

A Qualitative Study Of Gender Differences On Dimensions Of Pain

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ABSTRACT

The phenomenon of pain contains many different aspects and is often subjective, usually impacted by a range of factors such as psychological (mental illness or disorder), societal aspects (cultural norms) and biological reasoning (e.g. chronic illness). The goal of this qualitative study is to examine and explore the complex relationship between gender and pain. A total sample of 8 participants was used. Thematic analysis posited various themes based on the personal and social dimensions of pain. The findings presented differences in the expression and perception of painful experiences; however, a lower awareness of the presence of gender differences was indicated among participants.

Keywords: Pain, pain perception, gender, gender differences, social dimensions of pain, personal dimensions of pain

1. Introduction

Pain is a complex and subjective sensory and emotional felt by the body. This phenomenon is often associated with its physical characteristics; however, pain and psychology have a profound relationship. The revised International Association for the Study of Pain describes it as the “unpleasant sensory and emotional experience associated with, or resembling that associated with actual or potential tissue damage” (Raja et al., 2020). Critiques and comments arose surrounding the initial definition of pain by the IASP in 1979 due to advancements in the field. Pain is understood to be a subjective experience, which renders it difficult to study and observe (Wideman et al., 2019).

The IASP’s definition of pain specifies an attribution to tissue damage, which calls into question the psychological aspects of pain. Gorczyca et al. (2013) briefly refer to Wall and Melzack’s multidimensional theory of pain, encapsulating psychosocial factors in its description. The authors also outline the psychological nature of pain through its correlation with depression and coping strategies. Furthermore, Vadivelu et al. (2017) highlight this connection. The authors state that chronic pain can increase susceptibility to developing depression, and reports of pain are prevalent among depression patients. There are also neurobiological reasons for the relationship between depression and pain. The authors indicate studies that present how depression can affect areas in the brain responsible for pain processing. Chronic pain can be damaging to an individual’s well-being. Findings by Yildizeli Topcu (2018) posit that the severity of pain significantly impacts psychological well-being.

Due to its subjective nature, pain perception will vary from person to person. The idea that it is unique to each individual can signify possible gender differences in pain perception. Pain can manifest in multiple forms and various intensities and can be influenced by numerous cultural, social and psychological factors. A large pool of research primarily investigates the biology of pain. Hence, other factors must be taken into consideration. Bartley and Fillingim (2013) indicate a higher propensity in women to report pain. However, there is less evidence that suggests a disparity in pain intensity. Another study by Funeka Faith Pandelani et al. (2023) shows that the duration of chronic pain for males lasts from six months to a year, while females experience chronic pain for more than ten years. Past literature also indicates gender disparities in emotional pain. There is a long-standing notion that women are more likely to experience substantial psychological distress (Thoits,

1991). The current study will delve deeper into these distinctions to examine this study, providing a more thorough explanation of this phenomenon.

1.1 Rationale of the Study

There is substantial evidence to validate the sex-related differences in pain perception. The expansive research on the matter provides a comprehensive understanding; nonetheless, some areas need further exploration. Many of the studies concerning the biological reasoning for gender differences indicate hormones to be the dominant factor (e.g. Wiesenfeld-Hallin, 2005). Additional research can aid in broadening this knowledge.

It is essential to understand how gender functions along with pain because this aids us in developing a more in-depth comprehension of its effects on social and personal dimensions. The social dimension of pain completely confines the general societal context in which people manage and experience their pain. Gender expectations and roles can considerably exert influence on how pain is acknowledged, supported and expressed. Cultural norms have twisted the population's views on pain expression. Women are often vocal about their pain (Chi et al. (2020)), but they frequently face patronisation from their peers. On the other hand, men experience humiliation when expressing pain. The extensive androcentricity in the medical field amplifies the importance of further research on pain. Incorporating the female experience can also lead to developments in medical treatments and understanding for women (Merone et al., 2022).

Moreover, most pain research integrates quantitative methodology. Administering a qualitative design can provide detailed material. The nuances of pain make it a complex human experience; therefore, a qualitative study can thoroughly analyse its subjectivity (Webster & Harden, 2013).

