

ABSTRACT

On Healthcare's Dismissal of Women's Pain

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This thesis will be establishing that there is a greater dismissal of pain for women compared to men by medical practitioners. It will also be defining what constitutes pain in two topics: psychological/emotional pain and pain in endometriosis. It will cover the influence culture and societal views have on views of pain, the dismissal of women's pain as mental rather than biological, and the dismissal of women's pain as overdramatized and exaggerated. It will then discuss measures already in place against bias-influenced pain dismissal within the medical field and medical schools, as well as further measures that can be taken, with an argument for requiring more logic and reason rather than empathy and emotion. In conclusion, there is a need for a more holistic approach to medicine that considers and acknowledges cultural and social influences and the effects bias creates to inhibit proper treatment of patients in the medical field.

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ON HEALTHCARE'S DISMISSAL OF WOMEN'S PAIN

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CHAPTER ONE

Definitions and Establishment of Pain

Chapter One will be establishing that there is a greater dismissal of pain for women compared to men by medical practitioners. It will also be defining what constitutes pain in two topics: psychiatric disorders and endometriosis. It will be divided into three main sections; debates regarding definitions of pain in the medical field, how pain is viewed by people (specifically women) and the lack of consideration these discourses have for the effects of gender discrimination. This chapter will lay the foundation for the discussion of pain and gender's contribution to the experience.

Introduction

In the Empathy Exams, Leslie Jamison mentions the struggle for empathy in the doctor's office, and the hollowness that can be felt in the doctor that goes through the motions with formulaic answers. She discusses how empathy requires stepping into another's shoes, acknowledging that one enters the room ignorant of the other's experiences, and how that has affected their afflictions. She recounts the time there was a maggot in her foot and yet nobody at the hospital believed her, instead treating her like she was crazy until the maggot crawled back out of her foot, and the many women she had met who had experienced the same dismissal, and the anger and scars that had stemmed from it, from "being told that it was anxiety, in my head, female stuff" (Jamison, 31).

My roommate has Generalized Anxiety Disorder (GAD). It took her 18 years to get a diagnosis. She recalls the feeling of sudden suffocation, the number of scars in her

palm from digging her nails into her hands until they bled. She shakes her head as she recounts the misery when her parents and doctors had repeatedly told her that she was just being melodramatic, ridiculous, and that she should just get over it. My childhood friend went to four different doctors for her then unrecognized panic attacks, only to be told that she was making things up, that it was all in her head. She had called me in tears, demanding to know if she was really going insane, because she knew there was something wrong but not a single person would believe her. Another friend confides to me that she doesn't want to go to the doctors, because she is consistently dismissed and gaslighted for her gastrointestinal issues, accompanied by constant nausea and vomiting. She tells me that she doesn't have an eating disorder and she actually wishes she could gain more weight for dance requirements, but that multiple doctors have implied to her that her problem was psychological. She was recently diagnosed with gastroesophageal reflux disease and celiac disease but continues to go to the doctor as her symptoms and diagnosis appear to be more complicated.

It took seven years for another friend of mine to get diagnosed with endometriosis. Her periods were painful, heavy, and inconsistent throughout high school. When she went to the gynecologist for the first time, the physician told her that her pain and heavy periods were normal. When she asked about endometriosis, she was immediately dismissed because she didn't have all the symptoms and since she had never had sex, it would be impossible to know if she would have painful penetration. She went to other gastroenterologists, endocrinologists, allergists, and gynecologists, and none of them could tell her what was wrong and instead stated that her symptoms were likely just stress related. She would visit pain management specialists and pelvic doctors and would

still experience intense pain. After finally visiting an endometriosis specialist, she was diagnosed and ended up having two laparoscopic surgeries to remove excess tissue. She recalls the doubts and worries she had that her pain was really all in her head, a product of medical trauma and years of being told that her pain and symptoms were fictional.

These stories are not uncommon. Gender discrimination, as well as other kinds of discrimination, occurs in numerous domains. The Harvard Department of Health Policy and Management found that 18% of women in a country-wide gender study experienced discrimination in healthcare, 41% experienced discrimination in equal pay/promotions, and 20% experienced discrimination in higher education (Steelfisher, 2019). Native American, African American, and Latina women had higher odds than white women of reporting gender discrimination, and African American women's odds of discrimination in healthcare visits were 2.00 times greater (Steelfisher, 2019). LGBTQ women had a higher odd of reporting sexual harassment and violence against themselves and other female family members than non-LGBTQ women, though a study in 2018 found that 81% of women, compared to 43% of men, reported experiencing some form of sexual harassment and/or assault (SSH, 2018).

The medical field discriminates in treatment of pain by dismissing women's pain far more quickly than men's pain¹. In a study with adolescents suffering from chronic pain, females had significantly higher rates of reporting physician-generated pain dismissal experiences compared to males, raising concerns that they are receiving differential treatment for their chronic pain (Iglar, 2017). Another study, titled "The Girl who Cried Pain", finds that although women report an increased severity in levels of

¹ (Dusenbury, 2018) (Schopen, 2017), (Mieres, McNally, Grossman, and Duarte, 2021)

pain, increased frequency of pain, and greater duration of pain than men, they are treated for pain less aggressively (Hoffman and Tarzian, 2003). But by dismissing the woman's pain, by labeling it "female stuff", and assuming that it is a melodramatic pretense, it may cause further distress and illness, especially due to misdiagnosis which can worsen the body's state and cause greater stress².

Pain is practically a universal language. Nearly everyone has experienced pain in its numerous shapes and sizes, and we can grimace in sympathy when someone recounts the time they stepped on a nail or sharp piece of glass. And yet, pain is somewhat of a mystery. An individual cannot truly understand the extent of the pain others have experienced, nor can others know the pain of that individual. We can try rating pain on a scale of one to ten, but nobody really knows what four or seven entails or if that experience is even mutual for every person. In summary, pain is universal but personal. This creates difficulties for medical professionals and for patients. The medical field, which includes hospitals, private practices, psychiatry, therapy, and medicine, is supposed to resolve the concept of pain, through treatments and medications, and address it for society. The purpose of the medical field is to heal, best visible in the oath new physicians say as they enter the field. The Imperial College School of Medicine and Yale University Medical School's Oath has new doctors swear that "I solemnly promise that I will to the best of my ability serve humanity caring for the sick, promoting good health, and alleviating pain and suffering...and never intentionally do or administer anything to the overall harm of my patients" (Sritharan, 2001). However, the very experience of pain

²[drunk-snail] (2018). *Women's pain is often ignored or dismissed easily by health care providers. Ladies what's your story to when they really should have listened* [Online forum post]. Reddit. , (Scotsman, 2020), (Marta, 2021), (Gross, 2018)

is individual, containing bias and the influences of each individual. Due to this, issues form as the medical field attempts to answer what pain is, what level of pain is worth addressing, and how to know who is experiencing each level of pain. The answers cannot help but be affected by the culture, history, ideas, and biases of the people who address and define pain for the rest of society. Because of this, pain is difficult to define objectively.

General Pain Definitions

The difficulty of defining pain lies within the struggle to include the experience's multiple aspects, such as pain associated with tissue damage versus pain associated with emotional/psychological/non-physical damage. It is also limited linguistically, as there is no way to directly express pain, and people often explain their experiences through metaphors (Cohen, 2018).

Because of this, the International Association for the Study of Pain (IASP) outlines multiple types of pain, all meant for use by people within the health field, in addition to their definition of pain itself. The IASP was the first international organization created specifically to study pain and officially defines an assortment of pain-related terms, on top of having its own journal. The three types of pain relevant to this paper include **nociceptive** pain and **neuropathic** pain, which contrast each other, and **nociplastic** pain. Nociceptive pain stems from actual or threatened damage to non-neural organs and tissues, with activation of nociceptors (IASP, 2017). In comparison, neuropathic pain stems from damage or disease to the somatosensory system, with pain projections into “innervation territory” (Treede, 2017). Nociplastic pain is pain that comes from nociceptive signaling pathways changing despite having no actual evidence

of tissue damage or lesion/disease of the somatosensory system, and is the pain most often associated with chronic pain (IASP, 2017). In this section, I will describe the definitions of pain used by healthcare professionals then explore some of the debates that researchers had on the definition of pain. I will then elaborate on the neurophysiological basis of pain, which includes nociception as well as the pain-processing mechanisms in the brain. I will then discuss psychological pain, which is defined separately as it is not included by the IASP, and pain from an endometriosis-centered perspective.

The definition's origins come from the conversation of multiple researchers in the IASP, including Sternbach, who proposed that pain denoted a "stimulus, a sensation, and a teleological function" (Sternbach, 1968). Another researcher, Mountcastle, proposed that pain was "what hurts" and was "evoked by stimuli" that "threatens to destroy tissue" (Mountcastle, 1974). Merskey also linked pain to tissue damage, but he was the one of the first pain theorists to call pain an experience that provides a framework that can be used to assess and investigate patients' statements (Merksey, 1964). Together, these definitions, among many others, built up the definition of pain established by the IASP.

Pain Definition Debates

While IASP's definition of pain is generally applied as the main definition, there has been relative debate and discussion on its reliability. Other researchers criticized the IASP definition because it had left out cognitive and social dimensions of the experience. They proposed that the definition ought to be "a distressing experience associated with actual or potential tissue damage with sensory, emotional, cognitive and social components (Williams and Craig, 2016). This created discussion on the relevance of social dimensions, with some arguing that such aspects were unnecessary in a definition

of pain, using the example that a man on a deserted island with no social interaction is still capable of experiencing pain (Cohen, 2018). While the point that was trying to be made with the example is understandable, since one does not need a friend to feel the pain from a paper cut, it instead proved the relevance of social components. A man with no social interaction could in fact be feeling greater or lesser pain because of the psychological influence of his isolation. We consistently redefine experiences and our levels of reaction by observing the reactions of others; exemplified by a baby who may not cry when they first fall but then burst into tears when parents fuss over them, or the person who may dismiss their own pain because they are told that there are others out there suffering more, and they believe that disqualifies their own experience³.

