Faculty of Health Sciences

Perspective on Pain – A Look Towards Phenomenology

A Literature Study

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Master's thesis in Medical School, MED-3950 June 2022

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Foreword and special mentions,

Firstly, I would like to pay special thanks to my parents for giving me life in this world. Without you two, this would not be possible.

Secondly, I would like to thank my big brother and only sibling for showing me how to survive in this world. Thank you for looking out for me.

Thirdly, a special thanks to my supervisor Åge Wifstad for all the help with the structure, way of writing and overall impression of this master thesis.

Furthermore, I would like to thank my advisors Svein Bergvik and Lena Danielsson in my unrelated research project for introducing me to the sphere of scientific research and complexities within the field.

Finally, I would like to give thanks to literature and philosophy for revealing a world of wonders and infinite depths.

Best regards,

Isak,

Tromsoe, UiT, June 2022

0 1 . 0 6 . 2 2 Asak Furu Krogstad

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1. Summary:

Chronic pain is a rising global pandemic resulting in suffering across the world. It has been named a major public health crisis by IASP and warrants a greater focus. Chronic pain can have a massive impact on the quality of life, shortening one's lifespan to societal implications creating immense economical costs. This master's thesis challenges the current biomedical model and perspective on chronic pain and suffering. The biomedical model objectifies and narrows the perspective of the individual, which results in increased suffering for persistence of the condition. Phenomenology is offered as an alternative view shifting the focus from the third-person to the first-person perspective. It places the individual in suffering at the center of focus. Method: A literature-based search was made, scanning through PubMed, Medline and Embase for articles focusing on chronic pain and suffering through a phenomenological perspective on a conceptual level. From 1055 articles, 13 were included after the inclusion and exclusion criteria process. **Results**: Three main themes emerged; 1) From third to first-person perspective 2) Reconceptualizing pain and suffering 3) Rethinking our language about pain. Conclusion: Moving away from the biomedical model means rejecting Cartesian dualism and a split of mind and body. A shift towards a phenomenological approach focuses on the subjective experience of pain. It entails understanding mind-bodyworld as intertwined and indistinguishable parts. It enables a deeper understanding of how chronic pain can alienate the sufferer from herself and others, changing her language and her ability to express and interact with the world. Such a shift demands a re-evaluation of our current concepts on pain and suffering, changing our language on pain to give room for the

individual to be fully understood. New definitions on pain and suffering are suggested. With these changes, it might be possible to help the person in chronic pain to break free from a lived-world-in-pain.

2. Introduction:

2.1 Pain

Pain is a complex and mysterious phenomenon. In the *International Classification of* Diseases (ICD) of the World Health Organization (WHO), chronic pain is defined as pain that lasts or reoccurs for more than 3 months (1). In defining chronic pain, there followed seven sub-categories of chronic pain, showing its complex nature (1). Estimates by the International Association of Pain (IASP) state that up to 20 % of the European population suffer from chronic pain. In the Norwegian population, three out ten report to have persistent pain (2). The impact of living with chronic pain can influence all aspects of living; from being unable to exercise, more likely to quit your job due to health concerns, affecting sexual relations to driving a car (3). In a massive epidemiological study on chronic pain by Eriksen et al, 17 % of those living with chronic pain stated on some days the suffering was so intense that they wanted to die (3). In addition to the influence on quality of life, there are immense economical costs for society. In Denmark, the pain population used the health care system 25 % more than the general population (3). A major analysis looking into the impact of chronic pain on the American society, estimated costs of at least staggering 4,3 % of the yearly gross domestic product (GDP) (4). In comparison, the total investment in the U.S military in 2019 was 3,4 % of the GDP (5).

In spite of advances in science ranging from psychology, medicine, pharmacology to neurobiology, a pain crisis exists (6-8). The International Association of PAIN (IASP) has called it a major public health issue, warranting it to be called a disease of its own and not merely a symptom of other diseases and conditions (6, 7). Chronic pain is a such a huge problem on its own that it demands a greater focus. It is causing society immense economical costs (2-4, 9), it is limiting the quality of life of people and shortening their life-span (2, 3, 9, 10). The World Health Organization (WHO) estimates 10 % of the population developing a

chronic pain condition each year (11). What causes such a huge number? Why are so many people facing chronic pain as a massive challenge? How do we deal with pain in today's society and why are we not able to solve the "pain issue"?

Pain is a complex and multi-faceted phenomenon. There is a vast bulk of literature trying to solve the pain conundrum ranging from psychological (12), genetics (13) to neurobiological theories (13, 14). In addition, there is evidence showing how there are cultural differences in the understanding of pain and its meaning (15-18). Language influences our perception and interpretation of pain (16). The usage of specific words in different context can contribute to either facilitate or diminish one's pain experience (16, 19). The philosopher Ludwig Wittgenstein once said; "The limit of my language mean the limits of my world"((20), p. ix). In what way are we able to communicate and articulate our pain experience? Even the usage of the word pain has been contested to not have inherent universal meaning (19). How can language accurately capture a subjective experience through the usage of a universal language and phrases? What happens if we are unable to fully express our experiences? A common denominator when talking about pain, is the subject. Pain is a subjective experience, individual and unique to each, although a common facet of human life. In the on-going pursuit to further disentangle the pain puzzle, it is important to see the whole human, to take in the subjective experience (21, 22).

2.2 How Do We Define Pain

Pain is defined by IASP as "an unpleasant sensory and emotional experience associated with actual tissue damage, or described in terms of such damage" (23). It is usually classified into acute and chronic pain (23). *Acute pain* is short lived, from minutes to several weeks. Whereas *chronic pain*, is pain that persists more than three months (23). Evolutionary pain is a vital capacity of humans in order to increase their chance of survival. By experiencing pain, we learn to distinguish between dangerous and non-dangerous situations and beings in this world. However, individuals with the genetic disorder *congenital insensitivity to pain* do not experience pain when injured. As a result, the individual does not learn in the same way of others, how to distinguish between danger and non-danger. Their inability to feel pain often leads to repeated injuries and they often do to not make it to adolescence (24).

2.3 Where Does the Current View of Pain Come From?

Illness is an unwanted occurrence which demands actions for their absolution. Thus, arises a framework of how to view illness as one group, joining this peculiar phenomenon which has existed since the dawn of man (25). All cultures have had their own models of disease and how to treat them (26), but has been the Western view of pain? (25).

The traditional view of pain today originates from an ancient Greek thought going back to Epicurus (27). Since ancient times there have been numerous interpretations and attached meanings to pain. In some cultures, pain was seen as evil spirits inhabiting the body, in others as punishment for your sins (28). Pain was later conceptualized by the French philosopher and mathematician René Descartes, through the distinction between mind and body as separate entities (27). The body is subject to different sorts of stimuli that can evoke damage such as tissue damage (27). It is therefore the body that is subject to the pain evoked, not the mind. The mind belongs to the soul, something eternal. Thanks to progress in imaging and advanced neurophysiological theories, more is understood of why we experience pain and what parts of the brain are activated during pain. But, it has not helped us fully understand how pain is experienced (29, 30). The separation between mind and body has echoed Western thought and conceptualization of pain for hundreds of years, called the biomedical model of pain (26). From this view the body is rooted in this world and its physical laws, therefore one can measure and quantify its physiological properties. Since the body abides and is affected by these physical laws, it is believed to find the root of the problem through locating a certain stimulus or wound. "The language of chemistry and physics will ultimately suffice to explain biological phenomena" ((25), p. 130). Descartes viewed it as fixing a broken machine. By locating the broken part, it may be possible to change or fix it back to its normal function (31). This conceptualization was broadly accepted after its emergence in the 16th century and has prevailed through the nineteenth and twentieth century. It remains a dominating perspective in the medical field today (26, 31).

Still, such a simplified view of pain does not reasonably explain conditions where there are no discernible continuous stimulus such as in phantom limb pain (32) or complex regional pain syndrome (33). Nor does it consider how psychological and sociological factors, culture, and language all influence the experience of pain (16, 28, 34). Since Descartes, different

theories of mechanisms and conceptualizations of pain have emerged, but a commonality in most are their rooting in the dualistic perspective (31). The biomedical approach to disease has given countless success stories such as the usage of microscopes to study bacteria by Anton Leeuwenhoek in 1675 (35), the discovering of vaccination by Edward Jenner in 1796 (36) and Alexander Fleming's discovery of penicillin after the First World War in 1928 (37).

However, in spite of its success, the biomedical model leaves "no room for social, psychological and behavioral dimensions of illness within its framework "((25), p. 130). In the last 50 years, there has been a growing acknowledgement of how these neglected factors influence the process of illness, which led to the emergence of the biopsychosocial model in the late 1970's to early 80's introduced by psychiatrist, G.L. Engel (25, 38). He argues that the reductionistic framework becomes a part of our psyche since birth. It is part of the common man's mindset, not only those who enter medical school (29). Engel created a new model by incorporating emotions, cognition, relationships, investigating meanings and acknowledging the uniqueness and complexity of each individual's experience, attempting a more holistic view (25). Engel believed that the current focus at the time was on the "science" and scientific method, with its energy directed towards explaining and treating the disease, leaving the patient and patient care in the background (38). Engel constructed a hierarchy of natural systems, each divided into individual parts with their own qualities and characteristics. This system was created to help physicians conceptualize these different factors ranging from biological down to a cellular level, to psychological processes in the person, to social implications on a community level (38). According to Engel, "nothing exists in isolation" ((38), p. 537), and it is essential to acknowledge the larger systems each factor influences and what it is influenced by (38). The model was meant to bring the person to the center of focus, using this systematic approach to understand the individual mechanisms at play and as a whole how to best treat the patient (38). In Engel's view, this biopsychosocial model would expand the biomedical framework, not replace it, but address previously neglected areas (38).