1.2 Literature Review

The explanation for most phenomena cannot be a single, one-line answer, but rather, it is the result of the interaction between multiple factors. The purpose of this literature review is to highlight the societal and personal nuances of the complex relationship between gender and pain by synthesising the qualitative research that has been previously conducted.

General Pain Expression

Previous qualitative studies have highlighted the fact that gender plays a huge part in moulding the communication and expression of pain. Research conducted by Chi et al. (2020) stated that social expectations and norms play an instrumental role in gender-specific schemes in the expression of pain, with women being more socialised and more likely to express their pain openly while men, on the other hand, may underemphasize it. As reported by Bartley and Fillingim (2013), women are more likely to report pain than men, however, the severity of pain varies between the two genders.

Biological Differences in Pain

Past literature has stipulated that women experience more pain due to greater sensitivity towards noxious stimuli. Additionally, gonadal hormones and reproductive age can cause lower tolerance to pain (Staikou et al., 2016). This notion echoes throughout past literature. Keogh (2008) stated the correlation between lowered sensitivity and a woman's menstrual cycle, especially during the luteal phase. The author also asserted that these findings were not consistent in women using oral contraception, signifying the importance of sex hormones in the disparities of pain perception. Cortical differences in the processing of pain stimuli may influence this distinction (Bartley & Fillingim, 2013). These studies primarily focus on clinical pain. On the other hand, Lue et al.'s (2018) investigation regarding thermal pain also demonstrates biological reasoning behind the varying pain tolerance and threshold. Apart from sex hormones, muscularity is another factor. The environment is also a constituent. Women and men experience varying degrees of thermal sensitivity due to different temperature preferences. The differences in the bodily regulation of temperature can cause women to be more sensitive to higher or lower temperatures (Zhang & Zhu, 2022).

Psychosocial Factors

In the discussion of pain perception, many may assume it is predominantly physiological. There are also psychosocial factors to consider. The conditioning of gender roles and societal norms within the population has a psychological impact on how pain is perceived. A meta-analysis by Smitherman and Ward (2011) underlines this factor and its relevance to headaches. A study conducted by Jackson et al. (2005) thoroughly investigates the social support networks of people in pain, the results revealing that women might be more predisposed to pursue emotional support, while men might usually not. According to 'News-Medical', men are also less likely to seek help when struggling with mental health issues, often preferring to deal with it by themselves. On the contrary, a study by Bedrov and Gable, (2022) states that women are prone to seeking while also providing social support to each other. These findings showcase and emphasise to us the significance of understanding gender-related social dynamics. Additionally, there is also a high propensity in women to catastrophize pain (Bartley & Fillingim, 2013).

Cultural Differences in Pain

Research covering diverse cultures reveals variability and differences in the way gender impacts painful experiences. In a cross-cultural study conducted by Johnson et al (2012), it was observed that culture usually does not play a part in pain expression but, instead, gender roles play a fundamental part. However, research conducted by Defrin et al, (2009) compared the difference in pain perception among Americans and Israelites. The results found that Israelites had a masculinized grasp on pain than Americans. This research is important for healthcare givers to avoid any unconscious biases. Moreover, cultural constructs of handling pain can largely influence pain perception; Expectations of men to tolerate pain are commonplace in society. Women also experience unique painful conditions such as an imbalance of hormones leading to a plethora of medical problems (i.e. PCOS, endometriosis, migraines etc.), menstruation and childbirth.

Coping Mechanisms

Learning to cope with pain, whether physical or emotional, is also subjugated to gender roles and influences. Keogh et al. (2002) stated women, often, gravitate towards strategies that focus more on emotions, whereas men lean more towards approaches that are problem-focused and adaptive. Strategies like reinterpreting pain sensations lead to improved chronic pain functioning (El-Shormilisy et al., 2015). This indicates the need for more personalised intercessions that weigh both gender-specific coping mechanisms to help with managing pain.