Milton Cohen, Williams and Craig, Price, and Scarry also criticized the IASP definition in the PAIN journal, as they argued it fails to fully describe pain with the word “unpleasant” and fails to cover the phenomenological aspects of pain properly. In addition, they argue that the definition relies on self-report (which puts mute groups at a disadvantage) and allows outside observers to judge whether the sensation was associated with actual/potential tissue damage (Cohen, 2018). As Scarry stated, “To have pain is to have certainty; to hear about pain is to have doubt.” (Scarry, 1985). Doubt causes conflict between the judgement of the observer, who cannot feel the pain, and the experience of the other person and causes the clinical issue of the validation of pain, especially when even examinations and extensive investigation failed to reveal the source of the nociception (Cohen, 2018).

³ (Wallace, 2017)

Neurophysiology researcher Treede, and Philosophy researcher Aydede defend the IASP definition with the reply that arguments were formed by creating “uncharitable interpretations” that overanalyzed the definition (Aydede, 2017). In addition, they argue that the IASP takes the issues previously mentioned into consideration through its footnotes, which associate pain with an adequate noxious stimulus which then equates it to the threat of tissue damage, and disqualifies hunger, social rejection, and other “unpleasant experiences”. In addition, they argue that it alleviates its verbal emphasis by acknowledging that having no verbal communication doesn’t mean there is no experience of pain, and that pain is an individual’s experience. Still, despite the fact that pain is confirmed as an experience, that doesn't mean that there isn't an issue in the interpretation that allows for the prejudice and opinion of the outsider to affect the validity of pain. Even the defense acknowledged that there are limitations caused by language, and that the definition requires “regularly updated footnotes” despite its validity (Treede, 2018).

In 2020, the IASP revised its definition of pain in response to the criticism by removing the statement that it needed to be “described”, and instead stated the current definition of pain as “unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage” (IASP 2020). Their updated notes and etymology state that pain is “always a personal experience that is influenced to varying degrees by biological, psychological, and social factors”, separate from nociception, a concept learned through life experiences, and normally adaptive but possibly adverse on function and well-being. They stated that an “inability to communicate does not negate the possibility that one experiences pain”, and finally, note that “a person’s report of an experience as pain should be respected” (IASP, 2020).

Neurophysiological Pain

With a discussion of pain and pain perception, it is important to understand the observable physiology and nociception involved. There are two types of general pain perception. There is a sharp and fast “first pain” and a more delayed, diffuse, and longer-lasting “second pain” (Purves, 2018). One can think of it in terms of pricking a finger on a needle. The pain from the prick is the first pain and the dull throbbing afterwards would be the second pain. These are all perceived by sensory receptors called nociceptors, which will fire when stimulated to send messages to other neurons within the spinal cord and brain through multiple pathways. While nociception cannot be considered equivalent to pain itself because pain’s definition is as a subjective experience and nociception is observable, it creates an understanding of pain perception in human physiology.

Nociceptors can be categorized by their axons, as either the A δ group of myelinated axons or the C fiber group of unmyelinated axons. The A δ group conducts at faster velocities than the C fiber group, which means that pain pathways, though already slow, can vary further in terms of communication speeds (Purves, 2018). Once these nociceptors are stimulated, they will fire at the synapses in laminae I and V of the dorsal horn of the spinal cord onto other either ascending or descending second-order neurons (Purves, 2018). The ascending second order neurons cross the midline of the spinal cord and “ascend to the brainstem and the thalamus in the anterolateral quadrant of the contralateral half of the spinal cord” (Purves, 2018). This is called the anterolateral system.

From thereon, the system supplies information to other structures in the brain. One of the ways it does this is through the spinothalamic tract, which mediates the

sensory-discriminative aspects of first pain. This includes location, intensity and quality of the pain and is communicated through the ventral posterior lateral nucleus to the somatosensory cortex (Purves, 2018). The affective-motivational aspects, such as the unpleasant feeling of pain, fear and anxiety, and autonomic reaction to pain are related to second pain and chronic pain and is mediated by many other brain structures, such as the reticular formation, periaqueductal gray, superior colliculus, amygdala, anterior cingulate cortex, and insula, among others⁴. The insula and anterior cingulate cortex are part of what is called a “pain matrix” and their activity is largely associated with the actual experience of pain⁵. In conclusion, nociception involves an extensive network over large areas of the brain and explains some of the mechanisms behind pain.

Psychiatric/Psychic Pain

In the field of psychology, there are many discussions on chronic pain, linked with the previously mentioned neuropathic pain and nociplastic pain, but also of another type of pain coined psychic pain by the American Psychological Association. Psychic pain is defined as “intolerable pain caused by intense psychological suffering (rather than physical dysfunction)” (APA). Publicly, this is also known as emotional or psychological pain, and is defined as pain with a psychological, rather than physical origin, like the heartache one may feel for a character in a sad movie or for the end of a relationship. It is often associated with depression and anxiety, as well as trauma caused by life experiences. This definition was not mentioned previously because it is excluded by the IASP and most professionals. They do not mention emotional pain in any of their

⁴ (Purves, 2018), ([Han](#), et al., 2009)

⁵ ([Legrain](#), Iannetti, Plaghki, and Mouraux, 2011), ([Zhang](#), Zhang, and Kong, 2020)

schemes of pain disorders despite the acknowledgement that pain is an unpleasant sensory and emotional experience that can be described in terms of possible tissue damage (Biro, 2010).

Researcher Dr. Biro, who graduated from NYU and Columbia for medicine, argues for the addition of emotional pain as an official term for professionals. He discusses this issue with references to the way people use “pain” to describe their feelings when a close family member passes away, and how the same vernacular is used to describe physical wounds. (Biro, 2010). Additionally, there is a difference in the location of the previously mentioned sensory (nociceptive) versus affective (emotional) aspects in the brain. People with destroyed affective centers feel a prick of a needle but laugh at the sensation because they felt no pain. Because of this, Biro argues that, despite its complexity, the critical component of pain is feeling (Biro, 2010). Without feeling pain, one would not avoid further damage, and there would be no reason to maintain the existence of pain. Studies monitoring brains of grieving people or purposefully socially excluded people found that the same affective pain centers triggered by a prick of a needle were activated by the psychological pain (Biro, 2010). The model Biro demonstrates for pain is the same whether physical or psychological as well. There is an event that causes damage, which leads to the perception of said damage. So, although debated, emotional or psychic pain is also called pain. The same brain regions for experiencing pain activate when a family member dies, when one gets stabbed in the heart, and when one is told that their pain is false because the observer sees nothing wrong.

This concept can be taken one step further by discussing actual physiological dysfunctions caused by severe emotional stress. Takotsubo cardiomyopathy- also known as broken heart syndrome- is the weakening of the heart's left ventricle, which causes the chamber to swell into an octopus-like shape (Harvard Health Publishing, 2020). The swelling causes chest pain, shortness of breath and EKG abnormalities similar to a heart attack. It is diagnosed almost exclusively in women ages 58-75 and is triggered by intense emotional or physical stress, hence its nickname (Harvard Health Publishing, 2020). At the very least, even if one were to argue against emotional pain despite the evidence within the neurobiological processing, they must acknowledge that psychological distress can cause real, observable physiological dysfunction that leads to nociceptive pain perception- and either way, emotional and psychological damage has resulted in pain.

According to the World Health Organization (WHO), gender is a critical determinant of mental health and mental illness, because it determines the “differential power and control the genders have over socioeconomic determinants, social position, status and treatment in society” (WHO, 2021). Depressive disorders account for close to 41.9% of the disability from neuropsychiatric disorders among women compared to 29.3% among men. and the female gender is a significant predictor of being prescribed mood-altering psychotropic drugs (WHO, 2021), despite the fact that about four times as many men committed suicide compared to women in the United States in 2018 (Elfein, 2021).

Pain in Endometriosis

Endometriosis⁶ is one large example of pain dismissal across women. Endometriosis is a condition where the endometrium grows in abnormal locations, causing high levels of both chronic pain and acute pain. It is not well understood and is only found in women- as the endometrium is a tissue only present in females. The chronic condition of endometriosis affects around one out of ten women and yet has a worldwide average diagnosis length of 7.5 years (Bullo, 2019). The endometrium is a tissue that normally lines the uterine cavity and is shed during menstrual periods in women. However, the tissue may sometimes grow in abnormal locations, irritating those organs. Common symptoms of endometriosis include recurrent painful periods, painful intercourse, painful micturition, painful defecation during menstruation, infertility, and chronic lower abdominal and back pain (Farquhar, 2007). The pain is often debilitating and described as “life-altering” although it differs by the person. Expressions of the pain include “being stabbed by a thousand tiny men” and “crushing the uterus and ovaries with a giant hand” (Bullo, 2019). Despite its pain-centered symptoms, endometriosis is primarily diagnosed when investigating infertility rather than complaints about severe pain (Arruda et al., 2003). As some symptoms are associated with women’s menstrual cycles, many healthcare practitioners dismiss and normalize the pain as part of the female condition, allowing up to 50% of patients to report experiencing dismissal of their symptoms (Bullo, 2018; Seear, 2009). One of the most common misdiagnoses for chronic pain and painful intercourse is that it is psychological- the women are told that it is all in their heads (Farquhar, 2007). There is even a term that was used for this specific experience in the 1800s, “hysteralgia”⁷, which was used to describe “an exquisitely

⁶ (Zondervan, Becker, and Missmer, 2020), (Giudice, 2010)

⁷ (Rutter, 1808)

painful disease” that had no inflammation and was associated with a diagnosis of hysteria⁸. The historical and cultural effects of this will be discussed further in the next chapter.

The idea of lower pain tolerance in women is one maintained in the field of endometriosis, proven by the countless women who have gone from doctor to doctor because they were told that their pain was “normal” and that they were being melodramatic⁹. It calls attention to the backwards state of the medical field, compared to other parts of society. In a recently trending social media challenge, men double over from simulated menstrual pain while women shrug at the feeling, rating it low on a pain scale. YouTube videos of men tapping out in the middle of a birth simulation and complaining after a single day of pregnancy reach millions of views¹⁰. Nonetheless, even as there is a greater understanding of bias and its influence in medicine, the medical field itself continues to normalize and disregard a greater portion of women’s pain compared to men.

