients with chronic non-cancer pain; Problems arising in the management of patients; Application of national/international guidelines for pain management; Knowledge about pathology and treatment; Non-pharmacological approach; Multidisciplinary approach; Referral of the patient within the healthcare system of the Republic of Moldova; Attitudes of doctors towards patients with chronic non-cancer pain; Training in pain/chronic pain; Needs for additional training of physicians in pain/chronic pain; Demographic data.

The individual and group interview was focused on several important topics: Working experience with patients with chronic pain; Knowledge about chronic pain; Current practices regarding patients with chronic pain; Attitudes towards patients with chronic non-cancer pain; and Barriers encountered in the management of these patients.

Results

The study group consists of 50 neurologists with average age of 47.4±9.52 years, mostly women (82%), from urban area – 80% vs. rural – 20%. 2% of respondents see patients with chronic non-cancer pain at least once a month, once a week – 12.0%, daily – 42.0%, several times a day – 44.0%. The vast majority of neurologists interact with chronic non-cancer pain patients on a daily basis (86%).

First, the knowledge about pain measurement tools was evaluated, whether doctors know and use them. As a result, 42% of the respondents know about tools to measure pain and only 40% of the surveyed neurologists measure pain during the consultation. This means that neurologists who interact most frequently with patients with chronic non-cancer pain have very little knowledge of pain measurement tools and the use of them less.

Analysis of physicians' knowledge of existing pain management guidelines demonstrated the following: 40% of respondents know a pain management guideline, of which they name a national guideline – 30% and/or an international one – 22.0%. In the Republic of Moldova there are two national pain treatment guidelines developed for neurologists on migraine and back pain management. Only 30% of the respondents knew at least one of them.

During the qualitative research, doctors mentioned that they do not know international guidelines because: "*I do not know English*" *(B, 54 years)*, "*I did not consider it necessary to study any guideline because chronic pain is not recognized as a separate entity in the Republic of Moldova, and it is not coded and paid respectively*" (C, 59 years, focus group).

Respondents were assessed if they know that the patient with chronic non-cancer pain requires treatment with specific drugs (not only analgesics): 92% of respondents answered affirmatively to this question. Evaluation of the experience of using specific pain treatment, that is classified into several groups: antidepressants (including tricyclics), anxiolytics, anticonvulsants, and opioids, showed the following: 80% of doctors mentioned that they had prescribed tricyclic antidepressants to patients with chronic non-cancer pain, anticonvulsants were used by 88% of doctors, other antidepressants in 58% of respondents, anxiolytics in 76% and opioids just in 24% of the questioned doctors. 4% of the respondents did not indicate any class of these drugs, the majority of neurologists administered 4 most indicated drug classes (tricyclic antidepressants, anticonvulsants, anxiolytics, and other antidepressants) in 36% of cases and 3 drug classes in 28% of respondents.

The neurologists indicated opioids very seldom. The qualitative research elucidated the reason of that mentioned by doctors: "*we don't have enough knowledge and we are afraid of adverse reactions*" (M, 58 years old), "*we haven't prescribed opioids for years, because it was strictly monitored and it was forbidden, and now we don't know how to do it*" (P, 50 years old).

The knowledge of neurologists regarding minimally invasive and non-pharmacological methods of chronic pain management was evaluated. The methods were indicated according to international guidelines, regardless of whether they are available or not in the Republic of Moldova. 72% of doctors mentioned that they know that exercise and sports help with chronic pain management, physiotherapy – 72%, infiltrations – 82%, physical therapy – 78%, psychotherapy – 74%, electrical stimulation – 50%, magnetic stimulation – 50%, manual therapy – 54%, biofeedback – 54%, relaxation techniques – 74%, cognitive-behavioral therapy – 56%, yoga – 52%, acupuncture – 72% of respondents and 34% of those surveyed know all non-pharmacological methods mentioned in the questionnaire. Thus, the top methods were infiltrations, physical therapy and exercises, the methods that are available in the health system and patients with chronic pain benefit from them.

Doctors were asked to mention which of the non-pharmacological methods the patients were referred to: 62% of the respondents referred patients to physical exercises and sports, 74% – to physio procedures, 70% – recommended infiltrations, 74% – physical therapy, 40% – yoga, 64% – acupuncture, 56% – psychotherapy, 30% – electrical stimulation , 38% – magnetic stimulation, 34% – manual therapy, 22% – biofeedback, 36% – relaxation techniques, 34% – cognitive-behavioral therapy and 16% of the respondents referred to all the mentioned methods, although many methods are not available in the Republic of Moldova.

