

## ASSESSING THE RELATIONSHIP BETWEEN CULTURAL BELIEFS AND PAIN EXPRESSION IN POSTOPERATIVE PATIENTS: A MIXED-METHOD STUDY AT SGTH

Muhammad Zahid<sup>\*1</sup>, Iqdar Ali<sup>2</sup>, Inayat Ullah<sup>3</sup>, Dr. Muhammad Anwar<sup>4</sup>, Dr. Shah Hussain<sup>5</sup>

<sup>1,3</sup>BSN, Nursing officer, Saidu Teaching Hospital, Saidu Sharif, Swat

<sup>2</sup>MSN, Assistant Professor/Principal Rabbani Institute of Health Sciences Swat.

<sup>4</sup>PhD, MSN, Principal/ Assistant Professor, Medtec College of Nursing, KPK.

<sup>5</sup>PhD, MSN, Principal/ Assistant Professor, Zalan College of Nursing, Swat.

<sup>\*1</sup>zahidsahilzahid56@gmail.com

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Corresponding Author: \*

Muhammad Zahid

### Abstract

**Background:** Pain is a subjective experience shaped not only by physiological factors but also by sociocultural influences. Cultural beliefs significantly affect how patients perceive, express, and manage pain, especially in postoperative settings. In culturally diverse populations, healthcare providers often face challenges in interpreting pain behaviors, leading to inadequate pain assessment and treatment.

**Aim:** This study aimed to examine the relationship between cultural beliefs and pain expression among postoperative patients admitted at Saidu Group of Teaching Hospitals (SGTH).

**Methods:** A mixed-method design was employed, incorporating both quantitative and qualitative approaches. The quantitative phase used a descriptive cross-sectional design with purposive sampling of 100 adult postoperative patients. Data were collected using a structured questionnaire assessing demographics, cultural beliefs, and pain expression. SPSS version 27 was used for statistical analysis, including chi-square and Pearson correlation tests. The qualitative phase involved semi-structured interviews with 10 patients, analyzed using thematic analysis to explore deeper cultural perspectives on pain.

**Results:** Statistically significant associations were found between cultural beliefs and pain expression patterns ( $p < 0.05$ ). Patients who believed in silent endurance of pain showed minimal or no expression, and those with strong traditional healing beliefs were less likely to request painkillers. Qualitative findings revealed key themes such as stoicism, religious framing of pain, gender expectations, traditional remedies, and communication barriers.

**Conclusion:** Cultural beliefs deeply influence postoperative pain expression. Integrating cultural competence in pain assessment and management can improve patient outcomes and satisfaction in surgical care

### INTRODUCTION

The intricate interplay between the cultural beliefs and the expression of pain is something that needs

to be understood in postsurgical treatment (Yelton & Jildeh, 2023). Cultural beliefs are communal

values, norms, practices and perceptions which affect attitudes and behaviors (Touseef, et al., 2023). Expression of pain refers to verbal or non-verbal expression of pain, such as facial expressions, gestures, vocalizations, and behavior. Such responses are physiological responses but also influenced by sociocultural conditioning. The manner in which patients verbalize pain in a clinical environment and especially after blood surgical procedures, can play a pivotal role in determining pain measurement and the success of medical measures taken by medical officers (Kuei, et al., 2024).

Misinterpretation or underreporting of pain among postoperative patients has become an alarming problem, particularly in healthcare facilities that cater to multicultural patients. Multiple papers have shown that in most surgical patients around the world, up to 50 % report moderate or severe pain within the first 48 hours after the operation (Pirie, et al., 2022). Nevertheless, cultural pressure or assumptions guide many people to underreport or overreport pain, resulting in inconsistent pain treatment. As an example, stoicism in certain cultures might forbid expressing pain in any form or requiring speaking out loud (Mehari, et al., 2022). The variations present a challenge to clinicians who use standardized instruments, which might be unresponsive to culture-related variations in pain reporting (Shillcutt & Shillcutt, 2022).

