Cultural influences on pain

Mrs Sue Peacock[1] and Mrs Shilpa Patel[2]
Health Psychologists, [1]Milton Keynes Hospital and [2]University of Leicester

SUMMARY POINTS

- The relationship between pain and ethnicity is shaped by experience, learning and culture.
- Mistaken beliefs about the nature of pain and disability, resistance to treatment seeking, reluctance to comply with treatment and failure to accept responsibility of the treatment outcome are not culturally or sub-culturally specific obstacles to pain management.
- A cultural group's expectations and acceptance of pain as a normal part of life will determine whether pain is seen as a clinical problem that requires a clinical solution.
- The reviewed literature shows disparities in pain treatment based on ethnic background.
- Multidisciplinary research needs to investigate the models of pain and treatment in different cultural groups to allow us to understand how pain is presented and how beliefs and expectations about treatment can be married with practical solutions and effective evidence-based pain management.

Introduction

Increasing ethnic diversity means clinicians are regularly required to meet the needs of people from different cultures and offer culturally relevant health care. Hence there is a growing necessity to understand the influence of race and ethnicity in pain management. Cross-cultural differences are evident in many aspects of human behaviour and in the prevalence of illness and in healthcare usage. Cultural factors influence beliefs, behaviour, perceptions and emotions, all of which have important implications on health and health care. Culture influences illness behaviour in a number of ways including defining what is regarded as 'normal' and 'abnormal', determining the cause of illness, influencing the decision-making control in healthcare settings and impacting on health-seeking behaviour.

Chronic pain affects approximately 1 in 5 adults in Europe resulting in substantial healthcare costs[1]. Evidence that cultural influences have an impact on pain is readily available from the UK where pain is the most common symptom encountered by the medical profession. This can be seen in the sickness absence for back pain, which increased dramatically in the UK between 1979 and 1996, despite no change in the incidence of the conditions that cause back pain. This trend has reversed in recent years, leading commentators to conclude the changes were most likely a cultural phenomenon. Hocking[2] explains this by suggesting that people cope with sub-clinical symptoms and only consult if the social environment changes and the "symptoms" become viewed as malign.

Definitions

The terms 'race,' 'ethnicity,' and 'culture' are often interchangeably used, however they all represent very different concepts. Controversy exists over whether "race" is a biologically valid idea, or whether it is a social concept, which serves a social purpose. Race is described as a construct, which distinguishes groups of people according to their ancestry[3]. Furthermore, distinguishing groups of people according to behaviour, culture, biological and physical characteristics is termed "ethnicity." Defining culture has not been straightforward; there are many definitions in the literature. These include defining culture as "a coherent set of values, concepts, beliefs, and rules that guide and rationalize people's behavior in society"[4] or "a set of learned behaviors, beliefs, attitudes and ideals that are characteristic of a particular society or population"[5]. A person's culture determines how pain is perceived, experienced and communicated. A useful analogy of culture described by Helman[6] refers to culture as an inherited 'lens' through which the individual perceives and understands the world and as a result learns how to live within it.

To aid our understanding of cultural influences on pain the notion of acculturation should be explored. Acculturation has been defined as the extent to which an individual, who migrates from the country of birth, adopts the values, beliefs, cultures and lifestyles of the country to which they emigrate. Those who are more acculturated report similar levels of pain and illness to the country they have emigrated to, in particular, second and third generation immigrants are more likely to share the beliefs and behaviours of the host nation; however this remains poorly researched[7]. The variation in health between groups could partly be explained by the idea that newly arrived immigrants tend to be situated in lower social economic groups and there is strong evidence of the link between low social economic status and poor health including the report of pain.

Experience, learning and culture shape the relationship between pain and ethnicity rather than any fundamental neurological differences[8]. The distinction between race and ethnicity is particularly important for pain research based on the biopsychosocial model. This model suggests the experience of pain is derived via the interaction of biological, psychological and social factors. In previous research the two terms have been used interchangeably; future research should focus on addressing "ethnic" rather than "racial" differences.

