

# University Honors Program

## Capstone Approval Page

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**Personality of Pain: A Look into the Experience of Pain as well as the Psychological and Sociological Factors that Impact It**

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ABSTRACT (100 – 200 WORDS): Within my research paper, my goal was to take an in depth look into the development, experience, and treatment of chronic pain. Information found in the paper includes (but is not limited to): the physiological breakdown of pain, causes, symptoms, statistics, views of pain through different medical models, treatment types, and sociological and psychological factors influencing pain. In order to research the topic, a variety of sources were used including: online periodicals and government websites, web pages, printed books, information taught in classes, and personal experience while working in a physical therapy clinic. My research has led me to many findings about the complexity and nature of chronic pain as well as the methods used to treat it.

**NORTHERN ILLINOIS UNIVERSITY**

**Personality of Pain: A Look into the Experience of Pain as well as the  
Psychological and Sociological Factors that Impact It**

**A Thesis Submitted to the**

**University Honors Program**

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**With University Honors**

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**By**

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## Personality of Pain

As of 2008, it was estimated that the cost of chronic pain is about 100 billion dollars every single year. That figure includes healthcare costs, lost productivity, and lost income. With every year that passes it continues to rise (American, 2008). While living in a recession, it is easy to recognize that number is much too high. This paper takes an in depth look in the experience of chronic pain, from the time of its development through its progression and correlating treatment. It identifies pain as a common human experience that is strongly impacted by individual psychological and sociological factors surrounding an person's life.

### **Types of Pain: Acute vs. Chronic**

#### **Acute Pain**

According to the length of time a person experiences pain, it can be classified as either chronic or acute. Acute pain typically lasts less than six months and can result from a number of different reasons. Such reasons include: broken bones, burns, cuts, pregnancy, and surgery. Also, it can arise suddenly and is usually classified as 'sharp pain'. Whatever the case, acute pain tends to go away after the perceived cause of it has been treated or healed (Cleveland, 2009). For example, getting a paper cut can cause a person to feel acute pain. However when the paper cut heals after a day, the pain is no longer felt. Acute pain can eventually become chronic pain if it exists longer than six months or persists after the given condition had been treated or healed.

#### **Chronic Pain**

Unlike acute pain, chronic pain lasts longer than six months and is usually characterized as a dull, throbbing feeling of pain rather than sharp pain. It can arise from a number of different

reasons including trauma, infection, medical condition, and stress. Typically, however, chronic pain is still felt longer after its original cause was treated (Cleveland, 2009). For example, a person who has never previously experienced health problems is rear-ended in a motor vehicle accident and is treated whiplash as a result of the incident. After the whiplash and all other injuries suffered from the car accident are healed months later, that same person continues to experience severe weekly headaches. Those headaches would then be classified as chronic pain.

Because chronic pain can exist for such long periods of time and can persist after treatment of a condition, experience of it can lead an individual to experience several other physical and emotional conditions. Physical effects on a person can include a change in appetite, limited mobility, and tense muscles. Emotional effects can include fear and depression resulting from lack of knowledge regarding the source of the pain or the diminishment of it. Also, chronic pain can have sociological effects on a person if that experience of pain hinders him or her from engaging in social activities that were once commonly partaken in (Stein, 2011). For example, a young man cannot play basketball with his friends as he once used to because that constant physical motion increased pain in his lumbar spine that has existed for over a year.

## **Physiology of Pain**

### **Physiological Breakdown**

#### Nociceptor Activation

Within the human body, pain results from the activation of nociceptors, or “receptors that respond to a variety of strong noxious stimuli (chemical, mechanical, or thermal) that cause or have the potential to cause tissue damage”. When activated nociceptors can cause either of two sensations: pain or itching. Stimuli causing the activation of nociceptors fall into four categories:

1. excessive potassium levels, 2. histamine and prostaglandin release, 3. serotonin release, and 4. the secretion of peptide substance P (Silverthorn, p 338).