The expectations of a society can highly determine whether people will feel safer to speak up when they are not okay or rather swallow the pain and stay quiet. Patients in certain Eastern cultures can see pain as a spiritual test or punishments and may not disclose unless probed. Patients with Western cultures, on the other hand, might experience greater liberty to show pain, anticipating to be remedied instantly (Jørgensen & Bøye, 2024). Such culturally influenced attitudes do not simply influence how patients can express their suffering but how they want it to be addressed with direct implications relating to health outcomes and customer satisfaction (Franchino-Olsen et al., 2025).

The management of postoperative pain is a key aspect of the recovery process connected with early mobilization, decreasing complications and minimizing hospital stays. Nevertheless, the inability to properly evaluate pain because of cultural

misinterpretation may hinder the recovery process and diminish the quality of care (Huang et al., 2023). Failure to take into account the culture of a particular patient may result in a nurse or physician misjudging the level of pain, subsequently causing either over-treatment or under-treatment. Therefore, safe and effective postoperative care requires pain assessment practices that are culturally sensitive (Abd El-Rahman, et al., 2023).

The existing pain evaluation systems, like the Visual Analogue Scale (VAS) and the Wong-Baker FACES Pain Rating Scale, are usually applied universally without adaptation. Nonetheless, these instruments might be ineffective in reflecting the pain experience of ethnically diverse patients (Adeboye et al., 2021). Using facial expressions in certain tools may also be a failure, as some patients are culturally programmed to hide their inner moods. Therefore, consideration of culture and integration of cultural insights into pain assessment procedures becomes critical to the delivery of patient-centered care (Limungi, et al., 2021).

Moreover, gender roles, religious aspects, language barriers, and traditional healing systems also determine the perception and expression of pain. The idea is that men in a certain number of cultures might be expected to suffer without an outcry, and women might be more free to articulate distress (Vitale, et al., 2023). Others are rooted in herbal remedies or ritual practices instead of pharmacological treatment resulting in potential refusal or lack of compliance to the designated pain management strategies. This underlines the significance of a culturally sensitive, holistic approach within the clinical situation (Roger et al., 2023).

In the face of the increasing diversity of patient populations globally, the study presented seeks to determine the correlation between cultural beliefs and pain expression among postoperative patients (Barrio-Ruiz et al., 2024). When healthcare professionals recognize which particular culture affects pain-related communication and how it affects patient behavior, they can create culturally competent approaches that help to evaluate and treat pain more efficiently. Its results can be used to enhance patient satisfaction, safety, and recovery outcomes during surgical care

### Methodology

This study used a mixed-method research design to examine the relationship between cultural beliefs and pain expression among postoperative patients in both orthopedic and surgical wards of the Saidu Group of Teaching Hospitals (SGTH) comprehensively. This design incorporated both the quantitative and qualitative information to consider the numerical picture and a better contextual sense.

The quantitative phase utilized a descriptive cross-sectional design. The study population consisted of adult postoperative patients aged 18 years and above, being alert, oriented and capable of communication. Patients who are critically ill and/or have previously diagnosed psychiatric disease or difficulties in communication were excluded. A purposive sampling methodology has been utilized, and participants have been recruited in the span of 4 weeks. The data was collected through a standardized questionnaire with three parts: demographic details, cultural belief items and a scale of pain expression customized to include culturally specific expressions.

Experts evaluated the questionnaire in regard to content validity and pilot tested it with 10 patients to improve clarity and consistency. The quantitative data were entered into SPSS version 27 and analyzed. Descriptive statistics like means, frequencies and percentages were employed, and inferential statistics, chi-square test was conducted to determine the association between cultural beliefs and manner of pain expression. Statistical significance was considered at a p-value less than 0.05.

The qualitative study was intended to delve deep into the views and stories of patients on how cultural

factors influence the perception and manifestation of pain. The subset of 10 participants was purposefully and diversely chosen based on age, gender, ethnicity, and cultural backgrounds to engage in a semi-structured interview. The interviews were audio-recorded with their permission. Each interview lasted approximately 25 to 40 minutes.