Healthcare Gender Inequality and Bias

A study done by Dueñas et al. (2016) showed us that people who suffer from chronic pain face disruption in their daily lives while also experiencing a lower quality of life. These disruptions also impact their family and social environment, causing them to be stuck in a recurrent cycle. Thus, a repeating theme in the research is the occurrence of gender inequality in healthcare practice, concerning pain. Research carried out by Miller et al. (2016) highlights occasions in which gender bias took place while in pain treatment and evaluation, wherein women were more likely to be dismissed for experiencing pain.

1.3 Aims of Research

This study aims to further explore these questions:

- How do both genders experience and communicate about their painful experiences?
- How does gender impact the personal and social aspects of pain?

2. Methodology

2.1 Research Design

The research was designed using a qualitative approach. The qualitative research method was chosen because it “aims which are directed at providing an in-depth and interpreted understanding of the social world of research participants by learning about their social and material circumstances, their experiences, perspectives, and histories;” (Moriarty, J., 2011) All the data that was collected from this research has been analysed and observed thoroughly by the researcher.

A semi-structured interview was conducted in this research since this style of interview produces more detailed and informative data. A semi-structured interview is a form of interview in which some questions are planned while some are not planned. It gives the interviewer the flexibility to further enhance their understanding through observation of the participant (Adeoye-Olatunde et al., 2021). It also gives the participant the ability to further clarify and unfold their opinions or experiences.

2.2 Participants

Based on the aim of the study, an equal sample of males ($N = 4$) and females ($N = 4$) were used to carry out this investigation with a total number of 8 participants. Equal samples were gathered to mitigate bias. The participants were gathered through a combination of convenience and purposive sampling. Both are forms of non-probability sampling; convenience sampling gathers participants through convenience, while purposive sampling chooses individuals who fit the target requirements (Galloway, 2005). All participants were university students and of the young adult age range, as a novel meta-analysis by Murray et al. (2021) identified young adults susceptible to chronic pain.

2.2 Data Collection

Ethical Considerations

Ethical considerations were detailed in a consent form given to the participants before each interview. It ensured that informed consent was gathered from each participant. The consent form outlined the information about the purpose of the study, the retention of anonymity and confidentiality, and the ability to withdraw from participating. It was circulated via Google Forms.

Data Collection

Interviews were done online, through Google Meets, and offline, face-to-face. All interviews were recorded and transcribed verbatim. The interviews followed an unstructured format with ten questions; four were compulsory, and six were chosen from twelve. Follow-up questions were also asked based on the participants' answers. The interviews were conducted according to each participant's comfort and ease. They were all asked a similar set of open and close-ended questions to increase reliability. The researcher made sure to use clear and concise language, devoid of heavy jargon, to let the participants feel a sense of ease and confidence while answering the questions.

2.3 Data Analysis

The researcher collected all the relevant data and analysed, assessed, meticulously examined, transcribed, coded and themed. The researcher accomplished this by identifying patterns in the interviews and methodically categorising, compartmentalising and grouping each transcription and code. The researcher further classifies the collected data into sub-themes and themes. The data was reevaluated, revised and ultimately established.

3. Results

3.1 Personal Dimension of Pain

The personal dimension of pain explores how the participants discuss and perceive their painful experiences. Underneath this dimension, two themes were ascertained. These themes were physical pain and emotional pain.

3.1.1 Physical Pain

When asked about their painful experiences, most participants refer to or mention physical pain (i.e. injuries, illnesses).

A male participant disclosed an experience of lingering physical pain:

"I have nights where I've almost killed myself from scratching, bleeding, crying for help. I've had instances where I have to tie myself up just to alleviate the pain. I've cried myself to sleep knowing that there was no point in stopping it."

(Participant 5)

A male and female participant also shared misfortunes concerning injuries:

"I once fell in a river in the Philippines. It was filled with trash and sharp objects, and I got a cut, I think, on my leg..."

(Participant 1)

"The first time I got a fracture was in grade 1. I fractured my left-hand pink, I think?"