Located inside the human body are countless potassium ions. The concentration of potassium ions within cells is much higher than the ion concentration outside of cells. Therefore when stimulated, potassium exits the cell through voltage and ligand-gated ion channels. In the case of tissue damage, which can occur during physical activity, excess amounts of potassium exit the cell. In turn individuals can experience a painful, burning sensation (Silverthorn, p 340). For example, in order to improve her physical condition, a woman might try to take up jogging. About fifteen minutes into their first jog, she might begin to feel a painful, burning sensation in her thighs. That sensation is caused by nociceptor activation due to increased potassium levels outside of cells located within the muscle fibers of that woman's legs. The sensation is meant to serve a signal to the body that tissue damage has occurred, and that rest is needed.

Besides increased potassium levels, tissue damage can also lead to a release of prostaglandins and histamine within the body. Release of these chemicals causes inflammation to develop at the affected site (Silverthorn, p 340). That inflammation can then be treated by aspirin or ice packs. Another source of nociceptor stimulation is the release of serotonin within the blood stream. Serotonin can be found within platelets found in blood plasma. When the body experiences vascular damage, plasma leaks out. As plasma leaks out, so do platelets which in turn release serotonin. Serotonin then activates nociceptors which cause the sensation of pain and provide a signal to the body that vascular damage has occurred (Silverthorn, p 341).

The last source of nociceptor stimulation is the release of the peptide substance P, which is secreted by primary sensory neurons upon the occurrence of injuries. Not only can substance P

activate nociceptors, but it can also lower their activation threshold. As a result, nociceptors are more easily stimulated. Therefore, the affected area of the body becomes more sensitive and more susceptible to further pain (Silverthorn p 341).

### Nociceptor Signal Transmission to the Central Nervous System

The central nervous system is made up of the brain and spinal cord. Once nociceptors are activated, corresponding signals are then sent to the CNS through three main sensory fibers: A-beta fibers, A-delta fibers, and C fibers. Delivery from different fibers produces different sensations. Transmission of signals through small A-delta fibers occurs very rapidly and produces the sensation “fast pain”. The speed of signal transmission is based on the fact that A-delta fibers are myelinated. To be myelinated means that the fibers have a strong support around them which allows signal to pass through them faster due to the fact that less chemicals can leak out during transmission. Fast pain is usually described as sharp and localized (Silverthorn, p 345).

On the other hand, “slow pain” occurs as nociceptor stimulation sends signals to the CNS through small, unmyelinated C fibers. This type of pain is often described as dull pain. When a person experiences an injury, he or she will generally experience both types of pain a result of it. For example, if a young girl were to slam her finger in a car door, she would immediately experience fast, sharp pain. Shortly after, she would experience dull pain in her finger as time subsides. Interestingly it is easy to make the distinction between fast pain and slow pain depending on where the stimulus (injury) occurs. If it occurs closer to the CNS, the timing between fast and slow pain occurrence is much shorter than if the stimulus were to occur far away from the CNS (Silverthorn, p 345). In other words, if a boy were to stub his toe, there

would be a longer time lapse in between fast and slow pain occurrence than the girl whose finger was slammed in the car door. Therefore, the boy would be able to distinguish between slow pain and fast pain much easier than the girl.

### **Pain is a Matter of Perception**

Pain is the brain's interpretation of sensory information sent as the result of nociceptor activation. As such, it is a subjective perception rather than physical reality. Pain as a perception can be demonstrated through four different categories: differential responding, habituation of nociceptors, gate-control theory, and referred pain.

#### Differential Responding

Differential responding refers to the "pain scale" exhibited individually by each person. All people tend to experience pain differently due to higher/lower pain tolerances and past experiences (Silverthorn p 346). A woman with a broken finger might say that she is feeling extreme pain and can barely move her hand. On a 1-10 scale (barely any pain – extreme pain), she would describe her pain as level 9. However, another woman suffering from the same injury and experiencing the same amount of pain as the first woman might have a higher pain tolerance and therefore describe her pain as level 4. Differential responding will be discussed in further detail later in the paper.

#### Habituation of Nociceptors

In some cases, such as the experience of muscular pain, nociceptors can develop a tolerance to stimuli. As a result, the perception of pain is lessened (Silverthorn p 346 – 347). Take into account the previous example of the individual who was trying to improve her physical



condition and took up jogging. During the woman's first jog, she began to feel a painful, burning sensation after fifteen minutes of physical activity. After two weeks of continuing the same jogging routine every other day, the nociceptors in that woman's body would begin to habituate as tolerance to physical activity is developed. In turn, she might not begin to feel that burning sensation until jogging for thirty minutes rather than fifteen. On the other hand, if she were to stop jogging again, the tolerance to physical activity that she built up would diminish.