Thematic analysis was used to analyze the qualitative data. Audiotapes were transcribed word-for-word and translated into English when needed. Data was coded manually and categorized into sections and emergent themes. Member checking, peer debriefing, and audit trail maintenance strategies were used to guarantee reliability.

The SGTH Institutional Review Board granted ethical approval. All participants gave written informed consent, and data were treated with high standards of confidentiality and anonymity. The combination of quantitative and qualitative results allowed a more detailed view of the influence that cultural beliefs have on postoperative pain expression and led to suggestions toward culturally sensitive approaches to pain management practice.

### Results and Analysis

#### Demographic Characteristics of Participants

The sample consisted of 100 postoperative patients, most representing the age group of 31-45 (32%), and 18-30 (28%). 58 participants were males and 42 were females. Regarding education, 38 % had no formal education, 30 % had primary education, and 32 % had secondary or higher education. This demographic balance indicates a heterogeneous sample that is of interest to study cultural aspects of pain expression [Table 1].

**Table 1: Demographic Characteristics of Postoperative Patients (N = 100)**

Variable	Category	Frequency (n)	Percentage (%)
Age	18-30 years	28	28%
	31-45 years	32	32%
	46-60 years	25	25%
	>60 years	15	15%
Gender	Male	58	58%
	Female	42	42%
Education Level	No formal education	38	38%
	Primary	30	30%
	Secondary or above	32	32%

**Cultural Beliefs Related to Pain**

The findings revealed that 60% of patients believed pain is a test from God and should be endured silently, while 48% agreed that expressing pain openly is a sign of weakness. Additionally, 42%

preferred traditional or home remedies before taking medications. Interestingly, 55% of participants found it culturally acceptable to discuss pain with healthcare professionals, indicating a blend of traditional beliefs and openness to modern care practices [Table 2].

**Table 2: Cultural Beliefs Related to Pain (N = 100)**

Statement	Agree (%)	Neutral (%)	Disagree (%)
Pain is a test from God and should be endured silently	60	25	15
Expressing pain openly is a sign of weakness	48	28	24
Pain should be treated with traditional/home remedies before medicines	42	30	28
Discussing pain with health professionals is culturally acceptable	55	20	25

**Figure 1: Patterns of Pain Expression Among Patients (N = 100)**

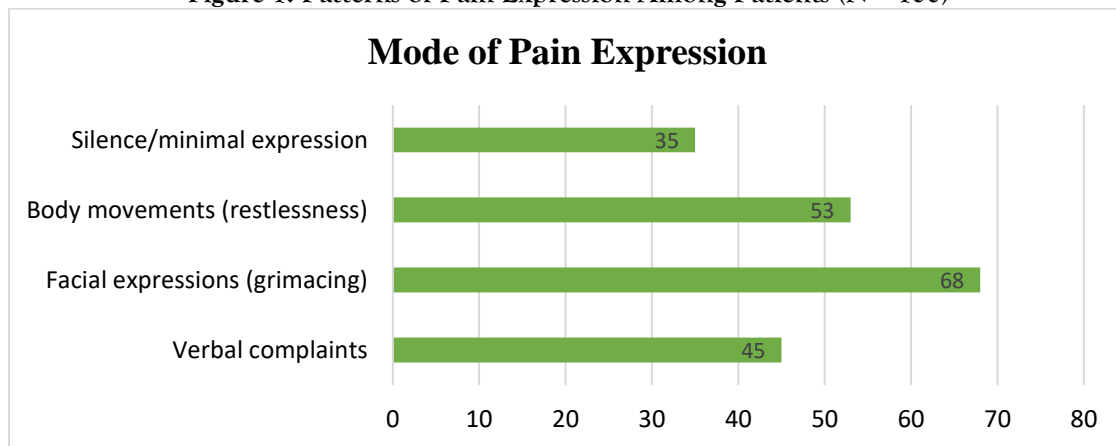


Figure 1 shows that the facial expressions were the most common mode of pain expression (68%), followed by body movements (53%) and verbal complaints (45%). Notably, 35% of patients expressed pain minimally or remained silent, reflecting possible cultural restraint.