On the other hand, it can be argued that the model is still rooted in Cartesian duality (29). The body remains the focus for objective knowledge through investigation of biological processes, while the psychological and social factors are considered something else (29). It still promotes the reductionistic division of body and psyche in spite of the intention of a holistic framework (31). In Western medicine, man is still treated for his illness or pathology whether it belongs to the soma or the psyche, as an organic or psychological process, not as man as a whole (26, 29, 31). We still have not managed to develop a systematic alternative to

the biomedical model (31). Pain is a complex and multidimensional process which needs to incorporate the totality of an individual's experience; "pain is in the body, in the mind, in life-history, in the everyday, in the lifeworld, i.e. it is multidimensional" ((26), p. 6). There is still no satisfying theory encompassing the full experience of the individual, which is truly able to grasp the complexity of chronic pain and suffering. A new theory is needed (26, 31).

2.4 The Current Understanding of Pain

In the 16th century, Descartes theory of specificity emerged: if I bang my foot against the chair, it activates specific pain receptors and fibers which in turn send pain impulses through a spinal pain pathway to a pain center in the brain (39). Modifications of this theory has occurred, but Descartes model has echoed Western medicine's understanding of pain for centuries. In 1965, a central theory of pain mechanisms called "the gate control theory of pain" was published by Wall and Melzack (28). It proposed a mechanism in the dorsal horns of the spinal cord acting like a gate which functions through inhibiting or facilitating signals from the body to the brain (28). This occurs through an interplay between different diameters of active peripheral fibers (nociceptors) in addition to dynamic activities in the brain (39). It was groundbreaking because it not only portrayed an advanced neurobiological model, but incorporated the vital role of emotions and experiences in the process of pain (28). This theory received high praise following its publication and has influenced pain research and pain theories ever since (39). However, this theory has been contended for not being able to describe several chronic pain problems, such as phantom limb pain where you are lacking an external stimulus (39). In the last couple of decades, more and more research groups have expanded and challenged this view, bringing science a step closer to understanding the complex nature of pain (40).

In the early 1990's renowned pain researcher Melzack wanted to elaborate and fill the gaps from his own gate theory from 1965 (28). He wanted to go beyond merely looking at spinal projections to the neuroanatomical structures in the brain to understand pain. His focus turned to the brain, which he believed to play a central and *active* role in pain. This view stood in contrast to many opinions at the time, which viewed the brain as a passive recipient of different signals and transmissions (39). One of the aspects provoking this investigation

was the complex nature of phantom limb pain. People who are born with a missing limb or has lost it due to injury or trauma can still feel pain in the missing area. How can this be explained? Paraplegic athletes report having throbbing pain and fatigue in the missing limb after competition in spite of no direct synaptic input (39). To quote Melzack; "you don't need a body to feel a body" ((39), p. 4,). Pain is still felt in the absence of inputs from the body. From here, Melzack introduced a new model to understand pain called the *neuromatrix* (39).

The neuromatrix represent a "large, widespread network of neurons consisting of loops in different structures of the brain such as the thalamus and cortex in addition to the cortex and limbic system" ((39), p. 5). These alternate loops deviate and intersect in various processing stages in the brain. They meet time and time again, which allows interactions and sharing of information in the different stages of processing. The entirety of this process, the repeated cycling processing and synthesis of nerve impulses through the neuromatrix gives a unique design called the *neurosignature* (39). "It is produced by the synaptic connections in the entire neuromatrix" ((39), p. 5). This signature is marked on all nerve impulses that travel through the neuromatrix. These processing signals are translated into a flow of awareness through a sentient neural hub, which leads to the activation of an action neuromatrix. This leads to a pattern of desired movements (39). The neuromatrix is the origin of the neurosignature, not the stimulus or the peripheral nerves (39). According to Melzack, it is the neuromatrix that helps produce a cohesive message from these millions of signals entering the brain, which represents the whole body and the experience of unity of the body (39). This works as a template of the whole, from which all these impulses, modulations and patterns are interpreted.

The neuromatrix model stands in stark contrast to the classical specificity theory where qualities of experience are presumed to be inherent in peripheral nerve fibers (40). Pain is not equated with injury; the quality of experience must not be confused with physical events such as breaking a chair or cutting your finger. Furthermore, phenomena like warmth and cold are *interpretations* on the inside, and not something that exists external to our bodies (39). Temperature exists, but the interpretation of this experience as warm or cold happens on the inside. All of these different qualities, and others such as burning, stinging, itching are built inside different neuromodels where the neurosignature is responsible for the emergence of these qualities (39). If this was not the case, how are those with phantom limb pain able to feel sensations in the missing limb? There is no limb to stimulate as supposed in the classical specificity theory, ergo it must come from the brain (39). Melzack further suggests that each

great psychological dimension (or quality) of experience serve a certain part of the neuromatrix, called a neuromodule. All of these play different parts like in a symphony orchestra; the strings, the bass, the flute etc. each contributing with their mark, and together creating a single symphony which varies throughout (39). Finally, this neuromatrix structure is believed to be determined mainly by genetic factors, but are also modulated through sensory inputs. The neuromatrix theory provided a new way of understanding pain, expanding on previous research and turning the focus towards the brain and its role in pain (39).

Since the emergence of the neuromatrix theory of pain, it has served as a template for understanding pain and its complex nature. Two renowned pain researchers from Australia, L. Moseley and D. Butler have expanded on this theory in their important work *Explain Pain Supercharged* (30). It represents part of the current understanding of pain today. A fundamental principle behind this approach is that "pain is produced by the brain when it perceives that danger to body tissue exists and action is required" ((14), p. 130). All dimensions of pain function to promote this objective. It is a multiple system output. In order to decipher what causes the pain, it is important to not only consider a possible stimuli, but also factors such as context, company, competitive stimuli and meaning (14). Since the neuromatrix theory from Melzack in 1996, there has been progress in imaging studies, identifying neuroanatomical correlates of pain (the "pain matrix" – including the anterior cingulate cortex (ACC), insular cortex, thalamus and sensorimotor cortex) (14). Although important structures correlated with the neuromatrix have been found, there is no single "pain center" (14). Variation in activation and participation of different neuroanatomical structures suggest an individual-specific pain neuromatrix (14).

In a simplified model, primary effect of chronicity is "enhanced synaptic efficacy / sensitivity" of the pain neuromatrix (14). Less input is required for activation. An example is functional allodynia (pain during movement that would not normally be painful) (14). The overall point: Smaller and seemingly less relevant inputs are needed to active the neuromatrix and thus produce pain. Sometimes it is activated *without* any inputs at all (14). Even though advancements in neuroimaging and important structures of the brain have been located during pain, it does not tell us what this means, nor increases the understanding of what this experience must *feel* like. How are we going to cope and treat these individual cases? It is believed that each neuromatrix is individually unique, so how can we take in all of these aspects in a therapeutic approach?

2.5 How Do We Treat Chronic Pain?

More than 30 % of people worldwide suffer from chronic pain (41). More than 100 million adult Americans suffer from chronic pain, a number which is greater than people suffering from diabetes, heart disease and cancer combined (42). Pain is among three (osteoarthritis, back pain and headaches) of the top ten reasons people seek medical care, and three among the four (back pain, musculoskeletal disorders and neck pain) leading causes to years lost to disability (41). Acute pain can help the individual to rest and take necessary care to prevent further damage to the body, but if it transitions to chronic and persists, it becomes of little evolutionary value (41). It has gone beyond its usefulness and is no longer just a symptom of injury or disease, but becomes a medical issue in its own (43). In its chronic form it is a syndrome comprised of persistent physical pain (with known or unknown origin) combined with a set of biological, psychological and social factors influencing the illness process (43). Due to pain's complex and heterogenous nature, it is often divided into subcategories such as nociceptive pain, neuropathic pain and nociplastic pain (see Cohen et al for further insight, (41)).

Chronic pain is notoriously difficult to manage (41). The challenge for medicine is the lack of universality and consistency in its expression. Sometimes the patients' pain relates to their physical symptoms, other times it does not. Sometimes medicine provides relief of pain and other times there is no effect (27). Management of chronic pain conditions vary due to different approaches and believed mechanisms. If the causal mechanism is known, mechanism-based pain treatment is usually adapted. However, in several pain conditions such complex regional pain syndrome (CRPS), the mechanism and underlying pathology is not known and demands a different approach (33, 44). Pain is a dynamic consequence of a series of different processes, ranging from biological to physiological, psychological and social factors. All of these vary and interact in different levels and magnitudes (27, 41). Guidelines overall for treatment of chronic pain conditions recommend interdisciplinary treatment due to its complex nature (41). This management applies the biopsychosocial model introduced by Engel (38), adapting a multimodal approach. Depending on the condition and the situation, treatment can range from pharmacological treatment, psychological interventions (such as cognitive behavioral therapy (CBT) and acceptance and commitment therapy (ACT), physiotherapy in addition to life-style changes such as healthy diet, proper sleep routines, exercise and smoking cessation (if used) (41, 43). Note that pharmacological intervention has

limited evidence in certain chronic pain conditions such as CRPS and should not be recommended lightly (45-47). Safer interventions are preferred to more invasive (41).

In management of chronic pain, physicians often turn to pharmacological measures (43). Opioids are the reference standard for acute pain, but are not considered first-line treatment for "any form of chronic pain" ((41), p. 10). There is little evidence of the long-term benefit of opioids, and with the risk of side-effects and addiction, there should be a thorough consideration to find the best possible treatment. Opioids addiction rates ranges from 1-25 % (41). According to the National Center for Health Statistics; over 100, 000 people died from overdose in the United States last year, an increase of 28, 5 % from the previous year (48). Over 70 -75 000 of these overdoses, were due to opioid overdose (48, 49). Rates for misuse and abuse are even higher than addiction rates, estimated at 20 to 30 % (48). Although one needs to be aware of bias selection in these numbers, it is undisputedly a serious and growing issue in the world. Not all of these overdoses come from chronic pain conditions, although it can be viewed as an example of existential suffering (50). What are the alternatives? In a survey from 2007, 4 out of 10 Americans used complementary treatment (in addition to traditional treatment), or as an alternate approach for treatment of pain (51). Interventions such as dietary supplements (vitamins, minerals, herbs etc.), chiropractic, music and stimulation of small electrodes (TENS) (41, 51). In spite of limited evidence of such interventions and methodological challenges for conducting sound studies, trends show a continuous increase for alternative treatments (129). With the major prevalence of chronic pain worldwide and amount of current suffering, there is something missing for solving the chronic pain puzzle.

