The pain experience and sociocultural factors

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Pain is a complex sensation that involves sensory, motivational, and cognitive components. The experience of pain is characterised by immense inter-individual and group variability. The pain response is not restricted to a physiological reaction to noxious stimuli or tissue injury, but encompasses emotional and behavioural responses as well.

These responses have as their foundation variations in cultural perceptions, expectations, and past experiences that are known to differ among race/ethnic groups.

Substantial literature suggests that diverse biological, psychological, and sociocultural mechanisms account for differences by race and ethnicity in the experience, epidemiology, and in the management of pain.

Race/ethnicity seems to have a larger impact on later stages of pain processing, including emotional and behavioural responses associated with chronic pain.

Culture is defined as "the customary beliefs, social norms, and material traits of a racial, religious, or social group." Culturally-specific attitudes and beliefs about the origin, role, and meaning of pain not only influence the manner in which individuals view and respond to their own pain, but can affect how they perceive and respond to the pain of others.

Cultural factors related to the pain experience include pain expression, pain language, lay remedies for pain, social roles, and expectations and perceptions of the medical care system. The extent to which culture can influence pain perception and response depends in part on the degree to which individuals identify with their ethnic or cultural group. Culture can in turn influence the request for medications or treatments to assist in ameliorating the pain.

The perception and experience of physical pain and the meaning pain has to one's existence will vary by culture. In the Chinese culture, pain has been understood as a result of blocked Qi (life energy or force). To resolve the pain, the blockage must be removed and the patient must return to a state of harmony with the universe.

Research has been performed on the relationship between expectations and pain experience. Expectations about treatments and about painful stimuli have been shown to profoundly influence brain and behavioural markers of pain perception. Another psychosocial factor that may influence differences in pain sensitivity response is the gender role. Individuals who considered themselves more masculine and less sensitive to pain have been shown to have higher pain thresholds and tolerances.

The pain experience is therefore shaped by a dynamic interplay between physiological, psychological, and sociocultural factors. For example, heightened
pain reactions have been found among individuals of Asian ethnicity relative to those of European ethnicity, both in North America and Europe.\textsuperscript{15}

Experimental pain measures may facilitate identification of biological, psychological, and sociocultural contributions to ethnic differences in pain processing. A recent systematic review analysed the use of experimental pain stimuli in assessing pain sensitivity across multiple ethnic groups.\textsuperscript{16} It found that race/ethnicity contributed significantly to variability in pain responses across most pain stimulus modalities.

In this issue of the \textit{New Zealand Medical Journal},\textsuperscript{17} Ho and Johnson importantly investigate how pain is construed and managed cross-culturally. Two groups, New Zealand Europeans and Chinese people, were defined for cultural comparison. The study anonymously recruited 165 participants from the general public (57.0\% Chinese, and 43.0\% New Zealand Europeans); the participants completed a questionnaire that measured the following characteristics: demographics, experiences of persistent pain, use of pain management and alternative treatment, as well as pain attitudes and beliefs.

Cultural differences did not appear significant for pain experiences, but influenced perceptions about pain as well as how people managed their pain. The study identified numerous cultural differences among New Zealand Europeans and Chinese immigrants in terms of beliefs about persistent pain and its treatment.

Acculturation, which entails adaptation to a new set of cultural norms, beliefs, and values,\textsuperscript{18} is inherently stressful, especially for first-generation immigrants.\textsuperscript{19} Stress of acculturation, in turn, may influence pain sensitivity.\textsuperscript{15}

Two recent studies have demonstrated this.\textsuperscript{15} In one study, first- and second-generation Asian Americans and European Americans took part in a cold pressor task. Evidence of heightened pain responses was found only among first-generation Asian Americans.\textsuperscript{15} The second study was further controlled for ethnicity. It replicated this pattern in finding heightened pain reactions among mainland Chinese students in Hong Kong relative to Hong Kong Chinese students.\textsuperscript{15}

These findings suggested a role for acculturation in accounting for ethnic differences in physical pain sensitivity.\textsuperscript{15} However, in the study by Ho and Johnson, acculturation levels did not reveal any substantial impact on the pain frequencies.

As stated by Ho and Johnson, “culture plays an important role in determining various aspects of pain experience and response.” A growing multicultural society presents healthcare providers with a difficult task of providing appropriate care for individuals who have different life experiences, beliefs, value systems, religions, languages, and notions of healthcare.\textsuperscript{10} Cultural practices and spiritual beliefs form the foundations on which many lives are based.

As the patient population in the New Zealand becomes increasingly multicultural, cross-cultural training, the use of cross-cultural principles, and the appreciation of the needs of immigrant patients and families becomes increasingly important.\textsuperscript{10}

The challenge to healthcare professionals is to strive to become more culturally sensitive and culturally competent. As proposed by Ho and Johnson, further cross-cultural investigations using randomised samples instead of self-selected survey populations are awaited.
Competing interests: Nil.

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