**Relationship Between Cultural Beliefs and Pain Expression**

The analysis demonstrated a significant correlation between cultural beliefs and the expression of pain. Patients who thought pain was something to be endured silently represented low or no expression ( $p = 0.001$ ), and those who thought saying something about pain was a weakness said fewer words of complaint ( $p = 0.003$ ). The traditional treatment belief to further reflect the behavioral cultural influence towards pain was also linked to decreased painkiller request ( $p = 0.021$ ) [Table 3].

**Table 3: Relationship Between Cultural Beliefs and Pain Expression (Chi-square test used)**

Cultural Belief Statement	Type of Pain Expression Observed	p-value	Significant? (p < 0.05)
Belief: "Pain should be tolerated silently"	Minimal/No expression	0.001	Yes

Belief: “Verbalizing pain is weakness”	Fewer verbal complaints	0.003	Yes
Belief: “Pain should be treated traditionally”	Fewer requests for painkillers	0.021	Yes

**Emerging Themes from Qualitative Interviews**

The qualitative analysis identified five major themes that affected pain expression by postoperative patients. Stoicism was perceived by many participants as a virtue of the culture, with silent wearing of pain being a symbol of strength and dignity. The gender norms were involved as well, as men tended to suppress pain to meet masculine expectations. Religion often influenced the way pain was

interpreted; it was understood to be a divine test, and truly expressing complaints was associated with a lack of faith. Moreover, some people favored traditional healing methods, which resulted in reporting pain later and less use of modern treatment methods. Finally, patients were not willing to open up about their pain due to communication barriers such as language barriers and not trusting the healthcare provider [Table 4].

**Table 4: Emerging Themes from Qualitative Interviews (n = 10)**

S. No	Theme Title	Description
1	Stoicism as a Cultural Virtue	Patients from certain backgrounds emphasized enduring pain as noble.
2	Gender-Based Pain Expectations	Men expressed pain less due to perceived masculinity norms.
3	Religious Framing of Pain	Pain was seen as a divine test; verbalizing it was viewed as weak faith.
4	Traditional Healing Preferences	A preference for home remedies delayed professional pain reporting.
5	Communication Barriers and Pain Reporting	Some patients were reluctant to express pain due to language or trust gaps.

**Discussion**

The aim of the study was to evaluate whether there is a correlation between cultural beliefs and pain expression among postoperative patients in the orthopedic and surgical wards of Saidu Group of Teaching Hospitals (SGTH). The results of both quantitative and qualitative data illustrate that cultural beliefs have a certain influence on the way patients perceive and express pain. According to many respondents, bearing the pain without crying was seen as a symbol of strength or spiritual strength, and at the same time, corresponded to cultural and religious norms in the region. These attitudes determined both the verbalization of pain externally and communication with the medical staff about discomfort.

The quantitative results showed statistically significant relationships between some cultural beliefs and ways of expressing pain. The subjects who thought that pain should not be expressed were more prone to less or no emotional expression (p =

0.001), following the results of Afsah & Kaneko (2023), who also found that cultural norms had a significant effect on pain behaviors in African American patients. Likewise, the patients who perceived speaking about pain as a sign of weakness had lower chances of reporting pain verbally, which indicates a stoic pattern which has been described in other cultures, like the Bazargan et al. (2021) These trends indicate that when measuring pain, healthcare providers must be culturally sensitive and not make generalizations by using a standardized scale.

The qualitative data complemented the interpretation of these results by explaining how pain was frequently defined in the context of religion as a test or a type of spiritual challenge. This is congruent with a study by Morais et al. (2022), which posits that the perception of pain is related to spiritual development or purification in most Muslim societies, where patients end up underreporting symptoms. Nonetheless, in contrast to their study, when gently jerked awake patients still expressed

wanting pain relief immediately, our participants tended to wait or leave out mention of pain, indicating a more rigid attachment to recognized or religious coping controls. It could be related to differences in the levels of health literacy or access to culturally competent care.