Laboratory pain studies

Findings from laboratory studies have suggested there are ethnic differences in experimental pain but other research has questioned this[3,9]. Sensitivity to experimental pain stimuli is demonstrated to be greater among African-Americans compared to non-Hispanic Caucasians[10]. In a study focusing on ethnic variations in pain tolerance among South Asian males and White British males the results indicated South Asian males had significantly lower thermal pain thresholds and experienced higher pain intensity than White males. This was only true of thermal pain, no differences were reported for cold pain threshold or heat unpleasantness[11].

Similarly, ethnic differences have also been reported in studies of acute clinical pain including post-operative pain, low back pain and exercise induced angina where African-American patients reported greater pain intensity than Caucasians. We must treat these results with caution as some studies have failed to report any ethnic differences in acute clinical pain. Moreover, other studies have found when matching ethnic groups on selected confounding variables such as education, pain duration and work status, the differences in pain related sequelae and emotional distress may be reduced[12,13].

The race/ethnicity of the experimenter is rarely documented or controlled. Some studies have suggested that the experimenter's gender has been found to influence results[14]. It could be that similar effects occur in the context of ethnic characteristics.

Factors influencing the clinical situation

Pain beliefs are brought to the clinical situation by both clinician and patient and can have a profound effect on care. Mistaken beliefs about the nature of pain and disability, resistance to treatment seeking, reluctance to comply with treatment and failure to accept responsibility of the treatment outcome are not culturally or sub-culturally specific obstacles to pain management.

Pain is a private experience, however pain behaviour is influenced by social, cultural and psychological factors. It is these factors that influence whether private pain is translated into pain behaviour, the form this behaviour takes, and the social setting in which it occurs[6]. Part of the decision about whether to translate private pain into public pain behaviour depends on the interpretation of the significance of pain, for example, is it seen as "normal" or "abnormal", the latter most likely to be brought to the attention of others.

Each cultural and social group has its own unique language of pain and distress, its own complex expressions by which ill or unhappy people make other people aware of their suffering. There is a specific, often standardized way of signaling both verbally and non-verbally, that the person is in pain or discomfort. The form that this pain behaviour takes is largely culturally determined, as is the response to this behaviour[6]. This depends on factors such as whether their culture values or disvalues the display of emotions, postural mobility or verbal expression in response to pain or injury. Some cultural groups expect an extravagant display of emotion in the presence of pain, but others value stoicism, restraint and playing down the pain.

Zborowski[8] stated that a cultural group's expectations and acceptance of pain as a normal part of life will determine whether it is seen as a clinical problem that requires a clinical solution. This is illustrated by observations of Australian aborigines. Despite one-third of men, and half of the women reporting back pain when asked, they did not perceive it to be a health problem and consequently did not report symptoms (unless asked), display pain behaviour or seek medical treatment[15]. Another study in rural Nepal found back pain to be common and yet when medical facilities were available virtually no-one sought help. In this instance, it appears that the symptoms of back pain were not perceived to be a medical issue but rather part of the aging processes[16].

The literature reviewed by Bonham[17] shows empirical data indicating disparities in pain treatment based on the patient's race or ethnic background. The key findings of this review were specifically that Black and Hispanic patients were more likely to be under-treated for their pain across "different types of health care facilities and treatment settings; from the emergency room to the community hospital to the nursing home"[17]. It is suggested that these disparities in pain treatment are a result of stereotyped perceptions of race and ethnicity, language barriers, socioeconomic status, doctor – patient communication and clinical assessment of pain.

These disparities are echoed by Carey & Garrett[18] who found that in comparison to White patients, Black patients recorded worse disability as measured by the Roland Morris disability questionnaire, and higher pain scores on a 10 point scale in comparison to White patients. Yet clinicians considered Black patients less likely to have disc disease and to have less pain than White patients. The incidence of hospitalization and surgery for back pain was found to be significantly lower in Black patients than in White patients. Also, after controlling for income, education, insurance status and baseline severity scores of low back pain, Black patients were less likely to receive radiographs or advanced imaging studies, than White patients.