### Gate-Control Theory

The gate-control theory helps to explain pain as a perception by explaining that pain can be modulated. In the presence of pain, the body still wants to be aware of other stimuli affecting it. For example, when a person cuts his or her finger, putting pressure directly on the cut can help to lessen the perception of pain. This occurs because putting pressure on the cut activates A-beta fibers which then inhibit some of those pain signals from traveling all the way to the brain. As a result, perception of pain is lessened in order for tactile sensors to send signals to the brain that pressure is being placed on the cut. Another example of the gate-control theory is the experience of pain being lessened during times of emergency. During times of emergency, pain can very often be suppressed due to the body's recognition that survival is more important than the pain. In such cases, inhibitory signals from A-beta fibers are sent from the brain down to the spinal cord and inhibit the transmission of nociceptor signals (p 347 – 348).

### Referred Pain

Experience of referred pain also helps to demonstrate pain as a matter of perception. Referred pain usually results from pain some type of stimulus or injury occurring near the heart or other visceral organs. When that stimuli or injury sends pain signals to the brain, the brain

confuses those signals as being somatic. In other words, the brain thinks that those pain signals stem from muscles of the body rather than organs. As a result, when an injury or stimulus occurs in the heart or other visceral organs, pain can be felt in some other part of the body (Referred, 2009). An example of referred pain would be experiencing pain in the left arm when a person is suffering from a heart attack. The existence of referred pain also helps to explain why amputee patients still sometimes feel pain in areas of severed limbs.

### **Most Commonly Reported Causes of Chronic Pain**

In 2007, over one quarter of Americans – about 76.5 million – reported a problem with pain. Of those millions, over 50% of the individuals claimed to have experienced chronic pain (American, 2008). Each year that number has continually risen. Although there is a wide spectrum of causes of chronic pain, there are three factors in particular identified as the main causes. Those main causes are: arthritis, neuropathy, and stress (National, 2011). Arthritis is a medical condition which a person experiences inflammation and stiffness of the joints (Makover, 2011). According to the Center for Disease Control and Prevention, over 50 million Americans were medically diagnosed with arthritis in 2010 alone. Also, arthritis is much more prominent in the senior population ages 65 and older. Between the years 2007 and 2009, over 50 percent of the American senior population was diagnosed with arthritis (National 2011).

The second leading cause of chronic pain is neuropathy, which involves damage to the peripheral nerves within a person's body. Damage to those nerves causes the brain to wrongly identify stimuli as pain, causing an individual to perceive that pain. As was the case with arthritis, neuropathy is also much more prevalent among the older population (National, 2011). The last leading cause of chronic pain is stress, a psychological phenomenon brought caused by

several different factors including, but not limited to: age, health, schedule, family problems, and finances. In a study performed by the American Psychological Association in 2008, almost every American reported having experienced stress at some point in his or her life (Lenglet, 2009). Not all stress causes the development of chronic pain; however stress does strongly contribute to its existence.

### **Pain through Two Different Viewpoints**

#### **Biomedical Model of Health**

The biomedical model of health was developed in the mid-nineteenth century as a way to explain and treat illnesses. Developers of the theory believed that because humans are a part of nature, they should be studied in the same way. Therefore, because nature was studied at a cellular level, it was thought that humans should be studied at a cellular level as well. As such, it was viewed that a person's health was only affected by alterations to a person's physical condition. Such alternations were the result of disease, genetic defect, or accident. To be healthy meant that a person is "free from disease, pain or defect" (Wright, 2005). Separating body from mind, this model did not take into account psychological and sociological elements that could affect a condition. In terms of pain, the biomedical model views pain as only being explainable in biological or medical terms. It is the result of an existing physical condition or accident, and treatment should be solely focused on medical approaches (Wright, 2005).