The gender component in expressing pain turned out to be another interesting finding. Our findings were echoed by the fact that male patients were less prone to expressing pain verbally, contrary to the masculine culture of South Asia and the Middle East, where men are characteristically supposed to be strong and emotionally composed. This can be confirmed by the study conducted by Tareen (2024) who reported that men tend to have lower pain reports because of gender role expectations. In contrast, other studies carried out in the West, like the studies by Alqasir (2024), have not revealed higher patterns of gender reporting differences in terms of pain, probably due to the more egalitarian cultural attitude towards emotional expression. This contrast highlights the relevance of local cultural context when interpreting behaviors of pain.

The style of traditional healing was another factor influencing the attitudes of patients towards the process of pain management. Others used home remedies and spiritual interventions prior to medical treatment. It aligns with the research of Paganini, Summers, Ten Brinke, & Lloyd (2023), which found that indigenous and rural patients usually utilize non-pharmacological approaches based on cultural tradition. Although such habits might be of consolation, they can result in undue medical delay. The lean on traditional practices in the context of the research contributed to lower analgesic administration and delayed expressivity of postoperative pain, indicating a need to close the gap in culturally responsive pain education (Osborne & Davis, 2022).

Communication barriers further complicated the pain expression process. Some patients cited reluctance to talk about pain because of language or the feeling that providers do not empathize with them. It aligns with what Okpechi et al. (2022), found and stated, that linguistic and cultural discrepancies between the patients and the providers may result in under-assessment of pain and suboptimal care. Nevertheless, in contrast to the

study by Green that explored immigrant communities in Western hospitals, we demonstrate that in native cultural contexts, inner diversity (dialects or ethnic subpopulations) can present a complication to communication in healthcare situations as well (AuBuchon et al., 2024).

To conclude, the review shows that cultural beliefs play a crucial role in postoperative pain expression and communication. International literature both validates and contradicts these findings, highlighting the nuanced and situation-specific nature of pain behaviors. Using mixed-methods enabled the subtle interpretation of these influences, and the findings indicate that pain management plans must be more culturally specific. Cultural competence training of medical staff, introducing culturally sensitive assessment instruments, and fostering an open, non-judgmental dialogue can potentially close to the gap between patient experience and a high-quality clinical encounter.

### Conclusion

Evaluating the study, it was concluded that cultural beliefs play an important role in influencing perceptions and expressions of pain by postoperative patients. The MSM results of SGTH indicate that a significant part of patients perceive pain as a spiritual trial or a state that should be endured without commenting on it and that it results in a slight or non-verbal expression. Pain-related behaviors were further informed by gender norms, preferential treatment approaches towards traditional healing systems, and barriers to communication. Such culturally based variables affected not only the way patients disclosed their pain but also the way patients responded to treatments on pain management. The article underlines the inadequacy of traditional pain assessment tools when applied to culturally diverse populations and ensures that culturally sensitive clinical expertise may be necessary to enhance accurate pain assessment and effective treatment. Finally, cultural beliefs should be identified and considered to enhance the quality of care provided after surgery and the satisfaction of patients.

### Recommendations

1. **Incorporate Cultural Competency Training:** Training in cultural beliefs and

communication styles should be included on a regular basis for the healthcare providers, particularly the nurses and pain management staff so that there would be more knowledge on how to interpret the pain behaviors and respond accordingly.

**2. Employ Culturally Adapted Pain Assessment Instruments:** design or modify pain assessment instruments that capture non-verbal signs of pain and cultural variations in communication, instead of utilizing pain scales that solely utilize self-report on a scale.

**3. Promote Open Communication in Culturally Sensitive Ways:** To encourage patients to be more open about the pain, you can use verbal and culturally sensitive ways to initiate the talk about pain in a more comfortable way.

**4. Educate Family or Cultural Mediator:** In cases where communication gaps have to be filled, incorporate a family member or cultural mediators as part of the care method to facilitate communication of pain management with the cultural beliefs of the patient.

**5. Raise understanding of the benefits of pain management:** Patients and family should be informed about the necessity of effective and timely pain management addressing myths surrounding the purpose of suffering, administering medications, and going against knowledge and traditions to positively influence adherence to treatment.

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