For future research, Cohen et al highlights identifying the factors causing the transition of acute to chronic pain (41). They are relying on the biomedical framework for finding future answers recommending emphasis on factors such as finding new biomarkers for pain and neuroimaging (41). Other researchers warrant using the biopsychosocial model to focus on functioning ability and well-being instead of "just" pain and its mechanism(s) (43). The prominent pain researchers L. Moseley and M. Lotze have suggested turning towards philosophy for answers (52). Are the current models robust enough to fully explain the multifaceted nature of pain? To understand the complexity of human pain and suffering and how this influences one's existence in this world?

2.6 A Look Towards Philosophy

In today's biomedical understanding of pain, clinicians are often taught to talk and ask about pain in a quantitively manner (21). They are trained to see the body as an object, as a "thing" that can be scientifically studied" ((34), p. 22). They ask several objective questions to circle in on a diagnosis. One of the world's most used measuring scales of pain is the numerical rating scale (NRS) (53). It asks to rate the pain experienced on a scale from 1 to 10, where 10 is the most painful feeling you have ever experienced. There are several issues with this method. Firstly, the numerical approach to pain tells us nothing about what a 7 on the NRS scale truly means for the experiencing person. A 7 for one individual may mean something totally different from a 7 scored by someone else. How do you interpret such a number without exploring how the person feels, what they mean when talking about pain, and their idea of it? An epidemiological study on chronic pain by Breivik et al, found that one fifth of patients did not think their doctor saw their pain as a problem nor showed considerable interest in it (2). Furthermore, 40 % of the patients thought their doctor would treat the illness at hand rather than explore their pain (2). Why? A physician will often turn to tools such as different forms and questionnaires in order to assess a person's pain state (53). This approach can place the patient to a passive state, waiting for treatments and medical examinations (27). It creates an image of the person's current situation, but not a deeper understanding of how pain affects the subject nor what it means to him or her (21). Is the current biomedical model enough to truly understand chronic pain in all its complexity and give sufficient treatment? (2, 10, 21).

In the epidemiological study on chronic pain in Denmark from Eriksen et al, as much as a third of those living with chronic pain where dissatisfied with their treatment (3). In another major epidemiological study on Europe, on average 40 % of chronic pain patients across Europe were dissatisfied with their treatment (2). In pain conditions such as complex regional pain syndrome, today's biomedical tests and models are not enough to explain what is happening to the patient (33, 54). If no blood samples, MRI scans or functional tests can explain why and how it hurts, how can someone still be in intense pain?

It is time to dig deeper to understand more of the experience of pain. In philosophy, phenomenology takes on the person's experience as the main focus, trying to explore the individual's understanding and expectations of the world. The phenomenological perspective has been used in qualitative research looking into conditions such as fibromyalgia (55-57) and

other chronic pain conditions (58, 59). This is part of a process of understanding more of conditions and concepts we cannot fully explain through the biomedical model, trying to utilize all aspects of human exploration to further our understanding of pain (60).

2.7 Putting the Subject in Focus

Phenomenology provides a different perspective of how we can view the human body. It shifts from the objective perspective to the subjective. The body is in focus. Before we in a given situation can say anything about the situation, we are already there, in our bodies, present (29). In Merleau-Ponty's massive work *Perception of Phenomenology* (first released in 1945), it focuses on how the world in its fundamental form portrays itself to us (29, 61). In this work and studies inspired from this phenomenological perspective, the lived body is in focus and its directedness towards the world (61). By lived-body (a term by Merleau-Ponty), it does not refer to the body as a living organism, but as an entity bearing meaning through the world. Events and experiences become a part of our lived bodies, it is part of how we view the world (61). Your body is always the center of your experience and from where your experiences originate. It is not possible to distance your hand from touching an object, you are your body, you cannot see or touch your own body outside of your own experience (29, 61). Because it is in itself your access to experience and information about the world. Even though you can narrow your focus to certain parts of your body such as your toes or your fingers, you are not able to *fully* objectify and distance these parts from your experience. They are a part of your body, a part of you (29). In addition, Merleau-Ponty explains how we have a pre-objective view of the world. This entails our experience having a "irreducible and existential background which is prior to sensation and perception and gives meaning and scope to them" ((62), p.198,). Actions of psychological, physiological and existential nature are directed towards the world, an intentionality, where pain can be viewed as a mode of being in the world (62). It colors the way we experience events, but also how we see and find meaning in them (50).

In Merleau-Ponty's opinion, objectification is drawn to a halt in terms of the body. The body draws the line between objectification and subjectivity (61). The body is not possible to objectify, body and mind are seen as one entity. The phenomenological perspective and the embodied self can be used to study patients with chronic pain in the context of suffering (55,

57). What is this pain and what are the complexities lost to the perspective of the biomedical model? Chronic pain is problematic for biomedical theories because the framework is based on "objective" signs. However, often in chronic pain conditions such as fibromyalgia or phantom limb pain, the pain is not visible. It cannot be distinguished to a specific locus which can then be repaired like a broken machine. "Pain escapes the visual sense; it cannot be *seen* in the body. Nor can it be measured in the strict sense of the word." ((59), p. 198).

The aim of this master's thesis is to go deeper into the current discussion on chronic pain and suffering and what we can learn from philosophy, more specifically phenomenology. Through changing the focus from the third-person perspective ("objective"-lens) to the first person, it may broaden the existing understanding of pain and possibly add new insight to the current treatment of pain.

3. Material and Method

This paper is a literature-based study. Information and data were collected through a systematic search from the databases Pubmed, Medline and Embase. The first step was identifying relevant research words and topics. For each search word, it is necessary to adapt and modify the search process according to the number of hits and size of the available database. It is an iterative process, learning more and more about the subject, widening the search, deepening the learning and knowledge base. In addition to databases and internet sites, relevant literature such as essential books within the field were included, experts on the field, former reports and more.

3.1 Inclusion Criteria

- Published within the years 1986 to 2022
- Published in or translated to English
- Full text available through the Artic University of Norway (UiT) license
- Articles focusing on pain and the philosophical branch of phenomenology on a conceptual level

3.2 Exclusion Criteria

- Articles published before 1986
- Articles published in other languages, or not translated to English
- Articles focusing on a specific population through a form of trial. Not discussing pain on a conceptual level
- Articles discussing pain within philosophy, but not within the frame of phenomenology

The search was filtered through the years 1986 to 2022 in order to pick out relevant articles in line with today's perception of pain. The year 1986 was chosen as the earliest search year, because this was the year IASP implemented the current definition of pain (23). The first search was conducted 05.04.22. Possibly relevant articles may have been published since then, but are not included in this study. Finding the relevant search words is an iterative process of trying out and deciding on the proper size of hits and data. For instance, the search words pain and philosophy gave a total of 41,807 results. As a way of narrowing the search, phenomenology was added being the focus for this study within the tree of philosophy. Articles discussing pain and phenomenology on a conceptual level are preferred instead of using phenomenology as a investigate and analytic measure to focus on a certain population (for instance people living with lower back pain (63) or fibromyalgia (56)). The latter does not discuss the possible utility of the phenomenological perspective on pain on a conceptual level. The relevant conceptual articles are usually based on a solid theoretical literature and therefore demanding to read. Thus, the search was further narrowed to the combined keywords pain and philosophy and phenomenology. This provided respectively 66, 21 and 44 hits in PubMed, Medline and Embase. From these 131 articles, 52 articles were selected for further investigation after reading the abstracts. 17 articles remained after removing duplicates, articles without access, and articles written in a different language than English without translation. These 17 articles were read in full text to evaluate if relevant for the purpose of this study, resulting in 8 articles.

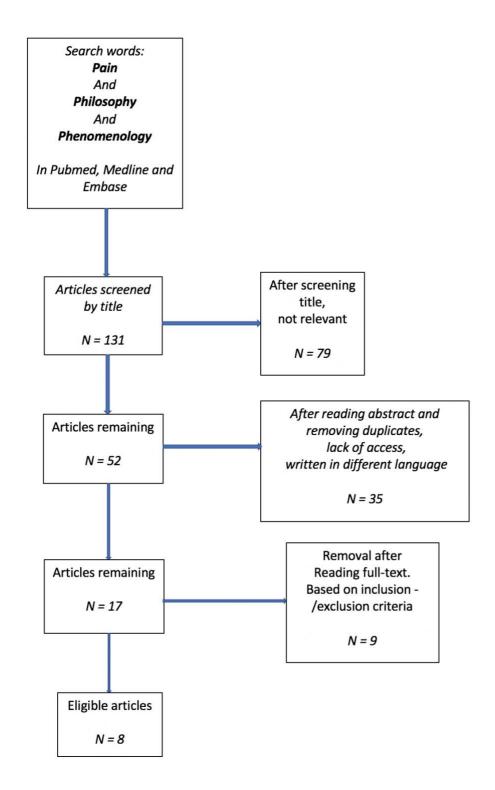


Figure 1 – *Illustrating the first search process*

After reading the eight eligible articles in full text, it turned out that one of the articles by Lima et al made a similar search to ours in April 24th 2013 (26). They conducted a search in the electronic database PubMed with comparable inclusion criteria as this master thesis (26). Their search words were *phenomenological* and *pain*, only picking out articles that discussed

pain on a conceptual level through a phenomenological lens. Their search was only from 2008 – 2013, yielding 129 studies, from which only five were included in the study. Most articles (112) were related to traditional medical research and used qualitative phenomenological methodology, not for discussion as a theoretical framework (26). To strengthen the methodological basis of this master's thesis, Lima et al's search was included in our study to ensure that relevant articles were included. The search words *phenomenological* and *pain* were used in the electronic database PubMed from 1986 – 2022. The same inclusion and exclusion criteria were used as for the first search (see above). Out of 924 articles, after screening the titles, 60 articles remained for abstract reading. After reading the abstracts, removing duplicates (from the previous search), articles written in another language (and not translated) and removing those not meeting the inclusion criteria, seven articles remained for full-text reading. Out of these seven, five new articles were included.