In the mid-nineteenth century, the main causes of death in society were accidents and diseases. As a result, the biomedical model was very successful in the medical field in terms of treatment of individuals. As time progressed into the twentieth century, conditions such as heart disease and diabetes became more and more common. Such conditions result not only from

biological factors (such as heredity), but also from psychological and sociological factors (such as depression and eating habits). As a result, the biomedical model could not treat all aspects of those diseases, and recognition of the model's shortcomings began (McDonald, 2003).

Although still widely used, there are now several flaws associated with the biomedical model due to the black and white nature of the viewpoint. One of the main flaws associated with the model is its view of humans. Because the model denies psychological and emotional contributions to physical conditions, its treatment of those conditions is the relatively the same regardless of the individual. Therefore, critics believe that the biomedical model views humans more as machines than as individual beings. Another flaw associated with the biomedical model is that the treatment methods used could cause psychological conditions to occur (McDonald, 2003). For example, if a person was experiencing pain in the lumbar spine heavily affected by stress and depression, the biomedical model would probably suggest treating that patient with a prescription medicine. Although that medicine does help alleviate the pain for a period of time, the underlying causes of the pain would not be addressed. As a result, the person would continue to experience pain, and the dosage of medicine would increase as the body becomes tolerant of the medicine. After several months not only would the pain be present, but he or she would continue to take medicine in order to alleviate it. Meanwhile what the patient really needed was psychological help in order for pain to cease.

### **Biopsychosocial Model of Health**

In 1977 psychiatrist George L. Engel proposed "the need for a new medical model" introduced a new way of thinking to the medical field in the form of the biopsychosocial model. Unlike the biomedical model, the biopsychosocial model views health as more of gray matter. It

theorizes that health is a function of three aspects within an individual's life. Those three aspects are: biology, psychological state, and social experiences. Taking all three aspects into account, this model aims at explaining and treating pain according to physical condition of the body as well psychological conditions that could contribute to pain such as stress. Also, the model would focus on understanding pain in terms of social factors surrounding a person, such as the amount of support a person receives. Such support could influence an otherwise apathetic patient to engage in activities that would promote healing of the pain such as exercises and posture awareness (Hanson, 2000).

James M. Hunter once said, "Treat the patient, not the Xray" (Weaknesses, 2010). In order to treat patients according to the biopsychosocial model of health, the use of integrated disciplinary teams has become more common as society delved into the twenty-first century. Such an approach requires that patients be provided services by members of different professions working together on a singular healthcare team. Those team members can include but are not limited to: nurses, psychiatrists, doctors, and social workers (Hanson, 2000).

Despite its modern approach to healthcare treatment, several criticisms regarding this model of health have developed. The first criticism is strongly related to the main criticism of the biomedical model. Just as the biomedical model is criticized for focusing on an individual's biological aspects to an extreme, the biopsychosocial model is criticized for focusing on psychological and sociological aspects to an extreme. As a result, critics believe that conditions in which biology does play a large role become viewed as psychosomatic (Gatchel, 2008). In other words, this biopsychosocial model views that condition as being psychologically perceived rather than existent based on both psychological and biological factors. Also, critics of this model believe that because it can undermine the contributions of biological factors to a

condition. In turn insurance companies are more capable of exploiting patients and denying them treatment that would that a physician would otherwise deem necessary. One more criticism of this model of health was that it undermines the role of a doctor in doctor-patient relationships. Because it theorizes that individual factors contribute to conditions, some individuals can attempt to gain control themselves over their own conditions rather than leaving necessary work up to the professionals (Gatchel, 2008).

### **Psychological Background of Pain**

As previously stated, the biopsychosocial model of health puts a heavy amount of focus on a person's psychological state in determining an illness and/or how it should be treated. Scientists have been studying the role of psychology in pain experience since the early 1900's; however those studies really started to become prominent in the 1950's as the number of patients claiming to suffer from unexplainable chronic pain began to rise significantly. Two key theories play leading role in understanding the contribution of psychology to pain perception: differential responding and behaviorism (Eccleston, 2001).

#### **Differential Responding**

Differential responding refers to the existence of pain tolerances. It highlights the fact that in the majority of cases, especially the experience of pain, no two people respond equally to the same experience. What might be considered unbearable pain for one person might barely be felt by another person. On the other hand, a minor injury to person A could be considered much greater to person B; everybody responds differently (Eccleston, 2001).