Improving the situation

Possible reasons for this under-treatment include the problem of communication. Immigrants living in close-knit communities or those who have recently arrived may not be fluent in the language of their adopted country and health care providers might not have easy access to interpreters. Other barriers identified are the inability to access health information due to poor access to language specific literature, and literacy problems.

Further reasons may be subtler, for example, it has been demonstrated that ethnic minorities are less likely to become involved in medical decisions about their treatment than non-minority groups[19]. This effect can be reduced if the treating health professional has the same ethnic background as the patient.

The need for culturally grounded pain management services should be addressed. The psychological and behavioural management of pain is developed primarily from a western approach to the causes and the appropriate way to manage pain. Although acculturation and increased socio-economic participation eventually reduces cultural inequalities in health, it is unethical to allow this alone to solve the problem. Multidisciplinary research needs to investigate the models of pain and treatment in different cultural groups to allow us to understand how pain is presented and how beliefs and expectations about treatment can be married with effective evidence-based pain management. The role of factors such as gender, language, acculturation, socioeconomic factors, family involvement and interactions with the health care system should be investigated to improve our knowledge of how these factors influence pain management. Within the healthcare setting factors such as stereotyping, bias, clinical decision making, the health care setting along with legal and insurance systems require further research[19].

Some practical solutions to reduce disparities in pain management are suggested by Davidhizar and Giger[20]. Many pain assessment tools have been translated into different languages with various levels of reliability and validity, however it is key to utilize the appropriate cultural and linguistic tool. The limited usefulness of the basic pain assessment tool should be combined with reports from the patient and their families to ensure accurate pain information is obtained and culturally appropriate care is provided[21].

With regard to pain communication, it is important for the health professional to appreciate both verbal and non-verbal responses to pain to avoid the misdiagnosis of having both pain and a hysterical emotional disorder[22]. Cultural responses are usually divided into stoic or emotive, however we need to examine reasons for non-verbal behaviour. These could include not asking for medication because either they think it will be brought to them if they need it, or that it is disrespectful to ask. Others who grimace or groan may feel that this is enough to describe their pain, so do not verbalise it. Research has shown that health care professionals are more likely to be responsive to pain communication by people from the same culture, and are less likely to understand that of other cultures[23]. Health professionals need to acknowledge that the meaning of pain frequently differs between different cultures. For some this permits expression of pain, for others their pain is associated with religious beliefs, whilst some try to find some other meaning to make sense of their pain.

Health professionals should be aware of the biological factors that influence pain treatment. Pharmaceutical research has determined ethnic differences in drug metabolism, dosing requirements, therapeutic responses and side effects[24]. It is also important to consider that these differences are possible within cultural groups, therefore the assumption that all people in that cultural group will respond in a certain way should be avoided.

It is vital for the health professional to engage in personal reflexivity to further develop their own self awareness of values and beliefs. Reflexivity can help avoid ethnocentrism, (that is the belief that their culture is superior to other cultures) and help health professionals become aware that personal biases can influence their responses to the management of pain.

Conclusions

Policy documents argue that people should be valued as individuals: their views and experiences should be obtained and addressed. Therefore there is concern that ethnic minority communities are at a disadvantage to the host nation regarding treatment for painful conditions. It is demonstrated that people from ethnic groups receive less provision of preventative health care, provision of medication and secondary referrals than host nationals. Multidisciplinary research is required which integrates basic clinical and health service research methodologies into practical interventions for ethnic and minority groups to overcome barriers to accessing pain management.

Acknowledgements

The authors would like to thank Dr Paul Watson for helpful comments during the writing of this paper.