Conclusion

The IASP’s 2020 definition of pain states that it is a subjective, unpleasant experience that is influenced by many factors and should not rely on verbal explanation for validation. One of its six keynotes is the statement that a person’s report on pain ought to be respected. The issue is that the current culture and history of our nation has limited that respect and empathy and replaced it with doubt and disbelief, causing

⁸ (Davis, 1833)

⁹ (Holowka, 2021)

¹⁰ Habersberger, K., Fulmer, N., Kornfeld, Z., & Lee Yang, E., [Try Guys]. (2015, May). *The Try Guys Try Labor Pain Simulation* [Video]. YouTube. <https://youtu.be/b81Cr97ANrk>

elongated suffering and preventing recovery. This is especially prominent in minorities, especially in women of color. “Women are half as likely to be treated for a heart attack as men and twice as likely to die six months after discharge; over half of women who are eventually diagnosed with an autoimmune disease will be told they are hypochondriacs or have a mental illness” (Jackson, 2021). One out of five women report that they have felt that a healthcare provider has ignored or dismissed their symptoms (Paulsen, 2020).

In “the Atlantic”, Joe Fassler recalls a trip to the ER, where his wife had an overgrown ovarian cyst and had been spasming from the pain, and the nurses had told her it was just a bit of pain and told her not to cry when they asked for some painkillers during her CT scan. The doctor had diagnosed her with kidney stones without ever checking the results. She was only rushed into surgery after Joe flagged a young woman down and asked her for results. The psychic pain from the trauma would give her nightmares even after the surgery. My friend was left undiagnosed for the past three years despite vomiting multiple days a week because the doctors chalked it up to anxiety, despite her insistence that it was no such thing. Last week, she was finally diagnosed with GERD and Celiac disease. She refuses to go to the doctor without being accompanied by someone else because she says they take it more seriously when she does. In contemporary society, the culture and history of Western countries has caused a significantly greater dismissal of women’s pain compared to men’s pain by medical practitioners. This propels a detrimental and outdated viewpoint that increases human suffering and ends lives unnecessarily, compromising the ideals of improved life that underlie medicine. This is true across the medical field but is highly prominent with endometriosis and leaves its effects in psychiatry.

CHAPTER TWO

On the Historical and Cultural Influence of Hysteria on the Dismissal of Women's Pain of Anxiety

During this chapter, I reintroduce the definition of pain from a psychological perspective before discussing the current expectations of a “normal” woman's behavior across cultures. I then move on to connect pieces of history where such ideologies of enduring women and masochistic expectations may have emerged with specific case studies. The psychological and physical effects of the expectations will be presented and linked to the previous case studies. The history of hysteria and the traces of its influence on current cases further argue the effects that expectations have had on experiences of pain. This section will discuss the dismissal and the underdiagnosis of physical pain as emotional distress, and the physical consequences of the emotional pain caused by such dismissal. This will be concluded by addressing the contradiction between physical and psychological pain caused by the failure to examine pain and illness holistically. The physician's diagnosis is affected by more than just the symptoms. Culture and history continue to disadvantage and injure the minorities in a field whose original goal was to end suffering and pain.

Revisiting Definitions of Psychological Pain

The previous chapter explored several definitions of pain. Pain itself is officially defined by the IASP as an “unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage”- a definition that fully acknowledges pain as emotional, a personal experience, and the

possible absence of physical damage. Psychic pain, or emotional/psychological pain is pain with a psychological origin, rather than a physical one. It activates the same affective system in the nervous system that the experience of nociceptive pain does and is largely acknowledged by the heartbroken and traumatized but is often ignored and bypassed by the IASP and most researchers.

It has already been noted that nociceptive pain is caused by physical damage and psychic pain is caused by psychological damage. Additionally, psychological damage can cause physical damage, causing further pain. This creates complexity for identifying the origin of a person's pain. One may go to the doctor for stomach pain and be diagnosed with irritable bowel syndrome (IBS) because of an overly sensitive colon¹¹ or because of severe stress¹². A woman could go to the doctor with

severe menstrual cramps and be told that she was over-exaggerating her pain, only to find that she had endometriosis. To properly end a patient's pain, one must be able to identify its root. Both kinds of pain are in fact, pain, so getting the correct treatment requires a heightened sense of all the definitions of pain and their relationship with one another.

Effects of Social and Cultural Ideologies on Behavior, Experience, and Expression

The experience of pain as well as the expression of that pain is proven to be largely influenced by the expectations and ideologies of the culture and society¹³. This then brings into question the social and cultural expectations for women's behavior that currently influence perception, expression, and treatment. What is normative behavior for

¹¹ (Phililips, 2020

¹² Nagoski, E., & Nagoski, A. (2020). Burnout: The secret to unlocking the stress cycle. Ballantine Books.

¹³ (Miller, 2019 (Peacock & Patel, 2008), (Sharma, Abbott, & Jensen, 2018)

the female gender and why? How does that differ based on a culture or social status? Where have our beliefs come from, and how are they influencing the quality of life now? These are the questions that will be investigated here with an examination of women's history to further the understanding of some influences on pain and investigate the legitimacy of the biases that affect the disparity in treatment between genders.

As we have mentioned numerous times, pain is an experience, and its perception is largely influenced by multiple factors that are neurologically separate from the sensation of nociceptive damage. This includes cultural and social aspects. Cultures and their social influences especially build an individual's experience as they often determine one's cognition, emotion, and motivation¹⁴. Simply put, the influence that culture has on pain is a case of the influence the environment has on the individual. One example of this can be taken from studies done on the influence of gender expectations of the perception of pain.

Gender is a social construct that "includes norms, behaviors, and roles" associated with being a woman, man, or nonbinary, and "produces inequalities" that "intersect with other social and economic inequalities" (World Health Organization, 2021). Gender-related expectations about pain perception influence pain responses¹⁵. In one study, participants who scored high on masculinity showed higher pain tolerance while participants who scored high on femininity showed higher pain sensitivity, regardless of their actual gender¹⁶. In another study, women showed lower pain threshold and tolerance compared to men. However, when the participants were both informed that the typical

¹⁴ (Markus & Kitayama, 1991)

¹⁵ (Bartley & Fillingim, 2013)

¹⁶ (Wise, Price, Myers, Robinson, & Heft, 2002)

person of their gender lasted a certain amount of time before the task, there were no longer any differences between men and women regarding pain threshold, tolerance, and pain ratings¹⁷. These experiments prove that pain perception itself is influenced by social expectations.

Social dynamics, the behavior of groups stemming from interactions of individual group members¹⁸, influence people's perceptions and can therefore affect both the physician's and the patient's trust of each other's reports. In a sociological report, the treatment of medically unexplained symptoms was different depending on the patient's ethnicity, and the physician's specialty, among other things.¹⁹ Another study states that in this society, people are valued more or less based on social characteristics such as age, skin color, ethnicity, education, social class, status, occupation, and accomplishments.²⁰ A clear example of this is in the "perception of mistrust" from the African American community due to previous experiences with the healthcare system²¹, as well as the calculated 13.1% of African American women experiencing discrimination and unfair judgement in healthcare settings (Urban, 2021). Another example is the experiences of women who have had their reports of pain dismissed as anxiety. These cases are somewhat complicated due to a history of hysterical diagnoses as well as the frequent confusion of panic attacks as heart attacks²² but the accumulated social dynamic results in distrust from both the physicians and the patient. The influence of the social dynamic between genders, the lack of studies done including both genders in the topic, as well as

¹⁷ (Alabas et al., 2012)

¹⁸ Merriam-Webster. (n.d.). Social dynamics. In *Merriam-Webster.com dictionary*. Retrieved December 4, 2021, from <https://www.merriam-webster.com/dictionary/social%20dynamics>

¹⁹ (Hill, 2016)

²⁰ (Glaser & Strauss, 1964)

²¹ (Kennedy, Mathis, & Woods, 2007)

²² (McCann, 2021)

the failure of doctors to recognize women's symptoms of heart attacks, finds that women are seven times more likely to be misdiagnosed and discharged in the middle of a heart attack (Nabel, 2000). The physician was more likely to dismiss the patient or view them in a negative less willing to believe the patient's reports and the patient is less willing to vocalize and advocate for their own suffering, causing further disparity in treatment of pain²³.

Hysteria: The Overdiagnosis of Mental Illness and Underdiagnosis of Physical Pain

The effect that social and cultural perspectives had on pain can be seen in the large number of misdiagnoses women have had, with doctors frequently attributing women's pain to a mental illness, rather than a physiological one. Hysteria, also known as neurasthenia or hyperesthesia, is one of the most dramatic examples of the influence of social and cultural cues on behavior and medicine. While it is no longer considered a real mental disorder and is instead considered behavior that can originate from severe distress or a deprivation of mental stimulation²⁴ and is excluded from the DSM-5²⁵, hysteria was a formally studied psychological disorder that the American Psychiatric Association listed as a valid diagnosis. Symptoms of hysteria included hysterical loss of voice or hysterical screaming, laughing, coughing, crying, as well as fits and fainting²⁶.

Hysteria was first "accurately described" in the second millennium BC in Egypt, where the cause of hysterical disorders was associated with "spontaneous uterus movement within the female body"(Tasca, et al., 2012). In many treatises from the

²³ (Reid, 2017), (Suttie, 2013), (Green, et al., 2003)

²⁴ (Teoh & Yeoh, 1973)

²⁵ (North, 2015)

²⁶ (Janet, 1907)

medieval times, including one by Arnaldus of Villa Nova (1240-1311), who was considered the best physician in medieval Europe, women were often not described as "patients" to be cured. Instead, they were viewed as the "cause " of a human disease the physicians defined as “the madness of love” due to an “unfulfilled sexual desire”. The blame and disdain for women escalated further as in *Summa Theologica*, St. Thomas Aquinas asserted that “the woman is a failed man” and brought up the idea of women as “defective creatures”. This belief men had in the influences of the uterus, the idea that women’s nature itself was the problem, carried through even in the 1800s, after neurology was established. According to Greek mythology, the experience of hysteria was at the base of the birth of psychiatry²⁷.

This history of viewing women as the cause of disease or ill due to their very existence as a female is reflected in medical tendencies to attribute women’s pain as fictional. Countless women recount experiences where doctors told them that their experiences were “made-up” and “all in their head”, something that appears in greater likelihood when they have a chronic autoimmune disease²⁸ such as systematic lupus erythematosus²⁹ or myasthenia gravis³⁰. Chronic illnesses and pain, which is mostly classified as nociplastic pain, is found to be 70% in the female sex and yet 80% of chronic pain studies as of 2017 were done on the male sex and is less likely to be treated seriously by physicians³¹. For example, a study on patients who had a coronary artery bypass graft surgery found that women were around 50% less likely to be prescribed

²⁷ (Tasca et al., 2012)/

²⁸ (Brown et al., 2021)

²⁹ (Cleghorn, 2021)

³⁰(AANEM, 2004) (Wet, 2021)

³¹(Brown et al., 2021), (Tsang et al., 2008), (İlhan et al., 2019) (Unruh, 1996), (Leresche, 2011)

painkillers after their surgery despite going through the exact same procedure (Calderone, 1990).