The high percentage of doctors who referred patients with chronic non-cancer pain to physical therapy and psychotherapy demonstrates that doctors know about the bio-psycho-social approach to chronic pain where biological, psychological and social factors must be evaluated and addressed and the patient needs the consultation of multidisciplinary teams that would work in coordination.

Unfortunately, in our country such teams are limited and referral to specialists is difficult. In qualitative research, respondents mention: *"If they are sent for physical therapy or psychotherapy, patients don't understand why they are sent and they don't go" (K, 55 years old)*, *"When I tell patients that they need to go to psychotherapy, they don't believe me" (F, 59 years old), "Patients don't understand when I tell them that they have to deal with pain with other methods than drugs" (A, 47 years old).*

The reasons why neurologists did not refer patients to any non-pharmacological management method are: there are no available experts and methods in the Republic of Moldova (20%), there are no specialists and the respective methods in the district (8%), they do not know where to send the patient (2%) and they do not know that they should refer patients to specialists in the respective fields (6%). The most frequently mentioned barrier in accessing medical services by patients with chronic non-cancer pain was the availability of methods.

Neurologists were asked if they know that the patient with chronic non-cancer pain needs the consultation and treatment of a multidisciplinary team; 96% of the respondents know this fact and 96% of those surveyed mentioned that they sent patients with chronic non-cancer pain to the general practitioner (24%), to another specialist (32%), psychologist (72%), kinetotherapist (66%), physiotherapist (64%), pain specialist (34%) or osteopath (32%).

Multidisciplinary approach is when a team consisting of several specialists (neurologist, rheumatologist, traumatologist, neurosurgeon, physiotherapist, psychiatrist, nurse and social worker) works together in a well-coordinated way. In the qualitative research, the doctors mentioned that it is difficult to work in a team with a physiotherapist and a psychotherapist because the referral system is faulty, the approach of each specialist is different and they do not work to the same standards, for the same common goal – the treatment of chronic pain.

"If I prescribe to the patient specific drugs for the treatment of chronic pain and additionally recommend physical therapy, then the patient comes in a few months and says that the physical therapist said to stop the drugs, to do only exercises" (G, 57 years old), "Sometimes the patient comes to the chiropractor or osteopath after months of procedures without proper investigations, because each specialist works according to their own preferences, or protocols if they are for that specialty" (A, 45 years old), "I often prescribe antidepressants to patients for 6 months and the primary care doctor does not follow the prescriptions, we lack interdisciplinary cooperation" (S, 52 years old).

The attitude of neurologists towards the patient with chronic non-cancer pain was evaluated through a series of questions inserted in the questionnaire. 62% of the respondents mentioned that the patient with chronic non-cancer pain consumes time, emotions, resources, 2% – that the patient is incurable, 38% of doctors consider that patient very often aggravates the situation in order to obtain benefits, 62% – requests additional investigations and treatments, 32% – is non-compliant with indications and recommendations, 46% – does not want to actively participate in his own recovery, 62% – is poorly informed about the disease and treatment methods, 20% – is responsible (guilty) for his own situation (disease), 86% – has the right to live without suffering, and 66% – must benefit from access to medical services according to individual needs.

As can be seen from the responses of neurologists, the attitude is mixed; there are positive and negative statements. Doctors recognize the right of the patient with chronic pain to live without suffering and the right to benefit from services according to their needs. At the same

time, it is mentioned that patients are difficult to approach: they consume time, resources and emotions; they are not compliant with indications and treatment. The patient is poorly informed about the disease and the available treatment methods, for that reason he does not want to actively participate in his own recovery and requests additional investigations and treatments. A remarkable percentage have an obviously negative attitude as they consider the patient incurable – so, it does not require effort and the use of resources; he is responsible for his own situation – so, the only person is to blame, respectively; does not require empathy and attention and very often aggravates the situation in order to obtain benefits – so, the patient is not believed, he pretends to get attention.