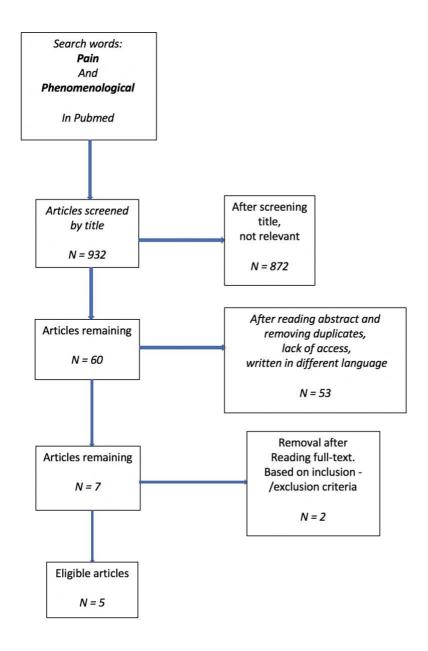


Figure 2 - Illustrating the second search process

Combining both search processes, a total of 1055 articles were screened and after the inclusion and exclusion criteria, 13 articles remained to be included in this paper (26, 27, 34, 64-73). Two important discoveries stood out from this process. Firstly, there is a substantial amount of studies investigating the lived experience of different pain conditions through using a phenomenological methodology. Second, staggering few studies have investigated and questioned the biomedical model in medicine and discussed possible alternative perspectives such as phenomenology on a conceptual level.

4. Results

All of the 13 articles discussed chronic pain or suffering on a conceptual level with usage of philosophical theory, with great phenomenological thinkers such as Edmund Husserl, Merleau-Ponty and Martin Heidegger as inspiration and references.. Combined, these articles help finding central ways a phenomenological perspective can expands today's biomedical and biopsychosocial perspective on pain. Going from the third-person- to first-person perspective, the very source itself, to enrich and broaden the understanding of pain in medicine. The following presents the essence of these articles with added relevant articles and literature to help understanding this complex phenomenon.

4.1 From Third to First-Person Perspective

In natural sciences and in medicine we often say that we "have" bodies, our bodies exist as something distanced from the mind, it is something we "own" or carry. Bullington argues that a more correct term would be that we "are" our bodies (68). The former is a way of objectifying our own bodies learned from the perspective of natural science. There is a double-sidedness to it; the body is both an object that we "have" and is something that we "are". These thoughts are borrowed from the ideas of Merleau-Ponty (61). Bullington argues that the three; mind, body and world are actually intertwined and cannot be distinctly and accurately separated from each other, it is "our thinking that divides them, not our experience" ((68), p. 102). The intersection of these three poles is the realm of human experience. The boundaries are blurred and cannot be seen in a mere dichotomous subjectobject view (26). To bring us closer to understanding this unity, phenomenology may hold the key. In the view of Merleau-Ponty, the lived body is ambiguous, due to it being material and self-conscious at the same time. It is physiological and psychological, but not separate, they are intertwined and both present. "The human being is always oriented towards the world outside itself (otherness) in a constant flow." ((68), p. 103). Imagine a rope being tied between the body and the mind. There is a certain length between, sometimes it is tight, other times it is loose, but they are always connected. If I am trying to read a complicated book, my mind is brought forth, while if I am chopping wood, the body is in focus. Each situation we

encounter will require the presence of both in varying degrees. But it is always these two poles that meet the world and its requirements.

There is a harmony of situations which is "sedimented" in the words of Merleau-Ponty, in terms of so-called structures, which allow the world to be understood in a basic organization which we already understand (61). A structure in Merleau-Ponty's description, an "inbetween" phenomenon, "neither in things nor in subjects, but created in the meaning between the two" ((68), p. 103). These structures are the way the bodily, psychological and social ways of being oriented towards the world which guides and allows understanding of it through this sedimentation. It allows the freedom of presenting the world as familiar and already known. These structures are what allows us to experience and view the world as coherent and not mere chaos. Over time and by engaging in this world, we develop patterns of experience which become almost an instruction manual for how to move our bodies. It tells us to respond to various situations and how to survive in everyday life. We interact with the world and our ability to move will over time resemble a sort of flow. Through these structures and gradual building experience, we are not forced to build up the base of experience time and time again, a foundation is formed (68). After a while, we cease to think of these structures and patterns, because they have become second nature to us. Like learning to ride a bike or a new language. In the beginning it is extremely hard to ride a bike without supporting wheels on the sides, but after a while some can ride at times without their hands. When learning a language, you have to translate word by word, and understand the grammatical build up and think about the appropriate tense. But over time a foundation is formed and you no longer have to think about it. It becomes second nature. These established structures and patterns can be modified and adapted to fit and master new challenges and situations. This is applied time and time again. But how are the structures and our ability to be "in-between" affected when in chronic pain?

4.1.1 Transformation of the Lived-Body

Being in chronic pain can take over your world. In some cases, it is severe and constantly present; "it alters the way we view and interact with the world." ((68), p. 104). Living in a

state of chronic pain forces the person to focus on the pain, narrowing the experiencing world around her (26, 27). In this process it affects the individual as a whole and influences her ability to engage in the world as herself and with others. It affects one's various roles in a family, at work, as a friend and ability to engage in other activities (26). It is also notoriously difficult to communicate the full breadth of the hardship and challenges faced. Activities and movements that previously have been executed without the slightest thought, can become a massive challenge. There are numerous reports of such experiences among chronic pain patients (56, 59, 74, 75). The existing structures do not work. All of the structures and habits related to a world without pain suddenly does not work. The pain forces a "transformation of the lived body" ((68), p. 105) in the mind-body-world. Bullington describes in great length the different ways how chronic pain can change the way you live in this world (68). It is not only the body that is disturbed and changed by chronic pain, but also "how the body can live the world" ((68), p. 105). It is challenging to truly understand this transformation and the level of importance it has for the person's world. Honkasalo described pain as an embodied relation to the world (59). This changed state can also lead to alienation from others who are not in pain. For some, only those who are in a similar state can truly understand, making the bridge between patient and physician even harder to overcome (68, 76). Thus, pain can have a double negative effect; changing and narrowing your lived world, and alienating yourself from those who are not in pain, creating a gap between those in pain and those who are not. In line with the phenomenological perspective of Merleau-Ponty, there is a disharmony in the lived body. The richness of the world shrinks. "One becomes pain" ((68), p. 109), the livedbody moves differently, the pain represents my new world and colors everything I see. The lived-through world becomes flat. Applying the lens of phenomenology is an attempt to understand the wholeness of the lived body and the consequences and expressions of such a transformation due to pain. Chronic pain does not live in isolation. "To understand pain, it is necessary to give voice to the patient's experience" ((26), p. 8). This entails not only seeing pain as a single origin of manifestation, but taking in the individual's whole and unique experience, working with and on the patient (26). By understanding and seeing the wholeness of this experience, it may be possible to reverse it.

S. Steihaug in her article *Can chronic muscular pain be understood?* also applies the phenomenological perspective to deepen the understanding of pain (69). In her view; "the body is marked by the lives we live; life becomes incorporated into the body" ((69), p. 37), and it is possible to recognize a posture the body forms over time due to its experiences. This

posture and expression can be interpreted through investigation. Steihaug, along with Honkasalo views pain as a sign, an expression from the body (62, 69). Following that our experiences and events take hold in our bodies, a part of understanding a person's pain is to understand the signs. This means going beyond the traditional way of interpretation symptoms in a cause-effect framework, but understanding it is an on-going process. She uses an example of red spots pointing to the cause measles (69). This method is useful in many cases and situations in medicine, but not all, especially when applied to chronic pain conditions. For a physician meeting a patient, it is important to remember that the body is never purely soma and is sociocultural embedded (34). What happens if it is not possible to find a locus for the pain? Steihaug suggest understanding in this case chronic muscular pain as an *indexical designator*¹. This means something that is not interpreted as a direct effect of an underlying cause, but as a sign that "stands for its object through nearness and interpretive habit" ((69), p. 39). She makes the point that there are several possible explanations and contributing factors for the origin of pain. These can be of biological, psychological and sociological dimensions. However, we do not know which factors are most important for this individual and how they interact. We do not know all the experiences a body has been through and how these contribute to the body "remembering." These have over time contributed to creating habits that we unconsciously use and remember in our lived bodies (using the term for Merleau-Ponty) (61, 69). In line with Merleau-Ponty's thoughts, these ways of behaving and acting are to be understood as intentional, as bodily oriented actions ((69), p. 39). "Pain is not a language we must interpret, but an action, a chronic pointer to that something is wrong." ((69), p. 39). To clarify, the author does not mean that the pain does not share any connection to cause factors, but it is far from the whole picture. A person's symptoms should be interpreted as bodily oriented actions which involve a message that is not decipherable through a traditional biological view of the body through its cause and effects.

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¹ Steighaug describes «an *indexical sign* stands for its object through closeness – physical, spatial, or proximity in time (p. 38). An index is something with a pointing function. She names two types of index: 1) *An indexical reagent* where the exists a causal connection between the sign and the object the sign stands for. Example: sign points back to its cause like smoke points back to flame.

2) *An indexical designator*: a sign with *partial* conventional relationship with its object. 69 Steihaug S. Can chronic muscular pain be understood? Scandinavian Journal of Public Health.

2005;33(66suppl):36-40

4.1.2 The Value of Meaning

Frenkel takes a phenomenological approach to understanding the placebo effect in his paper *A Phenomenology of the 'Placebo Effect': Taking Meaning from the Mind to the Body* (77). The placebo effect has had a significant role in medicine and continuous to baffle researchers on its workings. Frenkel theorizes through the understanding of Merleau-Ponty's work (61), that the body is able to understand and respond to meanings. This occurs without any need for conceptual or linguistic content. Thus, in the example of a placebo pill, the body responds to the underlying and intended *meaning* of the pill and situation, not the pill itself (77). This perspective underlines the role motor intentionality² and meaning serve in the lived world and can have great clinical implications.