(Participant 3)

3.1.2 Emotional Pain

Four participants primarily discussed painful experiences in terms of emotional pain or psychological distress:

"There was the time of losing my friend group and having to choose between two different friend groups because the other one ended up bullying the others. That was hard for me, and I also ended up getting bullied by those people."

(Participant 2)

"A lot of them have to be family-based for sure. But in terms of things that have definitely helped with the growth of my personality and my character, it would be a lot coming from high school, revolving around friend groups. Things like that. Making friends with the wrong type of people or people who use my trust and turn against me, those sorts of things."

(Participant 3)

"First thing that comes to mind is a heartbreak that I experienced; I think around this time last year..."

(Participant 4)

"It was when my cat, who we've had for eight years since birth, passed away..."

(Participant 6)

All participants show an experience with personal loss, ranging from friends to heartbreak and death.

Descriptors	Codes	Sub-Themes	Themes
<i>"I once fell in a river in the Philippines. It was filled with trash and sharp objects and I got a cut I think on my leg, falling onto it but I feel like it hurt more mentally."</i>	Misfortunes	Traumatic Experiences	Physical Pain
<i>I get random cuts in my hand and body. So, physically it did hurt and emotionally it did affect me more."</i>	Lingering pain		

<i>"It was when my cat, who we've had for eight years since birth, passed away. I think for two whole days I stayed in bed"</i>	Grief	Personal Loss	Emotional Pain
<i>"Time of losing my friend group and having to choose between two different friend groups because the other one ended up bullying the others."</i>	Sacrifice		

Figure 1

3.2 Social Dimension of Pain

The social dimension of pain dives into the participant's acknowledgement of gender stereotypes and gender-related differences in the perception of pain. With this, social constructs and gender differences were identified as themes.

3.2.1 Social Constructs

Some participants were aware of gender constructs in pain perception. A female participant expresses the inclination to look to female friends for comfort:

"That's why when I rant or want advice, I mostly go to my girlfriends because I know they'll understand me more and then guys are brutally honest. They don't sugar-coat things..."

(Participant 2)

A male participant also recognises social constructs when dealing with emotional distress:

"...I also tried to hold back my tears in front of my mom. Maybe it's because I'm a guy and I did not want to make it worse. I also saw how my dad was reacting, so I was trying to follow him."

(Participant 6)

However, others showed no awareness:

"No, not really. I believe that people go through a lot of different experiences. So, I don't really judge by gender."

(Participant 8)

3.2.2 Gender Differences

Relating to gender differences, some participants are aware of possible gender differences in pain perception. Nonetheless, they cite other factors as probable causes for these differences. A male participant indicated that personality is the reason for the disparity in his pain perception:

"...I feel like my way of dealing with that pain stemmed more from my personality rather than people telling me what to do."

(Participant 1)

Two females and a male participant expressed that upbringing instigates gender differences:

"...they are way more considerate of my feelings compared to when they talk to my brother."

(Participant 2)

"Their parents are usually the ones making them feel worse about it."

(Participant 4)

"...because people around me would say "Boys don't cry", "Boys are not allowed to cry", or "You should bear it". So, if I was a guy, it would be so much different."

(Participant 8)

Lastly, another believes it stems from personal experience:

"...They both have different ideas on it and I'd like to take it from what they're thinking..."

(Participant 6)

Descriptors	Codes	Sub Themes	Theme
<i>"...Most of my guy friends that I've made don't really have that emotional connection with their emotions...girls, they're more on the sensitive, emotional type so it's easier for them to understand..."</i>	Dealing of Emotions	Cultural Influences	Social Constructs
<i>"...Men genuinely or don't know how to care. In reality, there are some it just so happens we are part of a whole that really messes up people's opinions and perceptions of pain."</i>	Societal expectations	Media and Pop culture	
<i>"Depending on the person it does play a huge role, especially with the societal norms that a man should not feel or disclose their pain to others."</i>		Trauma	Gender Differences
<i>"...They both have different ideas on it and I'd like to take it from what they're thinking."</i>	Experiences		

<p>“...Because people around me would say “Boys don’t cry”...So if I was a guy, it would be so much different.”</p>	<p>Generational upbringing</p>	<p>Changing Norms</p>	
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Figure 2

4. Discussion

In line with the research aim, the qualitative analysis stipulated nuanced insights about the pain expression and perception of male and female participants through the social and personal dimensions of pain.