In Harvard Health Publishing, one author expresses “weariness and frustration” at a piece in the New York Times that went viral for discussing one gentleman’s experience with chronic pain and a diagnosis, as well his solution, which was that his pain was a “malfunction in perception” that should not be “dwelled on” and that one should not “try to fix” (Roberts, 2017). The neurophysiology of pain, discussed previously, finds pain to be a more complex process with the inclusion of nociception, neural inflammation, the nociceptor’s ability to learn and remember pain, and the pain matrix. A major reason why the Harvard author found the entire article frustrating was that when the man disclosed his pain to his employer, it was “taken with the utmost seriousness”. He was offered leave to find treatment even though he had no definitive diagnosis, which she shared was a stark contrast to the experiences of herself and many other women with chronic pain, as she and her peers had “pain often abruptly dismissed as psychological” as a “physical manifestation of stress, anxiety, or depression” (Kiesel, 2017). Her frustration over pain being dismissed as something to be ignored, reflects how even in modern times, physical pain is dismissed as psychological pain and reflects the disbelief she and others have experienced from the healthcare field.

The dismissal of pain as psychological rather than physical gained further development with the development of Sigmund Freud’s psychoanalysis³², which was influenced strongly by a hysteria endemic that affected Western countries in the 1800s, as well as the development of neuroscience³³. The entrance of the brain caused physicians to

³² Freud, S., & Breuer, J. (1974). *Studies on Hysteria*. Penguin.

³³ (Moore, 2021)

pit the reproductive system against the nervous system. The physicians believed that each system represented a mental state and the two fought against each other with the desire to rule over the other³⁴. The nervous system oversaw logic, and the reproductive system oversaw emotion. Men were encouraged to empower their nervous system while women were encouraged to reduce brain use and instead "allow" their reproductive system to lead³⁵. On top of this, Sigmund Freud's theories of psychoanalysis proposed that the basis of hysteria was that women were naturally mentally ill³⁶, a conjecture that ended up gathering incredible influence and shaped teachings even in the 1900s and created much of the implicit biases contained in the medical field to treat women's pain as psychological rather than physical.

In a case study presented to the Medical Society of Liverpool by physician Dr. John Rutter in 1808, a woman was diagnosed with "hysteralgia" (caused by hysteria), which was defined as "an exquisitely painful" disease with no inflammation in the area of pain, and no change of structure (Davis, 1833). The patient examined was a woman who had a miscarriage and found a hard lump in her pelvis a year later. She complained of intense pain which she associated with her uterus, and the lump grew large enough to rise out of the pelvis and "appeared to the touch to be about the size of a child's head" (Rutter, 1808). Nine years later, the swelling burst internally, discharging brown fluid that later appeared purulent over several weeks, and the patient came down with a fever. She additionally had shortness of breath, hot flashes, weakness, fainting, pain in the back, and arrhythmia. Fourteen years later, she continued to feel the pain and palpitations of the

³⁴ (Tasca et al., 2012)

³⁵ (Vertinsky, 1987), (Mosedale, 1978)

³⁶(Pouba et al., 2006.)

heart, and later had hemiplegia. When she passed away, she asked for inspection of her body, and the physician found that the cecum was completely distended, the labia had gangrene, and a tumor the size of an egg in the right hypogastrium. The uterus was connected to the large intestine with “considerable force” and when opened, had a cyst that extended into the left side of the rectum. Her bladder was thicker than normal, and the internal membrane had a rough surface “as if corrugated”. The ovaria and fallopian tubes appeared normal. In response to this lengthy breakdown, the physician’s conclusion was that “no derangement in the structure of the organ was sufficient to account” for the patient’s pain. His diagnosis was that “the symptom was hysterical” as the “flutter and agitation which accompanied the pain” and other symptoms “increased with the increase of pain and declined when the pain declined”, which made it “probable” that they were all one affection, and the doctor concluded that with the previously mentioned symptoms, “that affection was hysteria” (Rutter, 1808).

This case study is a clear example of how biased the medical field was against proper investigation and explanation of women’s pain. Despite the patient having a protrusion the size of a child’s head, a tumor the size of an egg, a cyst, the fusion of the uterus and large intestine, and heart palpitations, among other things, the physician’s ending conclusion was that the patient’s symptoms and reactions to pain (which included weakness, agitation, and fainting), were from mental illness rather than from any of the physiological issues discovered in the patient³⁷.

Although hysteria fell from popularity with the growth of Freud’s psychoanalysis, and his theory that women are born mentally ill, women were still considered “naturally

³⁷(APA, 2011)

mentally ill” even in the 1900s³⁸. The difference was that instead of hysteria, women were being diagnosed with anxiety³⁹ or depression⁴⁰. The field of Psychology taught that women were “hysterics, malingerers, child-like yet manipulative, either cold or smothering as mothers, and driven to excess by their hormones. Institutions taught that mothers-not fathers, genetic predisposition, accidents, and/or poverty- caused neurosis and psychosis” (Chesler, 1972). Psychotherapist and writer Phyllis Chesler recalls that during her clinical internship in the 1950s and 1960s, she and others were taught to diagnostically pathologize what may be normal responses to trauma. For example, they were informed that the normal woman (and human) response to sexual violence was a psychiatric illness. Assault victims’ reports of psychic pain were an attempt to receive attention or to enact revenge, rather than a reaction of trauma. In the late 1900s, clinicians were still being taught that women “suffer from penis envy⁴¹”, are “morally inferior to men” (which once again circles back to beliefs stemming from medieval beliefs and a history of witchcraft and the Augustine belief that men were wholly superior), and are “innately masochistic, dependent, passive, heterosexual, and monogamous” (Chesler, 1972). There is a visible continuation of the medieval attitude of blaming women as the cause of pain and illness as well as the 17th century belief that women were driven by their hormones and emotions rather than reason or logic. This restricts women’s access towards the expression of and treatment of pain, as their experiences were reduced to imagination or dramatization.

³⁸ (Tasca et al., 2012)

³⁹ (Abrams, 2012), (Freckelton, 2018), (Jones et al., 2012)

⁴⁰(APA, 2011), (Monica Ramirez Basco et al., 2008)

⁴¹ (Torsti, 1994), (Nathan, 1981)

The history of hysteria partially covers and explains the influences behind physicians' dismissal of women's pain. Despite being part of the late nineteenth and early twentieth century, the doctors largely mimicked the actions and beliefs of medieval Europe and ancient Western civilizations- actions that were based on fears, and religion, and beliefs that were based on myths, proofless theories, and over-enlarged egos. They failed to properly investigate and understand the origins of the issue and based their perception, treatment, and explanations from cultural beliefs that were made up by other men without proper, unbiased evidence thousands of years ago⁴². The contemporary culture and dynamic of society's effects were disregarded by physicians and experts even as the culture and social dynamics were consistently enforced and propelled into extremes by them^{43,44}. There were overdiagnosis of "crazy" based on personal opinions and underdiagnosis and dismissal of symptoms based on personal bias⁴⁵. Women are 2.48 times more likely than men to be diagnosed with depression or anxiety (prevalence ratio (PR)=1.86; 95% confidence interval (CI) 1.40–2.47) (Bacigalupe, 2020). This led to the loss of the original purpose of medicine. Due to its insistence on building upon stigma and bias rather than examining issues holistically, the field of "healthcare" instead became the disease it originally sought to relieve. It has caused undue mental and physical pain to women, and other minorities, because people have chosen oversight and dismissal of symptoms influenced by culture and social views, rather than holistic and thorough examination, research, and evidence⁴⁶.

⁴² (Fauvel, 2014)

⁴³ (Liang et al., 2016)

⁴⁴ (Fadus et al., 2020)

⁴⁵(Mosedale, 1978), (Moran, 2014), (Verbanas, 2019), (Kulkarni, 2017)

⁴⁶ (Martin et al., 2021), (Ball, 2013)

Presenting a Case Study: Heart Disease as Anxiety

The overdiagnosis of hysteria and other mental illnesses at any turn means that there is instead an underdiagnosis of physical illness and a lower level of trust in the patient's reports of pain⁴⁷. Women have generally been considered untrustworthy by Western societies since Ancient Greece, and even more so after the witch hunts of medieval Europe⁴⁸. There, they were labelled as generally lesser than man and full of weakness and sin. Then, into the nineteenth century, women were labelled by physicians as generally always mentally ill. Even when hysteria was debated, its conclusion, influenced by Freund, was that the woman is mentally sick. Add on the fact that women were pictured as less intelligent yet somehow sly enough to possibly make fools out of physicians and doctors, and the implicit bias against women's reports is much more tangible and explainable. A case study on heart disease in women dismissed as anxiety will be examined here to compare and emphasize the tendencies of healthcare to dismiss women's physical pain as psychic pain and the consequences of these actions.

Heart attacks are one of the leading causes of death for women, even when they are under the age of 55 (CDC, 2017). *Circulation*, the American Heart Association journal, has reported that 1 in 8 women under the age of 55 are unclassified by the universal definition of a myocardial infarction (a heart attack) (Spatz, 2015). Other research taken from 103 participating U.S. hospitals, in comparison with men, women were more likely to perceive symptoms of an acute myocardial infarction (AMI) as stress/anxiety (20.9% versus 11.8%, $P < 0.001$) (Lichtman, et al., 2018). Around 30% of women would seek medical care for similar symptoms before hospitalization but over

⁴⁷ (Vanderminden & Esala, 2019)

⁴⁸ (Tasca et al., 2012)

half of women (53%) report that their providers did not think their symptoms were heart related (Lichtman, et al., 2018). Both women and their providers are more likely to attribute experienced chest pain and other symptoms to anxiety or stress rather than an AMI. For an organ necessary for survival, like the heart, this mistake often ends up being fatal.