An example of differential responding is experienced by physical therapists on a daily basis while at work. When patients attend therapy for treatment, one of the most important

preliminary factors to assess is the amount of pain experienced by a person at that given point in time. Determination of a patient's pain level will not only influence the types of activities he and she will partake in during that physical therapy session, but it could also serve as indication about the success or lack thereof of previous treatment methods. In order to assess patients' pain levels, many physical therapists ask their patients to rate their current pain levels on a 0-10 scale – 0 meaning no pain and 10 meaning that pain is so bad the patient is considering hospitalization. Due to differential responding, two patients might answer that their pain levels are the same number; however the significance of that number could be very different. A pain level of 2 for one patient could be a 5 for the other.

In correlation with differential responding is the experience of a difference threshold, which refers to the “smallest amount of stimulation that can be detected” in a given experience. Difference thresholds regarding pain perception are strongly related to the amount of given pain initially experienced. For example, if a person is experiencing a very high level of pain, an additional pain stimulus would be much less noticeable than a person who was experiencing a relatively low level of pain (Morris, p 81). Overall, psychologists have identified four key factors as contributing to differential responding. Those key factors are: gender, age, and culture (Eccleston, 2001).

The gender of each individual plays a very strong role both biologically and sociologically. In terms of biology, women typically demonstrate higher pain tolerances than men because of the role they play in child-bearing. Evolution has allowed women to develop higher pain tolerances in order to endure the pain that is associated with giving birth to their children. Because men play no biological role in child-bearing, their pain tolerance is typically lower than that of their female counterparts (Morris, p 82). Sociology has caused gender status to

have to the opposite effect on differential responding. Since the beginning of time society has painted the picture that men are mentally and physically tougher than women. Any show of weakness is seen as undesirable or “wimpy”. As a result, despite experiencing pain, men might choose not to show in order to avoid appearing weak. Therefore, they respond differently to any stimuli contributing to their pain levels (Nayak, 2000).

An individual’s age also has a major effect on how he or she responds to situations, including pain perception. Young adults in their peak physical condition generally have higher pain tolerances than young children and aging adults. Therefore, the experience and response to pain is typically much different among people of very different ages. Other than biological factors, the elderly population (ages 65 years and older) is much more likely to accept pain. That is due to the common beliefs that pain is simply a byproduct of aging as the body down. Another commonly held belief among the older population is that have already lived a full life. Because of those two attitudes, the elderly can sometimes be deterred from taking the necessary steps to treat their respective painful conditions (Eccleston, 2001). Besides gender and age, culture also has a very significant effect on the way a person responds to pain. The beliefs, attitudes, and values specific to each culture and ethnicity help dictate how a person should respond to all given situations. As a result, culture plays a key role in differential responding (Lasch, 2002).

### **Behaviorism**

Behaviorism can be defined as “a school of psychology that studies only observable and measurable behavior” (Morris, p14). Although the term was coined by psychologist John B. Watson, its teachings first stemmed from the scientific studies of Ivan Pavlov in the late nineteenth century. Pavlov is most associated with the practice of classical conditioning, in



which case learned behavior allows initially neutral stimuli to cause certain behaviors when experienced by individuals (McLeod, 2007). Building on Pavlov's teachings, Watson believed that "all mental experiences – thinking, feelings, and awareness of self – were nothing more than physiological changes in response to accumulated experiences of conditioning" (Morris, p 14). His psychological beliefs correlate with the occurrence of nociceptors physiologically habituating to repeated pain stimuli. They help to explain the experience of pain being a learned response unique to each to each person and based on several different biological, psychological, and social factors.

Related Watson and Pavlov's beliefs about learned behavior is a research study performed by John Hopkins University in 2004. The study used a placebo effect in order to demonstrate the psychological significance of learned behavior within the realm of pain management. In order to perform the study, subjects were separated into two groups. Each group was to be subjected and informed about the same treatment; however the language used to inform about treatment was very different for each group. Group one was informed about the treatment in a very negative manner, causing the subjects to exhibit higher pain sensitivity and anxiety. The other group was informed about the treatment in a much calmer manner, using positive language. After both groups experienced the same given treatment, the first group showed higher susceptibility to developing pain than the second group (Staats, 2004).