Two themes were deduced within the personal dimension of pain. Upon hearing the word “pain”, most male participants detail physical injuries or illnesses as their most painful experience. This is verified by the notion that men are more susceptible to physical pain and high-risk behaviours (Chou et al., 2022; Grueter et al., 2023). However, female participants offered descriptive accounts of emotional distress in the discussion of painful experiences. They also indicated coping strategies such as isolation and internalisation, corroborating El-Shormilisy et al.’s (2015) study. Nonetheless, all participants were relatively comfortable communicating their experiences, contradicting cultural norms.

The social dimension of pain demonstrated the influence of societal constructs and gender differences in pain perception. Participants illustrated awareness of gender constructs. Participant 2 exemplified a difference in the reaction of male friends when disclosing a painful event, which can be characterised by deficit emotional intelligence in males (Fischer et al., 2018). Society is often unforgiving of pain expression among men (Pool et al., 2007), hence the lower sensitivity when discussing a painful event. Notwithstanding these findings, most male participants have not experienced stigma surrounding their experiences.

Surprisingly, participants do not consider gender differences to affect variations in pain perception.

Brooks and Bolzendahl (2004) note a change in the attitudes of the United States public towards gender roles. All respondents are young adults in *Generation Z*; therefore, their unawareness of gender differences could be attributed to the shifting environment of the new generation. Participants 1, 5, 6 and 8 show no knowledge or belief about gender stereotypes or constructs.

4.1 Comparison to Previous Literature

A study conducted by Ginsberg et al., (2000), shows that female infants express more facial expressions of pain than male infants. The findings of this research do allude to the fact that this behaviour is carried well into adulthood. This study found no significant difference in the expression of pain between males and females but instead found a difference in what type of pain each gender chooses to discuss. According to Chi et al, (2020) women were more vocal about their pain, whether emotional or physical, whereas men were not. The coping mechanisms, admittedly, were vastly different, showing us that while the expression towards pain may be similar, the response is not and this is proved by a study conducted by Pieretti et al., (2016) in which he states that men and women respond differently to pain. However, this study was unable to prove a difference in the expression of pain and the seeking out of emotional support in both genders.

4.2 Limitations of Research

There are numerous limitations to this research. Firstly, the sample size was not large and sufficient to make the findings and the results of it generalizable. Secondly, the participants might have been susceptible to demand characteristics, often replying with what they believed the researcher would want to hear or omitting crucial details they did not wish to share. Thirdly, a qualitative research method was employed which means that while analysing the results, the perception and analysis of the researchers might be skewed and might have led towards unreliable results. (Libarkin et al., 2018). There is also the question of the cultural and age variations in pain perception due to limited diversity in ethnicity and age range. The results might have looked different if elderly citizens, with chronic illnesses and a different mindset towards gender roles than the current generation, were chosen as participants.

4.3 Recommendation for Improvement

The recommendation for the researchers is to increase their sample size, adding more diverse ethnicities and age groups to create more generalisable results. The researchers should build trust and put the participants at ease to reduce the chance of demand characteristics. Lastly, the recommendation for the researchers would be to peer review their findings to avoid unconscious biases and discrepancies in the analysis.

5. Conclusion

In conclusion, this study's findings exemplify the distinctions between genders in the expression and perception of physical and emotional pain. It presented the unique accounts of each individual. Although the results ultimately keep with previous literature, it has also offered a novel view of pain perception, which spans beyond the influence of genders. This study also recognises the role of other contributors to the disparities in pain among men and women. In hindsight, it is difficult to pin these differences on a singular factor, as pain's subjective and idiosyncratic nature is enigmatic.

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