Researchers have found that in a study with over 3,000 patients, a third of which were female, female patients had significantly higher hospital mortality than male patients, (228 or 21% vs. 202 or 9%, $p < 0.05$) and a significantly higher total AMI mortality (23.7% vs. 15.7%, $p < 0.05$). Female patients more often died in hospital, 84% (230) than out of hospital 16% (43). While men more frequently died from ventricular fibrillation (22% vs. 10%, $p < 0.05$), women died more frequently of heart failure, cardiogenic shock, and myocardial rupture (33% vs. 15% $p < 0.05$), showing a difference in symptoms between genders.

The Heart and Stroke Foundation, a charity dedicated to the “advocacy, education, and the funding of research surrounding heart disease and stroke” (Heart and Stroke Foundation, 2016), publishes the stories of people who have struggled with heart diseases. One covers a 52-year-old registered nurse named Karen Narraway. When Narraway was running on a treadmill for a stress test at the cardiologist, the technician had to stop her midway, as she was experiencing tachycardia and shortness of breath. After the cardiologist reviewed the test results, she told Narraway that her heart appeared strong and healthy, and the doctor linked her fast heart rate to anxiety. Narraway’s family doctor referred her to the cardiologist and several other specialists for the symptoms she

was experiencing, including the racing heart as well as pain in her left arm. The specialists diagnosed Narraway with menopause, arthritis and carpal tunnel and anxiety.

Narraway returned home until she experienced severe chest pain over several months, which became so bad she took a trip to the emergency room. The verdict was the same: anxiety. Narraway was skeptical about the diagnosis as “the only thing I was anxious about was the chest pain I was having.” and instead expected that she was experiencing angina, but she believed the doctors and returned home. Later on, her chest pain grew even more severe, and she performed another stress test. After seeing her results, the doctor immediately sent her to the hospital, where further testing found six major blockages in her she now keeps in check with proper medication and exercise. arteries. Narraway had quadruple bypass surgery and ended up being diagnosed with angina, which

Narraway’s story is not uncommon⁴⁹. There are many other stories of female patients that visit the doctor with a cardiovascular disease but end up being diagnosed with anxiety or other mental disorders, some of which do not survive⁵⁰. One study has found that cardiovascular diseases kill a higher percentage of women (55%) than men (43%) (Peterson, 2005).

Conclusion: The Issue Cause by a Failure to View Cases Holistically

The history of hysteria covers in part and explains the influences behind physicians’ dismissal of women’s pain in both the past and in contemporary situations. This disparity and dismissal of pain and treatment is apparent in all minorities and

⁴⁹ (Mikhail, 2005)

⁵⁰(Kennedy et al., 2007), (Ferry et al., 2019), (Keteepe-Arachi & Sharma, 2017)

influenced by numerous cultures but was covered mainly in women because it is the focus of this thesis. Through this chapter, we have found that the reasons behind physician biases are opinion and myth based. They are heavily influenced by culture and social values, regardless of rationality or truth, and cause the questioning of women's reports of pain, symptoms, and suffering.

Despite a lack of reason and unbiased investigation, the belief of madness carried through to the famous Hippocrates and then to medieval Europe, where the belief of women as inferior, sinful, and beings who ought to be punished rather than treated developed extensively. The 1800s took those beliefs and altered them to fit in a more contemporary setting, but still maintained the belief that women were always sick as men were always healthy, and this continued even a few centuries ago. This gave rise to the overdiagnosis of any symptoms as psychological rather than physiological and further extended the dismissal of women's pain due to an association with mental illnesses rather than biological function.

The hysteria epidemic further created disruptions in the relationship between female patients and male physicians as a failure to cure the disease led physicians to irrationally question the disease's authenticity, leading to an increased distrust of the patient, a dismissal of their symptoms, crueler methods of treatment and an expectation of obedience rather than a description of the patient's actual symptoms. This then led to a further increase in biased overdiagnosis of mental illness, with an increased targeting of active women, by physicians who were allowing culture and social values interfere with any semblance of truth and duty towards the injured left. They failed to holistically investigate and understand the origins of the issue and based their perception, treatment,

and explanations off of beliefs based in culture and social values. This then has resulted in undue mental and physical pain to women.

Physicians' decisions to choose oversight and dismissal of symptoms influenced by culture and social views, rather than holistic and thorough examination, research, and evidence has allowed distress and anger in people such as anyone with Morgellons Disease to prolong their suffering, increased damage caused by misdiagnosis and medication, and as will be discussed in the following chapter, allowed serious tissue damage that further threatens the lives of patients and adds on psychological damage as well.

CHAPTER THREE

Tracing Historical Influences on Case Studies of Physical Pain Dismissal with a Focus on Endometriosis

This chapter discusses how nociceptive pain dismissal causes increased severity of the physical pain and creates psychic pain which furthers the physiological damage with a focus on endometriosis and heart disease. Overall, it is focusing on the physical damage done by pain dismissal. It discusses the history of the masochist stereotype as well as the lack of understanding of the female body. There will be a presentation on the case studies and tracing historical influences mentioned previously.

The previous chapter discussed the idea of women's nociceptive/neuropathic/nociplastic pain being dismissed as psychic pain despite a physiological basis for the reports of pain, and how there is a need for further investigation on reports before a diagnosis of mental illness. This was discussed in the context of the history of hysteria and how this historical/ cultural/ social influence may have led to this dismissal of pain in contemporary settings such as heart disease or other less investigated illnesses. In this chapter, I will discuss the case of the dismissal of women's nociceptive pain as less painful than the individual reports in the context of a history of expectations for women to sacrifice their wellbeing for others. Previously, pain was discussed to be dismissed as entirely false or attributed to the mental delusions of women; women's pain is dismissed to be psychic pain. This chapter discusses women's pain as acknowledged nociceptive pain but dismissed as less than the woman explains it to be. A key example of this dismissal of women's nociceptive pain as lesser than reported by the patient is endometriosis.

The History of Endometriosis

As mentioned in the first chapter, endometriosis is a complicated disease where the endometrium (a tissue that normally lines the uterine cavity) grows in abnormal locations, causing nodules and lesions, irritating those organs, and causing extensive pain⁵¹. Patients with endometriosis experience various types of severe pain. They experience nociceptive pain as well as other atypical symptoms such as “acyclic lower abdominal pain, radiating pain, non-specific bladder and intestinal complaints” or cyclical complaints such as “severe dysmenorrhea, cyclical lower abdominal pain, dyspareunia, dysuria and dyschezia” (Mechsner, 2021).

Although it is disconcertingly painful enough to simply have tissue growing in locations it should not be in, there is another reason why pain is so severe for endometriosis patients. Endometriotic lesions can develop their own nerve supply, thereby creating a direct and two-way interaction between lesions and the CNS⁵². This causes additional nociplastic pain with central sensitization⁵³ and produces differences in each individual’s pain which can continue independent of the condition.

The condition is in fact associated with the “hysteria family of disorders”, but the term “endometriosis” was first accurately described by the medical field with surgeon Thomas Cullen in 1920 (Nezhat, 2011). One strange myth that is still propelled by physicians on the treatment of endometriosis is the assertion that pregnancy is an effective treatment for endometriosis. Even in 2016, a gynecologist was referenced stating that “pregnancy itself is an effective ‘treatment’ for endometriosis” (Laidler,

⁵¹ (Peiris et al., 2018)

⁵²(Stratton & Berkley, 2011)

⁵³ (Mechsner, 2021)

2017). This article covered the story of a fourteen year old girl with endometriosis and suggested that the second-best method to treat endometriosis was for her to “become pregnant” (Laidler, 2017). This is not a proper treatment for endometriosis⁵⁴ according to the European Society of Human Reproduction and Embryology’s international guidelines (Dunselman et al., pg 2, 2013).

The three types of endometrioses currently identified by the medical field are peritoneal endometriosis, recto-vaginal endometriosis, and ovarian endometrioma and are differentiated by location and depth of the tissue growth⁵⁵. Endometriosis affects 10% of the female population yet has an average universal diagnosis length of 7.5 years (Bullo, 2019). Physicians do not know what causes endometriosis and can only diagnose endometriosis by performing laparoscopy, a surgical procedure⁵⁶. Endometriosis is hard to diagnose without surgery because painful and heavy menstruation cycles are common to women, and the abnormal tissue growth is only visible internally⁵⁷. No technologies that can detect endometriosis otherwise have been developed, and every individual’s experience of endometriosis can vary⁷⁴. The symptoms of endometriosis can be summarized as intense pain severe enough to affect one’s ability to function, as well as infertility.

The difficult disease is further hindered in diagnosis by a difficulty in expressing and describing pain, an issue mentioned previously in chapter one. One endometriosis patient and author, Abby Norman, expresses this issue when she states that after experiencing a sudden stabbing pain, she went to an emergency room, where she was

⁵⁴ (Metzger & Haney, 1989)

⁵⁵ (Kho et al., 2018)

⁵⁶(Farquhar, 2007; Giudice, 2010; Metzger & Haney, 1989)

⁵⁷ (Kho et al., 2018)

“handed the typical 1-10 pain scorecard” (Epstein, 2018). Her pain had receded but was still too severe for her to dismiss. She questioned whether she was a six or higher and whether the doctor would “believe her anyhow” (Epstein, 2018). When she reported pain during sexual intercourse to multiple doctors, it was ignored until she was accompanied by her boyfriend, who expressed his concerns (Epstein, 2018).

Overall, communicating pain and receiving proper diagnosis of endometriosis is hindered by the difficulty of defining each individual’s pain across a majority. This is further hindered in this specific condition due to bias influenced by the views society and medicine have had on women throughout history, causing further delay in treatment and extending the pain that patients will experience. With the inclusion of nociplastic pain and central sensitization, pain can form and grow in severity when left untreated, and with a condition like endometriosis, which takes an average of seven years to diagnose, the effects are permanently damaging⁵⁸.

This treatment of women’s responses as an issue of being female is one covered partially in the previous chapter’s overview of the history of hysteria. It is a belief that stems from ancient and medieval Europe’s patriarchal culture and their belief in the inferior and therefore sinful and naturally ill woman. The field of Psychology developed to diagnose women as normally mentally ill in opposition to the mentally healthy. That, however, is not the only aspect of history that reflects the culture of dismissing women’s pain as invisible. Among other reasons, women’s pain tends to be dismissed, even personally, due to the expectations of sacrifice in relationships and motherhood, a major social mission that women have been given⁵⁹. The following section will discuss how the

⁵⁸ (Vercellini et al., 2007)

⁵⁹ (*Motherhood - an Overview* | *ScienceDirect Topics*, n.d.)

past gender norms and social expectations for women dismissed their needs and implied instead that they should always be happy as the mother. This created a dissonance where women were considered overly emotional but were expected to be always stable and happy. This dissonance then allowed women's pain to be considered overdramatized and less painful than the patient believed- a concept that negates the definition of pain itself.