The meaning of our experiences have a great impact on the lived world and outcome (61, 77). An interesting example is a massive study by Phillips et al conducted in 1993 on Chinese-Americans and their traditions (78). Using a database of over 400 000 people from California, the researchers found that Chinese-Americans died on average 1,3 to 4,9 years earlier if there was a combination of disease and a birth year which according to Chinese astrology was deemed ill-fated. This was compared with "whites" or fellow Chinese-Americans who were not born in an ill-fated year (77). Furthermore, they found that stronger the attachment to Chinese traditions, the more life was lost, implying a sort of strength of meaning effect (77). If meaning can have such a profound impact on healing and life, is it possible for physicians to discover and utilize them? By going into the lived world of the patient, in Merleau-Ponty's words to be with other people instead of besides them (61), Frenkel suggests it is possible for physicians to discover such meanings through an phenomenological approach (77). Frenkel further posits that the recognition of a "good doctor" most likely is able to engage the patient through a shared meaning and investigation of the patient's lived world, and thereby can help the patient. In this way the physician herself is active in facilitating the journey towards healing (77).

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² *Motor intentionality* is a term borrowed from Merleau-Ponty referring to intentional activities that in its core involves a bodily understanding of the world (61. Merleau–Ponty M. Phenomenology of Perception Routledge; 2012 (original edition in 1945).

A phenomenological framework can be applied to all groups and stages of illness and pain because it puts the subject of the experience in focus. There is always an individual at the core of each experience. Morrisey in her work (65) applied a phenomenological perspective on pain and suffering towards the end of life which shows the difference such an approach can make (65). The elderly are a group who are consequently discriminated and neglected in society (79). Having a broad understanding of pain and suffering becomes especially important towards the end of life and in the focus of palliative care where "the goal of patientcentered care at the end of life is to relieve pain and suffering" ((65), p. 20). In this phase, many elderly experience a decline in functioning of structures and capacities, where pain and suffering plays a more prominent role (65). In addition, communication between older adults and their physician and health care system is viewed as a key aspect for improving end-of-life care (65). This highlights the importance of not only understanding the lived bodies of those in pain and suffering, but also our conceptualization and applied language. Many studies have emphasized the process elderly going through towards the end of their lives (65). Being in suffering can cause dramatic change to one's lived body, destroying meaning, limiting one's ability to engage and see the full richness of the world (50, 59, 73). It is a process of "renegotiating identity, meaning and relations with self and other, and motivated by a desire for agency and existential transcendence" ((65), p. 34).

Several studies suggest that it is possible to find one's way back to a life of meaning, and break through the world filled with pain and suffering (80-82). Victor Frankl viewed meaning as a crucial part of our existence, that to find meaning in one's suffering had the ability to "transform despair into triumph" ((83), p. x). In the words of Fredrich Nietzsche; "He who has a why to live for can bear with almost any how" ((84), p. x). By using phenomenology, through investigating the story of the patient, her language, and looking at how the body acts and moves in this world, it is possible to gain access to the challenges faced by those in suffering and gain insight to their lived experience. From there the patient and clinician together can find a new way of being in the world³. Finally, it is important to remember that

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³ There are also several ethical concerns revolving end-of-life care and how the elderly should be treated. Unfortunately, these ethical aspects are not the focus of this paper, but are discussed elsewhere. See Morissey for further discussion. 65. Morrissey MB. Phenomenology of pain and

the meaning behind an individual's symptoms are unique and a "one-size-fits-all" interpretation of such symptoms is not enough (69).

4.2 Reconceptualizing Pain and Suffering

Pain has for centuries not only been complicated to treat, but also define. In 1975, the IASP as formed and faced the challenge of defining pain (64). Two main challenges stood out in finding an appropriate definition; 1) making sense of the paradox of pain 2) finding a definition that linguistically and conceptually made sense. After assembling a committee of experts to find a suitable definition, the result of several years of work came in 1979 (although it was not put into use until 1986); "An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (23). This new definition proved a step in the right direction by including the "emotional experience", thus fronting those in favor of a more holistic view of pain, and not merely a biomedical one. However, Cohen and colleagues raise several criticisms of this definition of pain (64). First, the description of "unpleasant" can seem trivializing for those suffering from intense experiences such as kidney stones or childbirth (64). In addition it does not capture the different levels of suffering such as spatial and temporal characteristics (73). Second, in the note on usage accompanying the definition from IASP, state; "many people report pain in the absence of tissue damage or any likely pathophysiological cause; usually this happens for psychological reasons" (64). These words reveal the rooting in Cartesian dualism and run a risk of stating the pain either as "real" (meaning a biological origin), or "faking", i.e. existing in the mind of the sufferer (psychological). This can quickly lead to shame, distrust, and additional suffering for the subject in pain. For those advocating for a more holistic view and abandonment of the body-mind dichotomy, this definition may be a step in the wrong direction. Thirdly, such a narrowed definition does not include the various categories of experience that can have different causes and different qualities. They do not take in the full scope of how pain can affect the lived body (50, 73). A fourth argument laid

suffering at the end of life: a humanistic perspective in gerontological health and social work. Journal of social work in end-of-life & palliative care. 2011;7(1):14-38.

out by Price, concerns the supposed association between a sensation, an experience of unpleasantness and actual or potential tissue damage (64). Price asks who is entitled to make the association? Is it dependent on the outside observer or the subject in pain (64)? If there is a discrepancy between the observer and the experiencer, doubt may arise, which is a known problem in chronic pain conditions such as fibromyalgia and chronic fatigue syndrome. Here, patients are often disbelieved and mistrusted about their pain leading to shame and guilt (85, 86). An additional problem are doctors relying on clinical "objective" signs of pain for validation; in chronic pain these signs are often not present and a source of nociception is repeatedly missing (26, 31). Cohen offers a new definition; "pain is a mutually recognizable somatic experience that reflects a person's apprehension of threat to their bodily or existential integrity" ((64), p. 6). These challenges of redefinition warrant a broader perspective and investigation into the complexity of pain.

4.2.1 Including Other Perspectives

Cassell in his work *the Nature of Suffering and Goals of Medicine* criticizes how evidence-based medicine grown from Cartesian dualism, trains doctors to focus on similarities rather than differences in diseases (87). This provides a framework for how to approach each disease, categorizing it into specific boxes which exclude variation and subtle differences. Although the approach is useful for keeping an overview for each disease, it excludes differences within each condition and narrows the doctor's ability to see each unique case (87). The conceptual framework a doctor approaches a case with, will also influence what she is able to see and find (27, 87). Gomez along with Cassell argues that through the biomedical framework, the "patient as a person" suffers (27, 87). By only treating the pain through its measurable and objectifiable signs, the pain itself is inadequately treated in addition to causing suffering for the persistence of the condition (27, 87). By abstracting the pain from the individual (through mainly focusing on the measurable and visible signs as the cause of the suffering), the meaningful dimensions influencing the individual's suffering is left out. These dimensions include past experiences, personal assumptions and cognitive patterns, religious convictions and others (87).

It is important to differentiate between pain and suffering, although they are tightly linked and often used as synonyms. These are phenomenologically distinct, but may be present at the same time. Cassel defines "suffering as emerging if impending destruction of the person is perceived" ((87), p. 131). This can occur at the same time as acute pain, but the pain is in relation to the physical body. In an extended understanding of suffering, it includes not being able to do basic things that are considered to give meaning to one's life. Such as a good meal, going for a long walk, having a family or reading a book (66). In addition, suffering can be linked with identity, and no longer being able to be the person you want to be or lose one's dignity due to your suffering (66). In this sense, suffering represent a broader and more complex definition. Pain can be viewed as one of many modes of suffering, although a major one (88).

Suffering can have many different expressions. An example is the protagonist Charles Swann in Marcel Proust's first volume of in Search of Lost Time (89). He is hopelessly in love with the young and desirable Odette de Crécy, whose activities drives him crazy with jealousy (89). Not knowing where she goes in the evenings when they are not together torments his thoughts and the feeling takes hold in his body; "his thoughts in their wandering course would come upon his memory where it lay unobserved, would start into life, thrust it forward into this consciousness, and leave him aching with a sharp deep-rooted pain. As though it was a bodily pain, Swann's mind was powerless to alleviate it; but at least, in the case of a bodily pain, since it is independent of the mind, the mind can dwell upon it, can note that it has diminished, that it has momentarily ceased. But in the case of the mind, merely recalling the pain, created it afresh. To determine not to think of it was to think of it still, to suffer from it still suddenly a word causally uttered would make him change countenance like a wounded man when a clumsy hand has touched his aching limb" ((89), p. 331-332). This example illustrates how an emotional event or situation can take hold in the body, make its presence known as real as if a knife is driven into one's stomach. But here there is not a specific locus, it takes place in the *lived body* in line with Merleau-Ponty's phenomenological theory (61). It illustrates how the mind and body are interwoven in their expression and not separate existing entities, even though the author clearly is still anchored in Cartesian dualism.

A broader definition of pain and suffering is needed to understand its true complexity. In Cassell's view, pain is not equated with nociception. An important addition is the meaning of

the pain which the individual attaches to the nociception (27)). The level of meaning and its interpretation will vary from person to person, and from culture to culture (27). Cassell uses the example of childbirth to show the complex nature of pain and suffering. It is believed that greater the pain, greater the suffering (88). However, in childbirth, women can endure extreme pain to fulfill something meaningful, by bringing new life into this world. In spite of the incredible pain, it can be viewed as rewarding (87). This suffering can also originate from other experiences as mentioned in the example from Proust. The full scope of suffering, feelings, emotions, past experiences and intuitions needs to be included as part of the treatment. The physician should not only see a specific pain which she tries to place in accordance with the biomedical theories, but look at the individual situated in this suffering and consider contributing dimensions (73). By trying to adapt an alternate language and way of communicating this suffering, the physician might find a more holistic way of treating the patient (27, 87). This is no easy task, and demands a reconceptualization of how we view pain, our language attached to it and a greater understanding of the individual in focus (87).