Besides Watson, B.F. Skinner is also one of the major characters attributed with influencing the study and practice of behaviorism. Not only did Skinner believe that attitudes and actions could be conditioned, but he also implemented the practice of reinforcement within the conditioning process. Put together, Skinners' beliefs formed the practice of operative conditioning (Morris, p 15). This type of conditioning involves providing negative and positive

reinforcement to certain behaviors and has come to play a major role in the treatment process of pain.

### **Psychological Influences to Pain**

Besides differential responding and behaviorism, there are several individual psychological factors that affect a person's perception and response to pain (including stress, as previously discussed). The first of these is an individual's understanding of pain and their ability to identify its source. Not being able to identify the source of pain can indirectly affect a person's experience of pain. That lack of understanding and inability can be detrimental to a person's attitude and cause him or her to feel a lack of control over their own body (Stein, 2011).

Not only does that person feel a lack of control, but he or she is also not able to predict what types of behavior could increase pain levels or cause them to recur in the future. As a result, that person could then become overly cautious and refuse to partake in any behavior that he or she sees as risky; however those activities could help aid in pain relief (Stein, 2011). For example, a woman is experiencing chronic pain in her lumber spine. Because she is unaware of its origin, she refuses to do any physical exercises in fear that the pain will get worse. However exercises are needed to strengthen a person's core muscles. Once those core muscles are strengthened, they are able to support the back much better and maintain proper alignment of the vertebrae. In turn, pain diminishes. On the other hand, the lack of predictability could cause a person to partake in more activities than he or she should. Both attitudes could hinder the treatment process needed for pain management (Stein 2011).

Another major psychological factor that could affect a person's entire experience of pain is the development of a psychological mood disorder such as depression. As previously stated,

chronic pain is characterized as lasting longer than six months. Such a long period of time causes many people to develop feelings of anger and hopelessness. Eventually those feelings can come together and surface as depression. Therefore depression can arise from chronic pain and affect attitudes in the same way that misunderstanding can. Not only can depression result from physical pain, but it could also lead to physical pain; the two go hand in hand. According to Mayo Clinic, “depression causes unexplained physical symptoms such as back pain or headaches in many people” (Hall-Flavin, 2010)

### **Sociological Background of Pain**

The other major area that the biopsychosocial model of health focuses on – differentiating it from the biomedical model – is sociology (Hanson, 2000). Not only does sociology affect the development of pain experienced by each individual, but the experience of chronic pain can also affect the sociological factors surrounding a person’s life. An example of sociology affecting the development of chronic pain would a person belonging to minority having a higher pain tolerance than a Caucasian male; therefore that person is much less likely to report any pain at all (American, 2008). An example of how chronic pain could sociologically affect an individual would be if a woman could not partake in girls’ night with her friends because her chronic pain has made it very difficult to sit for extended periods of time. Three main areas in which sociology plays a role in the development of pain (and vice versa) are: gender, age and culture.

#### **Gender**

As previously discussed in the section referring to differential responding, gender plays a substantial role when experiencing pain (Nayak, 2000). Despite women reportedly having higher

pain tolerances, they are more likely to report experiencing pain due to many men's need to maintain a "tough" image. Referring to the study performed in 2007, in which 76.5 million Americans reported some problem with pain, the majority of those Americans were women. Of all Americans, 27.1% of women report experiencing some either acute or chronic pain, while only 24.4% of the male population reported experiencing pain (American, 2008).

### **Age**

Besides biological breakdown of the body that occurs throughout the aging process, there are also sociological factors associated with aging that affect the experience of chronic pain. As a person ages, it is likely that peers and family members may pass away. The social network of that person would then become smaller, and individuals once looked to for support may no longer be available. In turn, the individual's experience and chronic pain treatment could be strongly impacted in a negative way. (Effects of a social support network will be discussed in further detail later in the paper.)

Another sociological factor regarding aging that affects chronic pain is the perspective and attitudes of the person experiencing it. As previously discussed, it is very possible for members of the older population to develop irrational attitudes of acceptance toward health problems due to their age. Those individuals feel as though they have lived a full life and chronic pain could just be a side effect of aging. As a result, they choose not to take certain steps that are necessary to improve their conditions (Eccleston, 2001).

