

Original Article

**Cite this article:** Xu X, Lockett T, Lovell M, Phillips JL (2023). Cultural factors affecting Chinese migrants' perceptions and responses to cancer pain and its pharmacological management: A convergent mixed-method study. *Palliative and Supportive Care* **21**, 688–696. <https://doi.org/10.1017/S1478951522000360>

Received: 15 August 2021  
Revised: 29 November 2021  
Accepted: 28 February 2022



**Key words:**

Cancer pain; Chinese migrant; Cultural factor; Pharmacological pain management

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# Cultural factors affecting Chinese migrants' perceptions and responses to cancer pain and its pharmacological management: A convergent mixed-method study

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## Abstract

**Introduction.** Studies identified barriers of pain reporting and use of analgesics impeding Chinese cancer patients to achieve optimal pain relief. No research has yet explored these issues in Chinese migrants, where cultural differences may exacerbate the barriers.

**Objectives.** To explore cultural factors influencing Chinese migrants' perspectives to cancer pain and its pharmacological management.

**Method.** Informed by Leininger's Cultural Care Theory, focus groups and a short version of Barrier Questionnaire-Taiwan (S-BQT) were conducted in Mandarin or Cantonese, with 24 Chinese migrants receiving ambulatory cancer and/or palliative care services in Sydney, Australia. Integrated thematic analysis, descriptive statistics, and meta-inference were adopted for data analysis and integration.

**Results.** Participants suffered uncontrolled cancer pain negatively affecting their physical and psychosocial well-being. Most experienced moderate to severe pain, but only a third used opioids. Most adopted non-pharmacological approaches and half used Traditional Chinese Medicine. Participants scored a mean S-BQT of 3.28 (standard deviation  $\pm$  0.89). Three themes and seven sub-themes contributed to higher barriers of pharmacological pain management: (1) Philosophical health beliefs (cancer pain are self-provoked and body can self-heal); (2) Cultural values and beliefs (cancer pain is inevitable, and Chinese people express pain differently to local people); and (3) Conflicting views on the use of opioids (culture-related negative medication beliefs, Western biomedical model-related opioid fears, and opioids extend life for people with terminal cancer pain).

**Conclusions.** Chinese migrants' responses to cancer pain and attitudes towards opioids are complex. Culturally congruent strategies are needed to overcome culture-related barriers and improve quality of cancer pain care in this population.

## Introduction

Modern migration patterns have accelerated global cultural diversity (Williamson and Harrison, 2010). In Australia, people born in mainland China, Hong Kong, and Taiwan comprise the largest non-English-speaking migrant population, with most speaking Mandarin and/or Cantonese at home (Australian Bureau of Statistics, 2017). As the number of Chinese migrants has grown in Australia, so too has the incidence of cancer in this population (Federation of Ethnic Communities' Councils of Australia, 2010).

Culture can significantly influence individuals' attitudes and beliefs regarding disease and treatment, as well as their health-related behaviors (Dayer-Berenson, 2014; McFarland and Wehbe-Alamah, 2015). Understanding people's culture-related health perspectives and needs is crucial for providing culturally congruent care that is respectful and effective (Dayer-Berenson, 2014). However, Chinese migrants with cancer often experience suboptimal care, whose responses to psychological and physical symptoms vary and are largely determined by their cultural values and norms, which are often misunderstood by health professionals from different cultures (Dein, 2005).

Pain is experienced by most people with cancer at some stage during their illness journey, either from the cancer itself or its treatment (Yarbro et al., 2004; American Cancer Society, 2019). Pharmacological pain management, using self-reported numerical rating scales assessing cancer pain and orally administering right doses of weak analgesics (paracetamol and non-steroidal anti-inflammatory drugs) for mild pain and opioids for moderate-severe pain



around-the-clock (World Health Organization, 2015), is recommended as one of the most effective measures in controlling adult cancer pain (Australian Adult Cancer Pain Management Guideline Working Party, 2016).

Despite increasing efforts, persistent cancer pain remains a global health problem in people living with cancer (Van Den Beuken-Van et al., 2016). A recent systematic review on English and Chinese literature identified a range of patient-related barriers affecting cancer pain reporting and use of analgesics of Chinese cancer patients in mainland China, Hong Kong, and Taiwan (Xu et al., 2018). However, no studies reported Chinese migrants' cancer pain experiences and cultural factors influencing their pharmacological pain management practices. Since people from diverse cultural groups conceptualize their pain differently which affects their pain management decision-making (Narayan, 2010), this gap in the evidence may limit non-Chinese health professionals' ability to implement culturally congruent and individualized pain management plans for this population.

The aim of this study was to explore Chinese migrants' cancer pain experiences and cultural factors influencing their perceptions and responses to cancer pain and its pharmacological management.