Neurologists have very little knowledge and less use of pain measurement tools, as well as of national and international pain management guidelines, making chronic pain a poorly addressed and undertreated nosology. They know the specific treatment of chronic pain and use most of the drug classes, less opioids for which they are reluctant. They know about the non-pharmacological methods and the multidisciplinary approach to chronic pain but mention that some methods are not available in the RM and others are difficult for patients to reach because of poor interdisciplinary collaboration. Neurologists recognize the right of the chronic pain patients to live without suffering and to benefit from qualitative services focused on their needs, but consider this type of patients difficult to approach, communicate, work with and worthy of blame for the situation in which they find themselves.

Only 18% of respondents state that they have sufficient knowledge and skills to work with patients with chronic pain, 74% of them consider that they have partial knowledge and skills and 8% – insufficient. In qualitative research, doctors mention: *"Knowledge is insufficient because chronic pain is not sufficiently taught either at the university or post-graduate level, we have to do self-education on our own outside the borders of the country" (O, 38 years old*), "*Practical skills for infiltrations or other minimally invasive techniques are taken from older colleagues or at international courses" (L, 44), "Communicating with these patients is a challenge for any doctor and we were not trained to face it" (G, 47 years old).*

Physicians were asked to mention what knowledge and/or skills they still need for the management of patients with chronic non-cancer pain. They mentioned that it would be required:

- Additional theoretical knowledge in the management of patients with chronic pain – 50%,
- Additional practical knowledge in the management of patients with chronic pain – 52%,
- Additional knowledge about drug treatment of chronic pain – 50%,
- Additional knowledge about non-drug treatment of chronic pain – 66%,
- Practical communication skills with the patient with chronic pain – 32%,
- Practical skills of interaction with the relatives/family of the patient with chronic pain – 20%,
- Patient/family psychological counseling skills – 40%,
- Practical skills of minimally invasive interventions in the treatment of chronic pain – 30%.

Only 18% of respondents state that they do not require additional knowledge, others require at least one type of knowledge mentioned, most mentioned that they require all four types of knowledge – in 28% of interviewees. 46% of respondents do not need any type of skills, the rest need at least one type of practical skills for managing patients with chronic non-cancer pain. So, 82% of respondents would still need additional theoretical knowledge, 54% – additional practical skills.

64% of respondents state that they have received training related to chronic pain management from the refresher course given in the country, refresher course outside the country – 18%, national congresses – 34%, international congresses – 22%, lessons at the professional society – 52%.

When asked who they thought should be responsible for measuring, recording and treating pain, 86% said any doctor and 14% thought only a pain specialist should do this.

The doctors were asked to mention if the specialists in pain management are needed in the Republic of Moldova. 94% of respondents answered in the affirmative, from which 18% considered it should be in the form of a separate specialty, 34% – as additional skills obtained by any specialist and both forms mentioned 48%. 96% of respondents reiterated the need for a national chronic pain management guideline in the Republic of Moldova.

When asked who should be involved in the management of the patient with chronic pain, they mentioned the family doctor – 88%, pain management specialist – 90%, physiotherapist – 78%, kinetotherapist – 82%, psychologist – 88%, medical assistant – 68%, social worker – 66%, relatives and family – 80%, community – 66%. Only 60% of those surveyed mentioned that all mentioned above should be involved in the management of the patient with chronic pain.

Discussion

The research conducted demonstrated that neurologists who most frequently interact with patients with chronic non-cancer pain have little knowledge of pain measurement tools, both national and international guidelines, do not use them in daily practice, which causes chronic pain to be poorly recognized, evaluated and treated in the Republic of Moldova. In states with successfully implemented national pain management strategies, it has been demonstrated that any strategy will require the implementation of clinical guidelines that will reduce variations in the provision of medical services and will determine a consensus of specialists in the field. Pain management guidelines are believed to reduce disability by ensuring that the patient receives proactive treatment [10, 11].

The neurologists in the present research know the modern methods of drug treatment of chronic pain, but show reluctance to prescribe some drugs, especially opioids. These data are also reported by other international studies where more specialists do not feel confident to prescribe opioids especially for chronic non-cancer pain [11, 12]. Not only opioids are poorly used, but also some antidepressants, even if these drugs are available, they are poorly used due to the lack of necessary knowledge [13].