History: On the Expectations of Women Influenced by Motherhood

In the late nineteenth century mothers increasingly began to refer to healthcare practitioners for advice on childcare⁶⁰. During this time, doctors believed that the diseases of women, including hysteria, were because they were breaking away from “normal natural functions”- which was, according to them, the roles of women as mothers and wives⁶¹. Adrienne Rich, one of the most widely read and influential poets and essayists of the latter half of the 20th century⁶², defined motherhood as an “institution” that is “defined and restricted by patriarchy” and required that women should assume the “major burden of pain and self-denial for the furtherance of the species” (Rich, 1976). This expectation that women should deny themselves and their own pain- that they should not be suffering and should instead be loving was reflected in media, such as with the mother in the famous *Little Women* or in a speech by the United States President, Theodore Roosevelt to the National Congress of Mothers, stating that “the woman who, whether from cowardice, from selfishness, from having a false and vacuous idea shirks her duty as wife and mother, earns the right to our contempt, just as does the man who fears to do his duty in battle when the country calls him” (Roosevelt,

⁶⁰ (Apple, 2006)

⁶¹ Duby, G., & Perrot, M. (1991). *History of Women in the West from the Renaissance to Modern*.

⁶² (*Adrienne Rich | Modern American Poetry*, n.d.)

1905). As even the president of the United States was declaring women's duty to be a wife and a mother, society's expectations of women's roles is very apparent.

One woman, who worked, had five children, and a miscarriage, recounts how she did not want her "precarious" husband to "hear a cry of pain" from her, and how, since "travail pain cannot always be stifled", she would seek help from the doctor by receiving a "sleeping draught" any time she felt contractions or "pangs of childbirth" (Women's Cooperative Guild, 1915). Another woman who had seven children and two miscarriages writes that she couldn't express all the "sufferings during the time of motherhood" and thought "like hundreds of women do today" that it was "only natural" and "you had to bear it" (Women's Cooperative Guild, 1915). These accounts of pain in relation to motherhood are from the 20th century and reflect the mentality that the public had on women's relationship with pain- which was to bear it in silence.

In the 1930s and 1940s, Yale's American psychologist and pediatrician (famous in the field of child development), Arnold Gesell, developed a theory that the mother was needed to give the child an instinctual love, termed "mothering", developed (Gesell, 1934). Gesell described motherhood as a "natural aptitude" (Gesell, 1934). He also claimed was "supremely endowed" as an "almost unique emotional equipment" in the women of the "colored race" (Gesell, 1934). This incorrect viewpoint of people due to their race and gender not only affected social views in motherhood but also influenced and affected the treatment of these social minorities. This viewpoint of women of color as special due to a so-called instinct, emphasizes again the contrast between the intelligent and logical white male, discussed previously, with the emotional and instinct-driven woman of color. This twisted perception can be seen in healthcare and research during

this time with the famous Tuskegee Syphilis Study⁶³ as well as other experiments where medical practitioners believed that African Americans experienced less pain and had thicker skin compared to Europeans⁶⁴. Female African American slaves were experimented on without anesthesia out of the theory that they felt no pain⁶⁵. The experimentation without consideration of pain extended also to women in general, although to a lesser extent. In 1951, research on pain intensity was done on pregnant women by inducing additional pain during labor. Every time the woman had a contraction, the researchers would burn her hand with a machine and ask how the pain of the two experiences compared.⁶⁶ The lack of regard towards the actual participants of research shows the extent of the bias in research and medicine as well as the consequences of the bias visible in society and in science.

The emphasis that men in the field had on maternal performance ended up leading society back into the belief that women's actions were motivated by instinct and emotion, as it had in the 1800s when Neuroscience was developing as a field and should therefore avoid education and thought⁶⁷. This idea was also largely influenced of Sigmund Freud's theorized stage of penis envy, which claimed that girls would realize their gender when they realize they are lacking the genitals of their male counterparts⁶⁸. According to psychoanalysts, women could only be proper mothers when they had a "biological regression" into a "childlike" state (Anthony and Bendeck, 1846), which would allow the woman to accept her "long-resented castration" and "submit without envy to her

⁶³ (CDC, 2021)

⁶⁴ (Sabin & Greenwald, 2012), (Mende-Siedlecki et al., n.d.),

⁶⁵(Holland, 2017.), (Editors, 2012), (Bourke, 2014)

⁶⁶(Javert & Hardy, 1951)

⁶⁷(Eisenmann, n.d.), (Jordan, 1991)

⁶⁸ (Nathan, 1981)

husband's love", "pleasing him with a gift that is part of him" (Heiman,, 1965). This perception of mothers and women as naturally immature and childlike, also allows the perception of the more dramatic yet unintelligent and less trustworthy gender, causing a distrust of their reports regardless of their personal experience and understanding⁶⁹.

Although it applied at first to the woman's reports on her children⁷⁰, it is seen influencing every word and perception of women, which naturally ends up influencing the outsider's view of their pain as well. When one combines the implications of the expectation for women to endure pain in silence as well as a distrust in women's reports and intelligence, we find that pain is further able to be dismissed in women as they themselves are less willing to report pain, and their reports of pain are dismissed. There is no room for the individual's suffering because the gender's roles and the expectations that have been assigned to it cause the person's experiences to be dismissed.

First, there was the development of the idea that women were these all-loving, pure creatures who only sought to delight in the joy of others, especially their children, and therefore naturally were fulfilled and happy doing even the most menial tasks like changing diapers. There was then the slow shift towards the women who caused sickness in their children by attending to personal needs, failing to be always available for others regardless of personal pain or weariness. The contrast between society's expectations and their perception of reality created a greater disparity that induced guilt in women for attending to their own needs, and further propelled the concept that their pain was in fact lesser than they believed it to be and was instead exaggerated by themselves. The

⁶⁹ (De Lattes & Wainerman, 1986)

⁷⁰(Hewson & Bennett, 1987), (Bennett, 1985),

pervading influence of these societal beliefs still influence people's perception of women's pain today, exemplified in the case of Alex Roach.

Presenting A Case Study Reflecting Pain Dismissal Due to Expectations Discussed

Alex Roach said her problems started when her periods started at age 13, with abnormally painful cramps. She was told by numerous doctors that she "was a woman, and that was what happened and it's painful for some people," (BBC, 2018). Though her family consulted gynecologists, there was never a proper diagnosis on what was causing the pain, which was severe enough to interfere with school attendance and activities. Nonetheless, the patient was repeatedly told that her pain was normal regardless of her own reports, creating a sense of guilt and self-doubt regarding her own experiences. Alex Roach ended up hiring a private lab test, which found that while her pain was being normalized and she was treated as exaggerating her pain to avoid school, half of her left side of her organs had fused together because of the scarring and adhesion, and she had numerous cysts and internal bleeding. Her pain recurred later, and despite having her diagnosis, she still had five general practitioners inform her that "there was no underlying physical cause", with one physician even suggesting that if she could not handle the pain, she should get pregnant, a false belief, as discussed previously (BBC, 2018). Later, another private lab discovered the large cyst causing her recurrent pain, and had it removed.

Alex Roach is a classic example of a patient with endometriosis⁷¹. She experienced abnormally intense pain but upon reporting the pain, was told that the pain was normal and that her reaction was exaggerated. Some women will vomit and pass out

⁷¹(Boseley et al., 2015), (Nunez-Badinez et al., 2021)

from the extent of the pain and still be told that they are being dramatic and that their pain was not as bad as they thought⁷². Later, despite a clear diagnosis and a history of surgery, Roach was again told by multiple medical practitioners that there was no physical evidence for her pain. Her pain was first reduced and then was disqualified from being nociceptive pain, instead being classified as psychic pain, despite her own reports and the evidence backing her claims. During the time before diagnosis, she suffered a large amount of doubt toward herself and consistently struggled with the idea that she was overexaggerating her pain and being dramatic, unnecessarily being a burden to the people around her- a concept that we find carried among women throughout society, influenced by ideas centered around motherhood.

Another endometriosis patient, Paralympic swimmer Monique Murphy was flying to the 2016 Paralympics, when she experienced a flare-up of endometriosis and went to her team doctor (Lofthouse, 2021). She thought she had food poisoning and recalls that her heart rate was above 200 beats per minute when she warmed up in training. She states that when she informed the doctor of her pain, the doctor instead linked her pain to a previous accident unrelated to stomach pain and left (Lofthouse, 2021). After consultations with 14 doctors, Murphy finally had a laparoscopy to check for endometriosis. She recalls waking up from her surgery and thinking, 'I really hope they've found something because then I'm not crazy,'" (Lofthouse, 2021). She recalls trying to see how many cuts there were on her stomach after the surgery, showing the level of self-doubt that had been installed in her with the influence of the healthcare field (Lofthouse, 2021).

⁷² (Murphy, 2015)

Murphy's experience with her first doctor, who told her that her illness was somehow linked to her amputated leg before walking away, mirrors the dismissal that women experienced when they expressed their own pain and difficulties⁷³, as a normal process that is supposedly beneficial to the person regardless of the individual's experiences. Her relief upon finishing her surgery and finding that she had endometriosis contains implications of her previous worries, her self-doubting mindset, and the influence of the dismissal of 14 doctors on her own pain. It is a common experience of patients with endometriosis⁷⁴ and exemplifies the severity of gender bias and the actual physiological consequences of undiagnosed and untreated medical conditions. Despite having nociceptive pain, patients find that their pain is dismissed as normal and something that should be endured, as shown in the past two cases, in addition to being dismissed as psychic, as discussed in chapter two⁷⁵. It limits and delays treatment, and in endometriosis, that dismissal and a lack of a diagnosis goes on for years, causing permanent damage in nerves to increase pain sensitivity and duration⁷⁶.

Altogether, these two case studies showcase the experiences that women with endometriosis go through, a condition that is hard to diagnose due to a difficulty in expression of pain, the dismissal of pain as exaggerated and dramatized, the expectation for women to consistently swallow and dismiss their own pain, and the incorrect assumptions of the treatment of endometriosis, which are also influenced by social beliefs, create the elongated suffering and increase pain over an average of seven years.