This study adopted a convergent mixed-method design including focus groups and a short version of Barrier Questionnaire-Taiwan (S-BQT) (Chou et al., 2011) and was conducted between May and August 2017. Ethics approval was obtained from the South-Eastern Sydney Local Health District Human Research Ethics Committee (HREC reference no: 16/294) and informed written consent was obtained from all participants.

Leininger's Cultural Care Theory and Semi-Structured Inquiry Guide to assess culture and health (Wehbe-Alamah and McFarland, 2015; McFarland and Wehbe-Alamah, 2015), and Australian Guidelines for Cancer Pain Management in Adults (Australian Adult Cancer Pain Management Guideline Working Party, 2016) were used as a broad guide to develop the focus group question route, data analysis, and report.

### Participants, settings, and language

To be eligible, participants had to be: (1) age  $\geq 18$  years and born in mainland China, Hong Kong, or Taiwan and currently living in Australia; (2) receiving and/or had received cancer pain treatment from an ambulatory cancer and/or palliative care service during the past 2 years; (3) well enough to take part in a focus group; (4) able to speak Mandarin or Cantonese; and (5) willing and able to give written consent in English, simplified Chinese, or traditional Chinese. We focused on pain experience over the past 2 years in an effort to reduce recall bias.

Purposive sampling and a snowball technique were used for recruitment. Invitations were extended through a cancer care center and two palliative care units of two public hospitals, as well as three Chinese cancer patient support groups run by a Chinese community organization in Sydney, New South Wales (NSW), Australia.

All focus group study materials were developed in English and reviewed by all co-researchers before being translated into Chinese by a bilingual-speaking researcher Xiangfeng Xu and cross-checked by a bilingual-speaking academic. The S-BQT has been validated in Chinese and published in English (Chou et al., 2011). Participants could choose written study materials in either a simplified Chinese or traditional Chinese version.

## Data collection methods

### S-BQT

Immediately prior to the focus groups, participants completed a survey containing the S-BQT; a numerical rating scale (NRS) for worst pain intensity over the past 2 years; and closed-ended questions about demographics and pain management approaches. These questions provided additional insights into the participants' cancer pain reporting and pain management practice.

The nine-item S-BQT was validated (Total Cronbach's alphas = 0.86; two-week test-retest reliability = 0.83) in Chinese cancer patients (Chou et al., 2011), for which the Barrier Questionnaire was originally developed by western researchers (Wells et al., 1998). The scores of S-BQT and its subscales are graded as lower (0–1), moderate (2–3), and higher ( $>3$ ) (Chou et al., 2011). It may be used as a screening tool at clinics to assess cancer patients' barriers of taking regular analgesics and/or reporting the presence of pain, which the higher scores indicate the higher barriers (Chou et al., 2011).

### Focus Groups

Focus groups were facilitated by a Mandarin-speaking researcher Xiangfeng Xu or a Cantonese-speaking research assistant using self-developed questioning route and audio-recorded. Field notes were taken by the researcher or research assistants.

### Data analysis

Survey data were descriptively analyzed using SPSS 24 software. Focus group data were analyzed thematically using deductive and inductive reasoning methods described by Bazeley (2013) and Guest and MacQueen (2008). The transcripts were translated by the researcher Xiangfeng Xu and then cross-checked by two bilingual research assistants. Disagreements about the translation were resolved via discussion.

All translated transcripts were then coded by the researcher Xiangfeng Xu using NVivo 11 software to generate themes and sub-themes, with results checked through two cycles of coding to ensure the consistency and relevance. Then the coding results were reviewed by an Anglo-Australian researcher (TL). Identified themes and sub-themes were discussed within the research team.

### Data integration

Upon completion of quantitative and focus group data analysis, findings were presented in a joint-display table to enable meta-inference about whether focus group findings and S-BQT results were confirmed, contradicted, or complemented one another within the context of Leininger's Cultural Care Theory (Leininger, 2002b; Wehbe-Alamah and McFarland, 2015). Guided by the data integration approaches for mix-method studies of Creswell and Plano Clark (2018) and Tashakkori et al. (2020), initial meta-inference was carried out by the researcher Xiangfeng Xu and then refined after discussed with the research team.

### Quantitative result

A total of 24 participants contributed to five focus groups conducted in Mandarin ( $n = 3$ ) or Cantonese ( $n = 2$ ). The mean age of participants was 59.4 years (SD  $\pm 9.8$ ). (Refer to Table 1 for other sample characteristics).