### **Culture**

The cultural and ethnic background of individuals is also a very important factor in the pain management process. In the early 1900's it was strongly believed that perception of pain

differed significantly based on ethnicity, with whites being more sensitive to pain, while minorities such as African Americans and Native Americans intrinsically possessed higher pain tolerance. In today's society, those beliefs have been shown to hold some truth as the U.S. population possessing white, non-Hispanic origin has been shown to report the experience of pain most commonly (American, 2008). The difference in reported cases of pain among different cultures can also be attributed to the values and beliefs specific to each culture. Attitude differences among cultures regarding childbirth will help demonstrate this point (Nayak, 2000).

Despite the well-known fact that women's bodies are biologically developed to experience childbirth, it is also well known that childbirth can be very painful. While many minority cultures have come to view childbirth as a standard occurrence common to all women at some point throughout their lifetimes, the western world has come to fear childbirth because of the pain associated with it. As a result, anxiety level and anticipation causes many women in America to experience higher levels of pain in childbirth than other parts of world. In order to control that pain, western society employs two main techniques, Lamaze classes and epidurals. Lamaze classes involve strengthening and stretching pelvic muscles while also teaching breathing techniques aimed at keeping a woman (and her pelvic muscles) calm and relaxed while giving birth. Epidurals, a type of anesthetic pain treatment, can also be administered throughout the labor process in order to alleviate the pain of contractions. However, many cultures view the reception of an epidural as detrimental to the relationship between mother and child (Lasch, 2002).

### **The Role of Sociological Support within the Treatment Process**

The amount of sociological support a person possesses while experiencing pain and undergoing treatment can have a strong effect on the success or lack thereof of treatment. It has been statistically shown that individuals suffering from pain are much more likely to exhibit positive behaviors and attitudes that will allow them to take the necessary steps required for the healing process if they receive the support and encouragement of a social support network. Patients who did not possess environmental support from peers, family members, and friends were much more likely to get distracted and veer off the wrong course while undergoing the treatment process (Stein, 2011).

### **Treatment Plans Associated with Chronic Pain**

In the same way that no two patients are the same, no two treatment plans are exactly the same either. When developing a treatment plan for an individual suffering from chronic pain, several different factors specific to each individual need to be taken into account. Those factors include: age, activity level, overall health conditions, severity of pain, and diagnosis causing pain (if any). Also, treatment plans can be used to reach a number of different goals.

### **Goals of Treatment Plans**

The first and most obvious goal of chronic pain treatment is the elimination or reduction of pain. Another goal of treatment is to allow the patient to reach the highest level of functioning possible. In other words, treatment may not be able to return a patient to the high level of performance he or she once previously experienced if the source of the pain is very severe. One more goal of chronic pain treatment is to improve each individual's quality of life as much as

possible (National, 2011). Overall, it is very important for patients to understand the reality of their condition correlating to its severity.

### **Treatment Methods Used**

Because treatments plans are typically developed according to an individual's unique characteristics, several different methods are used. The first type of treatment method most commonly employed in the use of analgesic medication, both prescribed and over the counter. Also, physical therapy and chiropractic treatment can be used to help treat bones, muscles, and joints that could be causing or contributing to the pain. Within a medical setting, procedures can be performed to stimulate or inhibit nerves thought to be contributing to pain. If a condition is very severe, surgery could be necessary and also involve the use of anesthetic medication. Other types of treatment focus on psychological therapy to help alleviate pain. Behavioral methods could be taught in order to help a person control the amount of pain experienced. For example, hypnosis can be used to unconsciously change behaviors and attitudes unknowingly contributing to pain. Psychotherapy is another type of treatment used to the treat the psychological aspects of chronic pain (Cleveland, 2009).

### **Closing**

Chronic pain affects millions of Americans and accounts for about 50 million lost work days in one year alone. It is a complex phenomenon that strikes it victims in the form of acute or chronic pain. The causes behind the experience of pain are as numerous as the methods employed to treat it. In order to treat chronic pain, it is necessary to focus not only on the biological aspects of the condition, but also the psychological and sociological aspects as well. In doing so, patients are provided quality treatment aimed at improving their overall quality of life.

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