Gomez raises a problem with Cassell's view of the wholeness of a person. How is it possible to formulate and include all these different dimensions in the self? In Gomez's article *Conceptualizing suffering and pain*, he criticizes the underlying assumption that there is a coherent self subject to suffering. It portrays an idea of an autonomous, rational and coherent being which has been refuted across varies disciplines (27). Despite Cassell's attempt to move away from the mind-body dualism and biomedical model, his definition on suffering is open for criticism. The philosopher F. Svenaeus also recognized this problem and offers an alternative answer: understanding life as a narrative (67). This includes "stressing the experiential dimension, the holding together of states of consciousness making up the self" ((67), p. 412). A narrative structure gives cohesiveness to a human life, having a temporal structure (beginning and an end), but also a narrative which provides the opportunity to study and find out who one is (67). Values are central to our developing narrative and expressed through the lived body by being-in-the-world. How does this relate to pain and suffering?

Pain is described as a mood, and this mood works as a portal to my access to the world (67). "We do not choose the moods we find ourselves to be living in; the moods in question overwhelm us and cannot easily be changed ((67), p. 410). Svenaeus in line with many other phenomenologists believe that moods should be thought of something more than just a bodily sensation, they are meaningful experiences which open a world of multiple dimensions (67).

Bodily and mental suffering are connected and should be viewed as parts of one distinct phenomenon. Such a viewpoint allows further investigating of suffering and its impact on the sufferer's whole world. Svenaeus focuses on the "lived body", the body representing a person's way of existing in the world. In chronic pain, the role of this lived body changes and transforms into an alien character which becomes an obstruction for the subject's engagement and possibilities in the world. It becomes an obstacle for the developing narrative of the individual (67). It may prevent the subject in pain from being a father to his children, going on long hikes or listening to music (67). "The healthy body offers one a kind of primary being-at-home, which is turned into a not-being-at-home in illness" ((67), p. 413). This has implications for how he moves, acts and communicates in and with the world (67). It can lead to a "broken" life-narrative (67). Svenaeus views it as essential to take in these different layers of suffering and how they connect to one's mood and being-in-the-world. These are distinguishable primarily revolving around three central factors; 1) one's embodiment, 2) one's engagements in the world and 3) one's core values (67). Through identifying and changing core life values and these layers of suffering, it may be possible to for the person in suffering to reinterpret her life story into a more meaningful and rewarding life (67).

Svenaeus conceptualizes suffering in the framing of a narrative. He posits a cohesiveness of an individual's life with a temporal structure shown with a beginning (start of life) and end (death)(67). Through understanding an individual's life in the form of a narrative, it is easy to understand how such a destructive and great force as chronic pain can break through this narrative, causing the individual to diverge from one's path (50).

In criticism against this narrative approach, Gomez argues that an individual's life cannot be seen as a continuum and single event, our life narrative is pluralistic (27). It is influenced by our inner dialogue and can change. The narrative is dynamic and is constantly altered in line with new experiences and interpretations. Furthermore, life is not a "single" narrative for it alters with different viewpoints and can have several on-going stories at the same time (27). In one life, an individual can have multiple on-going narratives; of a father, a husband and a son. This highlights the issue of seeing the individual's wholeness across multiple dimensions and over time (27). Finding an appropriate definition for suffering and thus conception of it is complicated and has not reached a clear definition. Is language even capable to treat it? (27) A new definition on pain and suffering is offered by Gomez. It cannot merely be based on neurological theories, but also include other relevant dimensions such as cognitive awareness,

interpretations, culture and educational factors (27). A non-essential and non-naturalistic conceptualization is proposed: "suffering is an unpleasant or even anguishing experience which can severely affect a person on a psychophysical and even existential level" ((27), p. 9).

Pain and suffering are complex and challenging matters to define and explain. Taking in other perspectives such as phenomenology to understand is crucial in redefining the current definitions. In the discussion, these perspectives will be further examined and seen in the context of the medical world and how it may help develop our understanding of pain, and ultimately help those in suffering.

4.3 Rethinking Our Language About Pain

The level of advanced language used by humans is in part what makes us unique (90). We have found our own way of communicating thoughts and desires on an extremely high level. In order to connect and live with other people we use language, gestures and expressions as means of communication. This is essential for our survival as social beings and for being understood (16). However, communication proves a serious challenge when it comes to chronic pain and suffering. Pain is not an object of the senses. It is invisible. It is something that is felt and experienced in the body rather than in thought. It lives in the body. Usually, most body parts are absent from one's attention. Internal organs such as the heart, lungs and kidneys perform their life-preserving work without ever calling us to attend to it (72). The agency of different body parts flow through us when we use them. I am not aware of my hands when I am cooking dinner or cleaning the house. They go unrecognized, but are all the same still in use. This differs from chronic pain conditions where the individual often becomes intensely aware of the pain. An example is complex regional pain syndrome (33, 91), where the hand or foot usually is affected. In such cases, the individual is at times highly attentive and aware of the hand's or feet's (depending on what limb is affected) movements and interactions with the outside world. The pain draws our attention to it, yielding it no longer invisible and the flow is disrupted. It becomes an object of our concern. This transformation makes this part of our body exist in a new way (72).

Pain is also an emotional experience. In Western society we are trained and culturally adapted into avoiding suffering at all costs. We have pain medication for headaches, some use

alcohol to distract us from physical pain or existential suffering and others distract themselves through working for countless hours. The experience in the definition of IASP is deemed "an unpleasant experience" which we try to avoid or resolve (23). In spite of intellectual explanations for the occurrence or existence of this pain, for instance the evolutionary advantage of being able to feel pain or considering it a part of God´s plan for humanity, we still want to get rid of it (72). We arrive at the doctor´s office expecting a miracle cure, usually in the form of a pill which will remove it all. In chronic pain there is a "disturbance of my bodily equanimity" ((72), p. 256), a mode of subjectivity, which is not easily removed.

4.3.1 Are We Able to Express Pain?

Pain is a deeply subjective experience, one which radically can change our world and become the full source of our attention. As a paradox, in severe and chronic pain conditions the pain can take over our world, but also be the hardest to express. In the words of Virginia Woolf; "English which can express the thoughts of Hamlet and the tragedy of Lear has no words for the shiver or the headache . . . The mere schoolgirl when she falls in love has Shakespeare or Keats to speak her mind for her, but let a sufferer try to describe a pain in his head to a doctor and language at once runs dry." ((92), p. 34). There have been many arguments for the incommunicability of pain, though not as eloquently expressed as Woolf. Woolf makes an important note of the limitations of the English language to express the individual's pain, but Hooft objects that it is not a fruitless pursuit (72). One of the main claims, since it is the subject that has the experience, he or she cannot make you feel the same through expressing it in words or bodily gestures. It is subjective and private in nature (72). An attempt to compartmentalize and categorize pain is the McGill Pain Questionnaire. It is meant for evaluating the individual's pain through three main categories; (1) What Does Your Pain Feel Like? (2) How Does Your Pain Change with Time? (3) How Strong is Your Pain? (93). Even though this tries to capture the subjective nature of an individual's pain, through objectification and categorization it has not managed to capture the full subjective experience. For those in chronic pain there can be a lack (and usually is) of objective signs, which can make it harder for the patient to be believed by her physician. Especially if the physician is grounded in the biomedical model. There are too many examples of such encounters between patient and physician where the patient is not believed, considered faking their pain and thus is given inadequate help (58, 86). Elaine Scarry in her book the Body in Pain: the Making and Unmaking of the World said; "physical pain does not simply resist language but actively destroys it» ((94). The sufferer is often reduced to grunts and cries. In severe cases our language is not able to capture the totality of the suffering and thus silences many (72, 94). Scarry offers two main philosophical points contributing to the challenges in communicating pain: intentionality and objectlessness (72, 94).

First, intentionality. Pain is "not *about* anything and does not refer to anything but itself" ((72), p. 258)). This separates pain from other moods. Hooft uses the example of anger. If I am angry, I am angry about something. Or if I am feeling sad, it is about something. The loss of a beloved pet or not getting the job I wanted. These and other mood-like states become manifest through how they present themselves as objects in the world and are interpreted as such.

Hooft sees pain as a distraction from our being-in-the-world (72). It draws attention on itself and does not color the world in a pained way. He sees it not as a way of apprehending the world, but a presence which "pushes all other subjective states, and the world itself, to the periphery of my attention" ((72), p. 259). This view is in contrast to Bullington and Merleau-Ponty's views mentioned previously (61, 68). In both views the result is the difficulty of expressing and communicating the pain.

The second argument offered by Scarry is that pain defeats language because language's primary function is referral to objects (94). "This objectlessness, the complete absence of referential content, almost prevents it from being rendered in language" ((94), p. 162).

Language refers in some sense back to the objects in the world and the attributed meaning to them. Seeing pain as objectless, it does not have an attributable context. Pain exists in the world not as an object of reference such as chair or table, nor as an object words can refer back to (94). Leder in his article *the Experiental Paradoxes of Pain* objects to Scarry's description of pain as non-referential (73). He uses himself as an anecdotal example with his history of leg pain. For him, his own pain was consistently a "pain of" something. The referential nature and meaning of the pain shifted based of the current perspective from physicians and himself (73). "With each new interpretive meaning, the sensed pain itself changed in quality, intensity, meaning and affective content "((73), p. 446). Although the pain and its meaning could shift, it remained referential in nature (73).

Hooft also objects to Scarry's argument by describing pain in relation to others. We learn to distinguish if people look happy or sad through facial expressions, actions, language and

certain patterns. Through this I establish a way of perceiving this mode in others, but also in myself. I learn to call this experience pain through the observation and expressions in myself and in others. If a child falls over on his bike and starts screaming out loud and holding firmly to his knee, I would most likely interpret this as a person in pain. Through such experiences and situations, they do not only communicate their inner state of experience, but also teach me the expression of pain (72). Hooft makes the point that language can suggest pain although pain does not refer back to an object (72). Pain is still difficult to express and not all metaphors are adequate, but it is not impossible (72).