Neurologists from the Republic of Moldova know the non-pharmacological methods of chronic pain management and the multidisciplinary approach, but they cannot provide the patient with that approach due to the lack of availability of several methods and poor interdisciplinary collaboration. Referral of patients to non-pharmacological methods and other specialists is difficult. The UK survey assessed 20 general practitioners to determine the most common reasons for headache patients to be referred to a specialist, and they noted: patient demand, particularly frequent referrals, difficult patient-doctor relationship and long consultation time [14]. Most commonly a general practitioner in Ireland will refer a patient with chronic back pain to a physiotherapist [15]. Research in Ireland included 293 general practitioners who mentioned that they would refer 59% of patients with back pain to a physical therapist because of the need to indicate exercises, posture modification but not for pain relief [15]. In Germany, general practitioners mentioned that patients with headache and neuropathic pain come to them, and those with back pain go directly to orthopedists-traumatologists. Among patients with chronic pain only 40% will go to the general practitioner regularly (39% – those with headache, 41% – back pain and 40% – neuropathic pain) [16]. Another study demonstrated that when the family doctor decides the referral to the specialist, but not the patient, the patient experience is more positive due to confidence in the established diagnosis, because the specialists are better trained and will increase the role of primary care in the management of chronic pain [17].

The neurologists in the Republic of Moldova mentioned that they feel unprepared to deal with the management of the chronic pain patient due to the lack of training and deficiencies in practical skills. The International Association for the Study of Pain states that the training of pain management specialists is below the need in both developed and developing countries. In an analysis of 19 institutions of higher education possessing 108 educational programs, pain education occupies <1% and veterinary students have the most hours. In a survey from the USA, 153 general practitioners mentioned that they did not feel sufficiently trained in some aspects of back pain to work effectively with these patients (50%). It may lead to an increase in the number of investigations and surgeries requested by these doctors [18]. Several studies that have assessed how prepared and trained family physicians feel to deal with the management of patients with chronic non-cancer pain have determined that the vast majority do not feel prepared [18].

The neurologists in the present research recognize the right of the chronic pain patients to live without suffering and to benefit from quality services focused on their needs, but consider this type of patients difficult to approach, communicate, work with and worthy of blame for their situation. This data corroborates with international results: a recent study demonstrated that primary care specialists consider patients with chronic non-cancer pain to be difficult to approach and treat [19]. The biggest problem in dealing with these patients is communication. The vast majority of doctors feel difficulty in measuring the intensity of the pain perceived by the patient, which leads to the erroneous understanding of the patient's situation and expectations from the treatment, resulting in poor doctor-patient communication. This poor communication is the main cause of treatment failure mentioned by researchers [20]. The insufficient treatment of chronic non-cancer pain is a problem not only at the national level but also internationally – 2/3 of the specialists questioned at an international pan-European forum considered that the insufficient treatment of pain is a problem in their country [21].

Conclusions

1. Neurologists in the Republic of Moldova have very little knowledge of pain measurement tools and less use of them, as well as national and international pain management guidelines, which makes chronic pain a poorly addressed, evaluated and treated at the national level.

2. Physicians know the specific treatment of chronic pain and use most of the drug classes, less the opioids for which they are reluctant. They know about the existing non-pharmacological methods and the multidisciplinary approach to chronic pain, but they mention that some methods are not available in the Republic of Moldova and others are difficult for patients to access due to poor interdisciplinary collaboration, that is why patients cannot benefit from the approach to chronic pain management in terms of the biopsychosocial model.

3. Neurologists recognize the right of the patients with chronic pain to live without suffering and to benefit from quality services focused on their needs, but consider this type of patients difficult to approach, communicate, work with and worthy of blame for the situation in which they are.

4. Neurologists mentioned several barriers in the management of chronic non-cancerous pain, which can be grouped as system, clinical and communication. Physicians report that they have insufficient training in chronic pain management, requiring additional theoretical knowledge and practical skills to meet the demands of managing patients with chronic non-cancer pain.

5. Neurologists believe that every doctor should record, measure and treat pain, there is a great need of pain man-

agement specialists and a national guideline for pain management. They recognize that the management of chronic pain requires a wide involvement: specialist, patient, social worker, relatives, community, and government.

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Authors' contributions
OG designed the research, did statistics and interpreted the data; LR, SO, MS, SP, GC, IM drafted the manuscript and revised the manuscript critically. All the authors revised and approved the final version of the manuscript.

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Ethics approval and consent to participate
The research protocol (No 1 of 27.02.2020) was approved by the Research Ethic Board of the *Diomid Gherman* Institute of Neurology and Neurosurgery and the tests have been done according to the contemporary principles in biological standardization of experiences and Declaration of Helsinki with further amendments (Somerset West Amendment, 1996).

Conflict of Interests
No competing interests were disclosed.