References

1. Fricker J. Pain in Europe: a report. [Online] 2003. Available from: http://www.paineurope.com/files/PainInEuropeSurvey_2.pdf
2. Hocking B. Some social and cultural anthropological aspects of musculoskeletal disorders as exemplified by the Telecom Australia RSI epidemic. In: Moon SD, Sauter SL, (Eds). *Beyond biomechanics: psychosocial aspects of musculoskeletal disorders in office work.* London: Taylor Francis; 1996, p.145-158
3. Edwards CL, Fillingim RB, Keefe F. Race, ethnicity and pain. *Pain* 2001; 94:133-137
4. Hahn R. Sickness and healing: an anthropological perspective. *London: Yale University Press* 1995, p. 66
5. Ember CR, Ember M, Peregrine PM. *Anthropology.* 10th ed. Englewoods Cliffs (NJ): Prentice Hall; 2002, p. 217
6. Helman CG. *Culture, health and illness*. 5th ed. London: Hodder Arnold; 2007
7. Palmer B, Macfarlane G, Afzal C, et al. Acculturation and the prevalence of pain amongst South Asian minority ethnic groups in the UK. *Rheumatology* 2007; 46:1009-1014
8. Zbrowski M. Cultural components in response to pain. *J Soc Issues* 1952; 8:16-30
9. Edwards RR, Doleys DM, Fillingim RB, et al. Ethnic differences in pain tolerance: clinical implications in a chronic pain population. *Psychosom Med* 2001; 63:316-323
10. Sheffield D, Biles PL, Orom H, et al. Race and sex differences in cutaneous pain perception. *Psychosom Med* 2000; 62: 517-523
11. Watson PJ, Latif RK, Rowbotham DJ. Ethnic differences in thermal pain responses: a comparison of South Asian and White British healthy males. *Pain* 2005;118:194-200
12. Edwards RR, Moric M, Husfeld B, et al. Ethnic similarities and differences in the chronic pain experience: a comparison of African American, Hispanic, and White patients. *Pain Med* 2005; 6: 88-98
13. McCracken LM, Matthews AK, Tang TS, et al. A comparison of Blacks and Whites seeking treatment for chronic pain. *Pain* 2001;17: 249-255
14. Zatzick D, Dimsdale JE. Cultural variations in response to painful stimuli. *Psychosom Med* 1990; 2: 44-57
15. Honeyman PT, Jacobs EA. Effects of culture on back pain in Australian aboriginals. *Spine* 1996; 1: 41-43
16. Anderson RT. An orthopaedic ethnography in rural Nepal. *Med Anthropol* 1994; 8 :46-59
17. Bonham VL. Race, ethnicity, and pain treatment: striving to understand the causes and solutions to the disparities in pain treatment. *J Law Med Ethics* 2001; 29: 52-68
18. Carey TS, Garrett JM. The relation of race to outcomes and the use of health care services for acute low back pain. *Spine* 2003; 28: 390-394
19. Green C, Anderson KO, Baker TA, et al. The unequal burden of pain: Confronting racial and ethnic disparities in pain. *Pain Med* 2003; 4: 277-294
20. Davidhizar R, Giger JN. A review of the literature on care of clients in pain who are culturally diverse. *Int Nurs Rev* 2004; 51: 47-55
21. McCaffrey M, Pasero C. *Pain: clinical manual.* 2nd ed. St Louis: Mosby 1999
22. Rotunno M, McGoldrick M. *Italian families*. In: McGoldroick M, Pearce, JK, Giordano, editors. Ethnicity and family therapy. New York: Guildford Press 1996, p. 567-582
23. Giger J, Davidhizar R. Transcultural nursing: assessment and intervention. *St Louis: Moseby* 1999
24. Salerno E. Race, culture and medication. *J Emerg Nurs* 1995; 21: 560-562

S M Peacock, C.Psychol, Principal Health Psychologist Pain Clinic, Milton Keynes Hospital NHS Foundation Trust, Standing Way, Eaglestone, Milton Keynes, Buckinghamshire, MK6 5LD.

S Patel, MSc, Trainee Health Psychologist / Research Associate, Department of Health Sciences, Division of Anaesthesia and Pain Management, University of Leicester, Leicester, LE5 4PW.

Correspondence to: sue.peacock@mkgeneral.nhs.uk