An extended function of language is expressing ourselves in an intersubjective world. We do not live in isolation. Our moods and being-in-the-world are modified and influenced by our interaction with other people and the world. Perhaps pain destroys the intersubjectivity, causing us to isolate ourselves. "Healthy and pain-free persons are able to transcend themselves into the world and project their subjectivity in such a way as to invest the world with meaning" ((72), p. 259). For those in chronic pain, the world is reduced to their own isolated reality. Greater the pain, the more enclosed the world becomes (72). It becomes harder for them to forget themselves and be fully in the world. It becomes an obsessive condition. They are not able to not focus on themselves because the pain demands their attention. «They are not able to escape the prison of self-involvement which their pain has created around them." ((72), p. 259). In Hooft's view, this obsessiveness is what roots them to a world of pain, not a lack of language (72). The so-called structures mentioned by Merleau-Ponty are destroyed, because suddenly the language and patterns which are meant to describe the world no longer applies (61, 72). For those in severe pain, the flow of being-in-the-world is disrupted. Is it possible to find a language and expressions that can fully capture the experience of the lived pain experience and thus help the sufferer break out of that world?

5 Discussion

In summarizing the results, we first turn to the discussion on the definition and conceptualization of pain and suffering made by Gomez and Cohen. They highlight the difficulties on creating a new definition. Pain is viewed as one of many modes of suffering. Both concepts are part of a discussion on reconceptualizing, because they are essential for the

groundwork for our understanding. A wider definition is needed to move beyond equating nociception with pain. Pain holds more levels and dimensions than the mere biological aspect. The body in pain and suffering becomes a new life-world and disrupts the lived narrative. Svenaeus argues that viewing life in a narrative structure can help deepen our understanding of the destructive presence of pain in one's life (67). Gomez refutes the narrative approach due to multiple narratives on-going in an individual's life. In chronic pain a transformation occurs where an alienation of the self and to others emerges. Three main factors are important in creating a new definition on suffering; including the transformation of the body in chronic pain, an individual's values and the sufferer's engagement with the world. New concepts on pain and suffering are offered by Cohen and Gomez (27, 64), cf. 5.1.

The results show the key role language on pain plays in our understanding of pain. Sullivan discussed how language on pain emerges and the concept is part of a social phenomenon. The expression of pain arises and is modified through interaction and observations with others and the world. Scarry's two arguments on pain's intentionality and objectlessness were criticized by Sullivan, Leder and Hooft who offered alternate ways of viewing pain. According to Leder, pain can refer back to a locus in my body, but can also change over time in placement and meaning. Hooft puts emphasis on the interaction with others in a social context to show how pain can be observed and expressed.

Phenomenology provides an alternate way of understanding the subject in pain. Examples of this was shown in the results through the articles by Bullington, Steihaug, Frenkel and more (68, 69, 77). The mind-body-world are all intertwined and are inseparable parts (61, 68). Living in chronic pain represents a new lived world and a transformation of the being-in-the-world. This means a change in the structures and meaning that the sufferer lives it. These experiences and new ways of being are expressed through the body and in postures (59, 69). In order to interpret these bodily oriented actions it is necessary to incorporate all the dimensions of pain, and move away from the traditional, reductionistic way of viewing the body and person in suffering (61, 68).

5.1 Revisiting Our Concepts of Pain and Suffering

Pain is an essential aspect of human existence and is necessary for our survival (31). What does pain mean? How do we interpret pain? How is it experienced? How does it differ from other emotions such as anger, jealousy or hate? (64, 67). Our language and our understanding of pain and suffering is an important discussion and demands further attention. With chronic pain as a rising global pandemic, it is essential to further investigate how we conceptualize pain and suffering to understand the phenomena.

A new definition on suffering was offered by Gomez: "Suffering is an unpleasant or even anguishing experience which can severely affect a person on a psychophysical and even existential level" ((27), p. 9). This definition provided by Gomez fronts a holistic view of suffering, rejecting the Cartesian dualism which echoes the biomedical model. *Psychophysical* refers to the unity of body and mind, two concepts that are inseparable, therefore a clear step away from the current understanding (31). Suffering is viewed as an unpleasant event although this ranges on a spectrum where it can be both unpleasant and rewarding at the same time as with childbirth (67). In this definition the whole person is affected, also the personal attitudes and interpretations which are again influenced by cultural and societal patterns (27). Lastly, by referring to an "existential level" it shows the multifaceted nature of suffering and how it can affect several dimensions and the same time and involve our very existence (27).

The definition by Gomez can be compared with the newly suggested definition on pain provided by Cohen et al (64)⁴. They criticize the current world-definition on pain provided by IASP, which is: "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage"(23). Cohen's new definition; "pain is a mutually recognizable somatic experience that reflects a person's apprehension of threat to their bodily or existential integrity." ((64), p. 6) "Mutually recognizable" refers to

medicine and bioethics. Theoretical Medicine and Bioethics. 2014;35(6):407-20.

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⁴ As mentioned previously, pain and suffering are two different phenomena, where pain can be viewed as a major mode of many possible modes within suffering. 67. Svenaeus F. The phenomenology of suffering in

humans as sentient beings where pain is an experience which can be recognized by others in the same species (64). In Cohen et al's view this eliminates the element of doubt and the previously mentioned problem of validation and subjectivity versus objectivity (64). In Cohen's and Gomez's definitions they both use the adjective unpleasant (and anguishing in Gomez's definition) which is subject for comments. It is possible to object that unpleasant is not a sufficient word to cover the multiplicity of the full pain experience, but is it even possible to find a suitable word which would cover all individual experiences and levels of pain? The use of "somatic" in Cohen's definition refers back to the body, which is meant to echo a phenomenological perspective of the pain experience being located in the *lived body*. Embodiment was mentioned as a possible substitute, meant to more fully capture the essential role our body holds while engaged in the world, but was rejected due to its possibly various meanings (64). The removal of "tissue damage" in the IASP definition is meant as a deliberate step away from objectifying pain, obsessed with finding a locus for the pain which is rooted in the broken machine metaphor (23, 31). This is meant to help lighten the load and possible shame for those individuals who have no discernible locus of stimuli and are often meet by the physician with disbelief. Finally, Cohen in line with Gomez includes the existential dimension to their definition where pain represents a destructive force which can threaten the person's believed ability to perceive their integrity ⁵(27, 64).

Both of these new definitions integrate the "first-person" level and challenges the current dogma of third-person objective goals. Through incorporating phenomenology, it is possible to create new definitions which are meant to more fully capture the complexity and multifaceted nature of the individual's pain experience. This can help broaden and deepen our understanding of the phenomenon. Our language is part of forming our understanding of a phenomena and provides the framework for how it is perceived. Thus, by reconceptualizing the definition of pain and suffering, it is a step forward towards the subjective experience of those in pain and a step closer for clinicians to understand the complexity of the pain experience (26, 27, 67, 87).

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⁵ This reference to the apprehending threat to the body's or individual's integrity builds on Cassel's definition on suffering: "suffering as emerging if impending destruction of the person is perceived" 87. Cassell EJ. The Nature of Suffering and the Goals of Medicine. Loss, Grief & Care. 1998;8(1-2):129-42.

5.2 Language on Pain – Forming Our Perceptions and Interpretations

"Because pain is a private, personal experience, it is impossible to know precisely what someone else's pain feels like" ((28), p. x). Is it possible to access the experience of pain through language? Does our language hold the capacity to accurately describe and articulate such a unique and subjective experience? Sullivan in his paper *Pain in Language* argues that our pain experience and our expression of pain is mediated by the conceptual structure of our common language (16). Everything is filtered and interpreted through our language. Pain is still a subjective experience, but on a conceptual level it becomes a social phenomenon (16). Even though pain is a uniquely private event, Sullivan argues that one cannot solely rely on the first-person perspective as the only source to understanding pain. We as humans are sentient beings operating in a social world with a common language and conceptualize experiences together (16). Through experiences and interpretations over time, humans construct and build a language on pain. This is constantly modified by the social world through experiencing numerous situations and encounters with the world, and observing others. It is how we recognize pain in others, but also modify our own experiences (72). Sullivan makes the example of observing another person in apparent pain; "I act this way when I am feeling great pain, she is acting that way, therefore she must be feeling great pain ((16), p. 4). These thoughts follow the same trail as Hooft with his theory on intersubjectivity (72).

It is through pain's primitive, natural expression that gives it a recognizable face from which the language of pain is generated (16). Over time, more and more pain words become attached to certain sensations of pain. These become part of how we express our internal states. One study found five-year old boys to have five words for pain compared to 44 words at age 14 (16). Thus, a generalized concept of pain builds in the public with references which we have for "chair" or "bike". A spectrum of these concepts obviously exists, but there will be an underlying mutual understanding of what I am talking about when I am talking about a chair. Without this public common pain language, "our memory for pain would lack any specificity or distinctiveness." ((16), p. 5). This does not mean that pain necessarily is an universal concept having the same meaning for all. For example, the Indian culture hold different concepts and attachments to a more holistic view of pain than most of the Western

world (18). It is important to remember the constructive function of our language, although we often think language functions merely to communicate ideas about a pre-conceptualized world (16). Wittgenstein disagrees with such an assumption and argues that pain is learned and is defined by the surrounding environment and settings (16). Our words used to describe a pain experience is not a direct translation of something that was there before they were. "Language is not so much as a means as a mode of being" ((16), p. 6). The concept of pain is composed of narratives about "cause, blame, cure, meaning and value of pain" which is interpreted and modified through our lives (16). By understanding how our concept of pain is created, how it is influenced by our social world and how we modify our expression of pain, it can become a gate-way to a deeper understanding of the complexity of pain (16).