⁷³ ("Endometriosis," 2017)

⁷⁴(Dirks, 2020), (Stoner, 2018),

⁷⁵ (Cole et al., 2020)

⁷⁶ (Cole et al., 2020), (Dusenbery, 2018)

Social and Cultural Expectations of Normative Women's Behavior

Pain endurance is necessary for a normal life. If one were to collapse over every scrape and bruise, it would hinder them from continuing in their life and goals prior to each injury and eventually lead to the detriment of their survival⁷⁷. Both women and men are expected to endure pain. We are familiar with the idea that when a parent consoles a fallen child with sympathetic croons, the child is much more likely to burst into tears. When a child is told that they are okay and are briskly helped back up, they will pat themselves off and resume playing⁷⁸. However, stereotypes affect pain⁷⁹. The reasons behind the expectations are different between genders, causing the methods of pain endurance and the underlying effects to be different, which then contributes to a greater dismissal of women's pain⁸⁰.

When men are expected to endure pain, it is mainly to exhibit strength over weakness. The terms associated with masculinity are "endurance, dominance, independence, and instrumentality, which presuppose the presence of a healthy body"⁸¹. Often in literature and media, men enduring pain are portrayed in the image of a soldier who valiantly fights despite his wounds⁸². The pain is acknowledged as still fully there, supported by the nurse, and one is simply putting up a front to prove their bravery and fortitude. The wounds and pain are visible, but the man marches on despite it for a

⁷⁷ (Price & Dussor, 2014)

⁷⁸(Claar et al., 2008),

⁷⁹(Schwarz et al., 2019), (Robinson & Wise, 2004), (Mogil, 2012).

⁸⁰(*Gender and Women's Mental Health*, n.d.) , (Defrin et al., 2009), (Alabas et al., 2012),

⁸¹ (Burgess and Borgida, 1999; Connell, 1995, 2002; Deaux and Kite, 1993, Bernardes et al., 2008); (Bernardes et al., 2008)

⁸² (Wacquant, 1998)

glorious purpose because he is brave⁸³. In essence, pain endurance in men is based around the concept of strength.

When women are expected to endure pain, it is mainly to avoid inconveniencing others, and as discussed in chapter two, is also influenced by the view of women as emotional and overdramatic⁸⁴. The terms associated with femininity include “being affectionate, expressive, dependent, concerned with others’ needs and an object of desire”⁸⁵. The pain is to be hidden away from view and nonexistent because it would become a hindrance from the duties of support and service expected. The idea of a woman enduring pain brings up the image of a nurse who is solely focused on the pain of others⁸⁶ or of the previously mentioned sacrificing mother and wife who smiles for and at the child and father. The wounds and pain are to be normal and therefore invisible, and the woman is to be happy because from an outer perspective, there is no pain, and any pain mentioned is in fact, psychic and overexaggerated⁸⁷.

As quoted in “*Burnout*” by Dr. Emily Nagoski, who has a PhD in Health Behavior, the moral obligations expected for most women cross-culturally are still to be “at all times Pretty, Happy, Calm, Generous, and Attentive to the Need of Others” and “if they fail, they deserve to be punished” (Nagoski, 2019). Contemporary society still treats women’s responses as if women themselves are a problem⁸⁸. When women express anger, they experience shame and guilt⁸⁹. When women experience pain, there is sometimes an internalization of the fact that something is wrong as some action that the

⁸³ (Samulowitz et al., 2018)

⁸⁴ (Samulowitz et al., 2018)

⁸⁵ (e.g., Burgess and Borgida, 1999; Deaux and Kite, 1993)

⁸⁶ (Spence, 1984)

⁸⁷ (e.g., Burgess and Borgida, 1999; Deaux and Kite, 1993)

⁸⁸ (Spence, 1984)

⁸⁹ (Bernardes et al., 2008; Sciences, 2017)

individual has done wrong (Nagoski, 2019). As if the fact that there is a malfunction in the kidney is because she wishes for attention or has sinned and hasn't been good enough, rather than because of an infection. Pain, to women, is something one expects to live with for their entire life⁹⁰. There is an expectation for women to hide their pain, to hide their discomfort, and to hide their stress; they are to make the pain invisible as if there was no pain from the start⁹¹. This applies further with endometriosis because their pain is normalized and dismissed for years during their adolescent period⁹². They are told that the excruciating pain is normal and something to be lived with for their entire lives so they should get used to it⁹³.

Research has found that patients with endometriosis can often be diagnosed IBS⁹⁴, mentioned previously and largely associated with anxiety, ovarian cysts, or a “psychosexual problem”⁹⁵ (due to painful intercourse) before they are diagnosed for endometriosis⁹⁶, meaning that doctors believe that having a psychological problem with sexual intercourse is a more common illness than endometriosis, which affects around 10% of women in the reproductive-age group, and 30% to 50% of patients with infertility and/or pain (Rogers et. al, 2009).

In summary, endometriosis is a complicated condition seen in one out of every ten women that involves both chronic nociplastic pain and nociceptive pain. Despite requiring detailed handling for proper diagnosis, it is frequently misdiagnosed, sometimes even as a psychological disease, reflecting the issues mentioned in the previous chapter,

⁹⁰ (Levine, 2013)

⁹¹ (Smith, 2008), (*Here's Why Women Are More Likely to Have Chronic Pain*, 2019)

⁹² (Clarke & Bennett, 2013)

⁹³ (Hoffmann & Tarzian, 2001)

⁹⁴ (Johnston et al., 2015)

⁹⁵ (*Psychosexual Dysfunction* | *UVA Health*, n.d.), (Narang et al., 2016)

⁹⁶(Mackenzie & Royce, n.d.), (Farquhar, 2007)

and patients of this condition are dismissed as dramatizing and exaggerating their reports of pain. This development was explored as a development from the social expectation that women should live for others, with an emphasis on motherhood, which contains the core belief of self-sacrifice, and are therefore expected to restrain and hide any pain or suffering as it would interfere. This results in a condition that goes undiagnosed for an average of seven years and causes an increased severity of pain during its misdiagnosis, as well as mental distress from consistent disbelief and dismissal of pain from physicians, with patients repeatedly reporting relief that they were not crazy. This once again reflects the issue that gender bias causes in the treatment of pain, but in greater depth with a single condition. As will be discussed in the following chapter, this dismissal of women's pain simply because of their gender, should be prevented as it goes against the purpose of healthcare rather than furthering it. The pain dismissal that occurs in endometriosis shows that there is a proper need to take a more holistic approach to diagnosis and belief in pain reports.

Chapter Four

Using the Understanding of the Origination of Pain Dismissal to Create Plans for Improvement in the System

Summary of Previous Three Chapters: The Problem.

In the previous chapter, chapter three, I discuss pain in endometriosis, the difficulties of diagnosis, and the social expectations that existed for women, with a focus on the influence caused by motherhood, and how those expectations translated into a dismissal of women's pain as natural, exaggerated and therefore unworthy of attention. Due to the concept of motherhood as a mission and duty, women's needs were placed as a hindrance to the scheme of the upbringing of humanity's future, and any expression of stress or anger was marked as the reason for human's behavioral issues, creating the guilt and disapproval of women's reports of suffering. This treatment of women's nociceptive and neuropathic pain as reduced or normal compared to the patient's reports was explored in cases of endometriosis and how this further complicates the diagnosis of the disease. The cases showed how the delay in treatment and diagnosis exacerbated and prolonged the pain, causing abnormally fused organs and further lesions in the body.

In chapter two, I find the need for a broader consideration of the factors that affect pain to include social and cultural differences, with comparisons of Western and Eastern cultures. We explored the effects of cultural beliefs in hysteria and the psychoanalyst's movement that diagnosed women as "naturally mentally ill", which pushes the healthcare field to dismiss women's reports of disease more readily without investigation as a mental illness. We discuss this in the case of one of the most common medical issues in women: heart attacks. Women are often told that their myocardial infarctions are actually

anxiety, and that their experiences of pain are “all in their head” despite detection of tachycardia and abnormal EKGs. The further harm this lack of treatment and stress causes was also discussed in this chapter.

Chapter one defines pain in its various forms, in discussion across the medical field, with an explanation on why it is so hard to define pain and equalize it across every person- because pain is subjective, and humans are limited by our own vocabulary. I cover the differences between nociceptive, neuropathic, nociplastic, and psychic pain, as well as the overall definition of pain as established by the IASP. I also establish that women’s pain is dismissed in healthcare to the detriment of their health, with studies finding that over 90% of women who suffer from chronic pain report experiencing some dismissal by medical professionals, and an average 16 minute longer wait times for women in the emergency department.

Reviewing the cultural and social effects that history has had on gender biases in pain, whether psychological or physiological, shows the flaws this causes in treatment in the medical system, hindering the health of patients rather than assisting them.

The Consequences: Pain, Sensitization and Stress

Outside of the obviously negative effect that dismissing pain may have on the body, such as deteriorating health, organ failure, internal bleeding, or death, there are two other major effects that pain dismissal has on the human body. The first one is the development of sensitization, which causes hyperalgesia (which literally refers to a heightened sense of pain), neuropathic pain, defined previously as pain from damage or disease to the somatosensory system, with pain projections into “innervation territory” (Treede, 2017), and nociplastic pain, which comes from nociceptive signaling pathways

changing despite having no actual evidence of tissue damage or lesion/disease of the somatosensory system. The second effect is the effect of stress caused by the dismissal on the human body. These are part of the multidimensional influence of pain in a concept referred to as the neuromatrix theory of pain.

The neuromatrix theory of pain proposes that pain is a multidimensional experience that integrates multiple inputs, including cognitive, somatosensory, and affective-motivational information, which is produced by "neurosignature patterns of nerve impulses" generated by a vast neural network referred to as the "body-self neuromatrix" in the brain (Melzack, 1999). This theory states that the neurosignature patterns can be triggered by sensory inputs, which would create nociceptive pain, but also be generated independently, accounting for nociplastic and neuroplastic pain, among others. The multiple inputs are integrated to generate pain reception in all three sections, as well as the reaction to the pain and the stress-regulation response (Moseley, 2003). Both stress and central sensitization are considered here as additional consequences of pain dismissal because they cause and amplify chronic pain- which is often referred to as either neuropathic pain or nociplastic pain.

Sensitization, which the IASP defines as an "increased responsiveness of nociceptive neurons to their normal input, and/or recruitment of a response to normally subthreshold inputs", causes an uptake in a person's pain perception (IASP, 2017). Essentially, experiencing constant nociceptive pain will increase the amount of pain detected by increasing the membrane excitability and synaptic efficacy of the neurons and circuits in the nociceptive pathways mentioned previously. Additionally, the constant stimulation will end up rewiring the brain to continue to experience pain even when there

is no longer any tissue damage, prolonging an individual's perception of pain to last longer, if not permanently. Central sensitization is caused by changes in the properties of neurons in the central nervous system, which stops the pain from being coupled to noxious stimuli the way acute nociceptive pain is, and instead "causes pain hypersensitivity by changing the sensory response elicited by normal inputs" to translate as harmful to the person (Latremoliere and Woolf, 2009).

Continuously high levels of stress will amplify sensitization. In addition, it will increase S-I g A levels and make people more susceptible to disease, increases fatigue and reduces memory retention, increases the likelihood of hypertension, strokes, coronary heart diseases, cancer, cause ulcers, back pain, Temporomandibular (TMJ) Syndrome, and headaches, precipitate arthritic attacks, among other consequences detrimental to one's health (Greensburg, 2020). While stress itself is unavoidable and sometimes necessary for survival, the stress caused by consistent rejection of one's own experiences as well as the stress from illness creates chronic stress, which causes the negative side effects mentioned above.

In summary, pain is further enhanced and extended by neglect and dismissal of a patient's experience, creating further harm to the person and undermining the purpose of healthcare. Addressing pain requires an awareness of the multitude of factors that contribute to it and how the disregard of an aspect may result in subpar treatment of it.

Contemporary Solutions Currently Implicated by the Healthcare Field

The medical field has already acknowledged the effects of gender biases, among other biases such as racial bias or bias against the LGBTQ community, in healthcare. The National Institute of Medicine has noted that bias, stereotypes, and prejudice play an

important role in the disparities in the field, with one of their solutions being to hire more medical professionals from the underrepresented communities (Institute of Medicine, 2004). A large part of their attempt to lessen bias in the healthcare system is through the education of younger generations of physicians. Medical schools present cases of patients and clinical narratives to students with their age, presumed gender, and race, making automatic associations that help them, for example, remember that “a black child with bone pain may have sickle-cell disease or a white child with recurrent respiratory infections may have cystic fibrosis”, which “may be based on true prevalence rates” but may not apply to the individual patient (Marcelin, 2019). Stereotypes “inadvertently” have a great role in medical education because of this but using them in this way leads to “premature closure and missed diagnoses, when clinicians fail to see their patients as more than their perceived demographic characteristics” (Marcelin, 2019).

There are seven strategies, as presented by the Oxford Journal of Infectious Disease, that may reduce the bias seen in healthcare. They include an organization’s leadership commitment to culture change and meaningful diversity training, an individual’s self-reflection on personal biases as well as active efforts to counter stereotypes. Other strategies included increasing diverse experiences, cultural humility and curiosity, and mentorship and sponsorships of discriminated minorities, which qualitative studies of URM physician perspectives find are often more isolated and less mentored, which they attribute to a lack of mentors from similar backgrounds as well as discordant relationships (Marcelin, 2019).

The American Association of Medical Colleges (AAMC), The Kirwan Institute for the Study of Race and Ethnicity, and the American Academy of Family Physicians

(AAFP) provide implicit bias training guides and resources (AAMC, 2020). The guides discuss the existence of implicit bias as a “function of power and privilege, as well as behavior strategies for developing allies” which included giving examples of proper responses in response to others’ concerns. For example, an AAMC training on bystander intervention gave a hour long PowerPoint lecture where they would state that when someone expressed their concern such as stating that they feel disrespected by the way someone speaks down to them, to avoid telling them to get over it because that is normal and to instead express understanding and offer support with statements such as “That’s upsetting, how can I be supportive in those moments?” (Nakae, 2019).

Numerous medical schools, including John Hopkins medical school, Duke, University of Minnesota, NYU, and Mayo Clinic medical school, among many others, implement a form of implicit bias training in the first year of medical school (Hoffman, 2016). John Hopkins implemented a new 3-year anti-bias program in 2020 that aims to address the numerous kinds of bias that affect healthcare. Another resource often utilized by medical schools is the Implicit Association Test (IAT), first created online in 1998 by Dr. Tony Greenwald (University of Washington), Dr. Mahzarin Banaji (Harvard University), and Dr. Brian Nosek (University of Virginia). It is still available through Harvard University and is easily accessible online. Students and faculty take the test to check their biases, most frequently in racial preferences, and results have consistently found a preference for white men over African Americans (Greenwald, 1998). Some states, including California and Michigan, have even passed laws since 2019 that mandate anti-bias training in medical schools. The trainings are similar to the previous example in that they generally present some research and evidence for the influence of

inherent biases and their effect in healthcare before providing examples of acceptable and unacceptable dialogue.

While these trainings are easy to implement, their efficiency is largely debated. Research conducted by the NYPD on the efficacy of implicit bias training on their policemen found that while officers would express more awareness and a willingness to change after their training, a breakdown of their actions, specifically on the ethnic disparities among the people that are arrested and interact with the officers found no meaningful change (Kaste, 2020). Nevertheless, researchers, higher-ups, and experts recommend continued training, and have no thoughts in changing the ‘implicit bias training’ (Kaste, 2020). Students who have taken the IAT report that the implicit bias session was “eye-opening” and allows further conversation on topics such as “gender, race, sexual orientation, weight, etc.” which are commonly considered difficult topics otherwise (Reddy, 2020).

Solutions: Arguing the Need for More Logic Over Empathy

It is not that doctors are too logical or too unemotional, requiring a better bedside manner that will allow patients to feel more “heard” and therefore satisfied with their experience, but rather the complete opposite. Physicians are not being as investigative and logical as they should be, allowing their own opinions and beliefs to override and dismiss the reports and evidence presented by patients, and becoming a hindrance to the actual medical care of the patient’s wellbeing, instead causing further unnecessary damage. This is not about how doctors should comfort women in pain, consoling their “feelings”, but rather about how there is a need to logically confront and investigate reports of pain from a broad perspective that removes gender bias and allows for proper

investigation of the body and mind to reduce suffering, illness, and disease (Peabody, 1927). It means a prevention of pre-emptive conclusions of anxiety and depression as the common cause of women's suffering, a greater understanding of the social and cultural influences on one's own opinions, and implementation of less-biased treatment.

To assist with this, I think the best method would be to still include classroom training that includes testimony of severe case studies and extensive bystander intervention, as knowledge is vital for understanding, but also to incorporate direct applications of training and exposure to different minority and majority groups through required weekly diverse group conversations and interactions, something that can perhaps be implemented for physicians during research review meetings or meals/team-building trips. Implementing such groups during research review meetings would mean that there is no detracting from individuals' time and would create more natural and professional environments, reducing any stigmas on intelligence or competency. Holding it during team-building activities or dining would provide a more positive experience and increase the likelihood of positive perception. The trainings should contain information not only for the majority, but also trainings on how minorities can speak up and assert their positions, as they have been found to be passed over and ignored. One example of this is how women in Obama's administration found that it was so hard for women to "exert influence during the president's first term" that they devised a strategy called 'amplification', where if one woman "offered an idea and it wasn't acknowledged, another woman would repeat it and give her colleague credit for suggesting it" (Eilperin, 2016). These sorts of techniques to ensure that minorities' voices are heard should be

incorporated into the trainings to give them the resources they need to also assert themselves rather than simply defending themselves.

Direct consistent exposure and experience is recommended because it has been repeatedly proven to alter internal bias, with research finding that greater exposure to out-groups (which refers to social groups that one does not relate to) is “associated with *lower* explicit bias among majority-group members” (Rae, 2015). One study found that living in West Germany, which has more non-German residents than East Germany, predicted less explicit prejudice among the native Germans (Wagner, Van Dick, Pettigrew, & Christ, 2003). The larger the proportion of non-native residents were, the less negative evaluations from Germans of the non-Germans there were (Wagner, Christ, Pettigrew, Stellmacher, & Wolf, 2006). Another study found that “greater community-level ethnic diversity in the United Kingdom” was “associated with perceptions that ethnic diversity was respected and groups of different backgrounds interacted positively” (Laurence, 2009). However, it is vital that the experiences are positive, as negative experiences can further strengthen bias (Rae, 2015). Therefore, prior knowledge and training is also important before implementing diversity-focused exchanges, and the activities should also be held during other pleasantly associated activities such as dining or trips.

There should also be an increase of hired minorities as suggested in the previously referenced implicit bias training guides so that there would be an elimination of the term minority when addressing entire populations of people who are mistreated due to their appearances and such rather than their potential and capability when given the same level of opportunities as the majority. The application of these methods combined seek to

change the biased culture itself so that it lessens in the face of proper education and knowledge, removing irrational conclusions and opinionated suspicion.

Conclusion

The goal of this thesis is not to label all doctors and healthcare workers as close-minded individuals who are unconsciously bringing harm to minorities, or guilt people for some of the twisted beliefs that still affect minorities today. The goal is to discuss the pain and its perception, and how these opinions are affected by culture and society and have damaged and continued to damage lives, despite some of the preventative measures that have been placed. The healthcare field has tried to center on objective observation and reports to relieve subjective experiences but also to extend and save lives. Bias and stereotypes are things that implemented in human nature. Every person has bias. What the medical field needs to ensure greater improvement of minorities' lives is a move towards the ability to consider more scenarios than the most common one, especially when the bias is influenced by such a nonfactual history and culture. In the face of history, research, and statistical studies, in addition to case studies that exemplify the inappropriate influences, one cannot but acknowledge the issues visible. There is a need for the healthcare system to view illness and pain, in all its forms, from a multifactorial perspective that not only considers the body with all its systems but also with an awareness of the effects of culture, society, and psychology, and the influence these may have both on the patient and on the professional. This implementation is necessary through the education of medical students but also through training of the professionals themselves in both classroom and non-classroom settings to ensure in-depth understanding that will lessen biases through a willingness to consider nuance and the

role of bias in healthcare and the effects that the past beliefs may have on the future health of others.

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