As previously mentioned, Elaine Scarry argues in her book that pain destroys language viewing intentionality and directedlessness as two main contributing factors (94). Both have been challenged by Hooft (72) and Leder (73), accompanied by Sullivan (16). Hooft offers a solution in the form of a new type of intersubjectivity; grounded in empathy (72). This entails seeing "the Other", understanding pain not as a phenomenon, but as a modality of one's subjectivity (72). It is necessary to understand the whole world of the person sitting in front of you, not merely a case which waits to be solved. The clinician and patient can together reopen the patient's world and attempt to break free from the isolation forced by pain. The other person is calling out for help, and it is the ethical responsibility of the clinician to answer (72). Pain intensifies and magnifies the appeal between individuals, urging action. Pain is not only silent and incommunicable destroying language, but urgent and intense (72). In order to answer such a cry for help it is important to take in the wholeness of the other person, to investigate the expressions and postures of the body, their narrative and interpretations of meaning and experiences, the full lived-world of the sufferer (72).

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⁶ The ethical challenges and issues concerning treatment of pain and the responsibility of the treating physician are interesting, but are unfortunately not the focus of this paper. See Hooft for further discussion. 72. Hooft S. Pain and communication. Medicine, Health Care and Philosophy. 2003;6(3):255-62.

5.3 Clinical Implications of Implementing a Phenomenological Perspective on Chronic Pain

Chronic pain is a complex and multidimensional phenomenon. The treatment and rehabilitation of chronic pain patients demands multidisciplinary treatment drawing on experiences and insight from a range of specialties such as doctors, nurses, physiotherapists, occupational therapists and psychotherapists (41). Traditionally, a range of interventions are implemented with the main focus of eliminating the pain, and if not possible, focusing on improved pain control and quality of life (68). Over the last couple of decades there has been a broadened approach to chronic pain focusing on a vast range of angles such as pain control, reduction of dependency on medications and acceptance of one's condition (68). In addition, many patients will have other illnesses and challenges secondary to the chronic pain, which further complicates the treatment approach. Facing such a complex and challenging situation for both the patient and the physician (and other professions), what role can a phenomenological approach serve?

Chronic pain patients do not only suffer from the simplified biological concept of pain, but also from a "broken" narrative, a disrupted self which is trying to find new meaning from her experiencing world (95). "Pain is more than an aversive physical sensation. It can trigger a series of experiential paradoxes that shock and destabilize one's world" ((73), p. 459). In line with the thoughts of Bullington, Svenaeus and Leder, the chronic pain has disrupted the individual's lived world, alienating oneself from their body and others (50, 68, 73). The lived world is flattened and narrowed, deprived of its richness (50, 68). Understanding and interpreting this experience in the lived body is an important aspect in the patient-clinician encounter (59, 69). Seeing and helping the patient to understand how past experiences can express themselves through the body, can be a gate-way to taking back control of one's own body and narrative (68, 69). This is captured by Bullington's words; "our therapeutic efforts must therefore be directed not only to the "objective" body with its bones and muscles and transmitter substances, but also to the communicating body which conveys suffering without words ((95), p. 331). Such an approach includes letting-the-other-be, drawing on Buber's I-Thou relationship, where openness from the professional is critical (95). In another study by Bullington, seeing the patient as a Thou, a person with a history and personhood was deemed essential for the good clinician encounter (95). By understanding more of the patient's lived world and how this world is presented, it is possible to help the patient break through this

world trapped in pain. This involves "transforming the field of experience from pain centered to an opening of the world pole" ((68), p. 107). Through such a transformation, the person in pain needs to experience oneself as someone more than just a person with pain (68). This means exploring the different experiential dimensions of pain, ranging from temporal to spatial, its effect on agency to our sensations and interpretations and more (73). The structures need to be rebuilt in which the world is interpreted and restoring one's language (61, 94). But how is such a transformation possible and what does it actually mean?

A phenomenological approach to treatment differs from the traditional approach through rejecting dualistic ways of understanding pain. This means diverging from either objectifying the body through use of medication, or finding cognitive techniques where the mind is thought to wield its power over the body and thus eliminating the pain (68). The full experiential dimensions of pain cannot be reduced into numbers on a pain scale nor necessarily localized to a specific locus (26). This alternate approach does not mean that these interventions have no place in the treatment of chronic pain, but they are not the main focus for transformation of the lived body in chronic pain. There are several approaches for transforming the lived world, and finding the new flow in everyday life and the incorporation, instead of separation between mind-body-world (68). This can happen through physiotherapy, psychotherapy, dance or music therapy and a range of other approaches (81, 95). By investigating and exploring the lived world of the person in suffering, practitioners have the unique position of promoting, witnessing and validating the patient's own journey of exploration for meaning (68, 81). Chronic pain does not exist in isolation, each pain experience is unique. The approach needs to be individually tailored, but with the framework of putting the lived body into focus (26, 68). New studies applying this perspective have been conducted fusing the first- and third person perspective (96, 97). They represent an attempt of incorporating phenomenology into the experimental setting (21, 97). To fully translate the phenomenological perspective into the world of medicine, it is necessary to reflect and articulate how phenomenology theory can unfold and become a part of our widened understanding of chronic pain and suffering (26, 67, 68).

5.4 Strengths and Limitations

In line with interpretative analytical analysis in qualitative studies, the researcher plays an active role in the accumulation and synthesis of the results and discussion (98, 99). The

conceptual articles found in the literature search demand a cohesive and structural binding, in order to understand these articles and concepts as a whole. It demands a high level of reflectiveness and interpretation by the researcher. This can be viewed as both a strength and weakness. The interpretation of the articles and how this binds together will in part be determined by how the researcher understands these concepts and what is viewed as shared characteristics. The researcher's background within the field and pre-existing knowledge of the domain will influence how these articles are interpreted. The author is in medical school involving numerous experiences and encounters with chronic pain patients, which influences the underlying understanding of the concept. In addition, the author has a background in philosophy, which creates a special interest in applying a philosophical angling to the paper. Thus, there is a level of social constructivism where the material is made together with the researcher and the articles in the temporal setting.

Another limitation is the literature search. It could have been expanded and thus incorporated more articles and possibly enriched the results and discussion.

6 Conclusion

Chronic pain is a growing pandemic causing immense suffering across the world. Despite new medications, advanced technology and increased prosperity globally, the phenomenon continues to rise (2, 7, 41). The medical world has not managed to fully explain nor understand chronic pain conditions such as phantom limb pain or fibromyalgia nor the placebo effect (39, 77, 100). In this paper, the current biomedical and biopsychosocial model is challenged and its ability to treat and understand chronic pain. A model rooted in Cartesian dualism creates a split between body and mind, resisting a holistic approach. Phenomenology is presented as an alternative perspective offering a different way of approaching the individual in pain, and broadens our understanding of this complex and difficult phenomenon. A shift is made from third-person to first-person perspective, investigating the subjective experience. This posits seeing the mind-body-world as intertwined and moving away from viewing the body as a broken machine which needs repair (31, 68). Our bodies are not something "we have" or "own", but something we "are" (61, 68). By investigating the lived-body and how our experiences manifest themselves in our bodies (59, 68, 69), it is possible to

gain a broadened understanding of the person in pain. A person in pain is something more than a mere stimulus, it entails all aspects of life. Chronic pain patients do not only suffer from the biological concept of pain, but also from a "broken" narrative, a disrupted self which is trying to find new meaning from his experiencing world (95). It represents a shift in the medical world, no longer objectifying the patient and reducing the person in suffering to objective measures (26, 27). The clinician plays a vital role in this encounter and needs to take in the beliefs, interpretations and values of the patient in order to create mutual goals (80). Through openness, the clinician allows a space for the patient "to be" freed from being objectified or put into a box (95). Even without an apparent cure, it possible to help find and create meaning, to help the patient go from being a passive bystander to actively re-take control of her own life and faith (81, 82, 95).

We need new definitions to understand the fundamentals of pain. A new definition on pain is suggested by Cohen et al; "Pain is a mutually recognizable somatic experience that reflects a person's apprehension of threat to their bodily or existential integrity" ((64), p. 6). As mentioned, pain can be seen as a major mode among many modes of suffering. They are linked, but separate phenomena. Gomez provides a definition on suffering; "Suffering is an unpleasant or even anguishing experience which can severely affect a person on a psychophysical and even existential level" ((27), p. 9). Both of these definitions place the sufferer in focus, entailing a holistic framework going away from Cartesian dualism, and in addition encapsulates how pain and suffering can occur on an existential level. Our definitions of pain and suffering are culturally defined and shapes the perceptions, preferences, beliefs and behaviors of all individuals. It shapes how patients are met by their physician, by the health care system and in extension, how they are treated (16, 80). Reconceptualizing our definitions and ideas of pain and suffering is essential to further our investigation and understanding of these complex phenomena.

Applying new and strengthened definitions can help how we conceptualize and address pain. It connects to our understanding of pain and our ability to communicate. It is argued that our language of pain is created through interaction with the world and others, modified over time through encounters, observations and conversations (16). It is not a pre-conceived concept, but our expression of pain is created through language and engaging with the world (16). Language on pain is complex and difficult, but through ways such as empathy, it is possible to communicating with those in chronic pain. It is crucial to take in how chronic pain affects and invades a person's lived world, which is possible to capture through openness

between patient and physician (16, 69, 72). It requires applying a perspective emphasizing the subjective experience, redefining our conceptualization of pain and suffering, and finally investigate the language applied to people in pain. Perhaps then it will be possible for those in chronic pain to break free from their pained world and live fully through their bodies (27, 59, 68, 73).

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8 Appendix

*Note: In this type of literature search, it is not appropriate to use GRADE for evaluating each article. GRADE is meant as a framework for developing and presenting summaries of evidence and creates a systematic approach for clinical practice recommendations (101). The quality of evidence is rated linking it to outcome. However, this paper focuses on conceptual articles where the aim is not to present evidence in the traditional sense. The goal is not to rate each aspect of the discussion, nor rate the total impression of individual conceptual article. Each of the articles contribute to this master's thesis in various degrees which cannot individually be graded. Therefore, despite its acknowledged utility, it is not appropriate to use in this work.