**Table 1.** Characteristics of participants

	<i>N</i>	%
Gender		
Female	22	91.7
Male	2	8.3
Marital status		
Single	1	4.2
Married	20	83.3
Divorced/separated	2	8.3
Widowed	1	4.2
Language spoken at home		
Mandarin	8	33.3
Cantonese	16	66.7
Education		
Primary school	4	16.7
Middle school	6	25.0
Secondary school	5	20.8
Diploma	2	8.3
Advanced diploma	4	16.7
Bachelor's degree	3	12.5
Employment		
Part time	4	16.7
Retired	10	41.7
Unemployed	7	29.2
Housewife	3	12.5
Type of cancer		
Breast	12	50.0
Lung	6	25.0
Colorectal	2	8.3
Ovarian	1	4.2
Nasopharyngeal	1	4.2
Bowel	1	4.2
Pancreatic	1	4.2
Care center for pain treatment		
Cancer care centre	15	62.5
General practitioner	9	37.5

Nearly all participants reported having current pain, with three-quarters reporting having had moderate to severe pain ( $x = 5.58$ ,  $SD \pm 2.62$ ) over the past 2 years on the NRS. Only a third had used opioids to manage their cancer pain. Most preferred to use non-pharmacological pain management strategies, followed by traditional Chinese medicine (TCM) and paracetamol (Refer to [Table 2](#)).

The total mean S-BQT score of 24 participants was 3.28 ( $SD \pm 0.89$ ) indicating that they had a higher barrier to using analgesics and/or reporting pain (22). The highest mean score of the S-BQT subscales was “side-effects”, followed by “tolerate” and “disease

**Table 2.** Pain management strategies reported by patient participants

Pain management approach	<i>N</i>	%
<b>Non-opioid medications</b>	<b>18</b>	<b>75.0</b>
Aspirin	3	12.5
Paracetamol	11	45.8
Nurofen	5	20.8
Other weak pain meds	3	12.5
<b>Opioids</b>	<b>8</b>	<b>33.3</b>
Codeine	3	12.5
Oxycodone	2	8.3
Methadone	1	4.2
Fentanyl	1	4.2
Lyrica	1	4.2
<b>Traditional Chinese medicine</b>	<b>12</b>	<b>50.0</b>
Chinese herbs	7	29.2
Acupuncture	6	25.0
Cupping	1	4.2
<b>Non-pharmacological therapies</b>	<b>23</b>	<b>95.8</b>
Massage	14	58.3
Heat	10	41.7
Ice	3	12.5
Music	8	33.3
Qigong	8	33.3
Tai chi	5	20.8
Ice	3	12.5

progress”, and the lowest mean score was “religious fatalism” (Refer to [Table 3](#)).

### Focus group findings

One theme related to participants’ cancer pain experiences that emerged from the data analysis is described below with exemplar quotes displayed in [Table 4](#), together with another three themes relating to cultural factors underpinning their barriers of pharmacological pain management.

### Negative consequence of living with chronic cancer pain

All participants had lived with poorly controlled chronic cancer pain for months or years since their first cancer treatment started. They attributed the uncontrolled pain to the side-effects of their anti-cancer treatment, which had changed their lives forever.

While living with cancer adversely impacted on participants’ well-being, the burden of living with chronic cancer pain lowered their self-esteem and amplified the impact of cancer on their daily life (e.g., decreased mobility, inability to do housework, and poor sleep).

Nearly all participants described how their uncontrolled cancer pain adversely affected their psychological well-being and/or their ability to continue working. For some participants, an

**Table 3.** S-BQT scores of participants

Subscale	Mean (SD)	Level of score*
Addiction	3.46 (1.69)	Higher
Disease progress	4.33 (1.20)	Higher
Tolerate	4.33 (1.27)	Higher
Fatalism	3.38 (1.88)	Higher
Religious fatalism	1.50 (1.89)	Lower
As needed	3.17 (2.20)	Higher
Side-effects	4.71 (.75)	Higher
Fear of distracting physicians	2.17 (1.76)	Moderate
A desire to be good	2.54 (1.7)	Moderate
<b>Total S-BQT</b>	<b>3.28 (0.89)</b>	<b>Higher</b>

\*The scores of S-BQT and its subscales are graded as lower (0–1), moderate (2–3) and higher (>3) (Chou et al., 2011).

inability returning to work and loss of income had a roll-on effect that increased their social distress and sense of vulnerability and further lowered their self-esteem. The multi-dimensional impacts and burden of chronic cancer pain were omnipresent for these participants and negatively impact their quality of life.

### Cultural factors influencing pharmacological pain management

Three themes and seven sub-themes that impeded participants to achieve an optimal outcome of pharmacological pain management are identified (Refer to Table 4) and interpreted in conjunction with S-BQT results in the data integration section.

### Integration of focus group findings and S-BQT results

Key points extracted from focus group findings and S-BQT results, along with meta-interference regarding the degree of agreement between qualitative and quantitative data, are summarized in Table 5 and discussed as follows:

#### *“Philosophical health beliefs” shape Chinese people’s perceptions of cancer pain*

Chinese people’s philosophical health beliefs may shape their view on cancer pain in two main ways.

#### *“Cancer pain is self-provoked” (Focus groups) and “religious fatalism” (S-BQT)*

The lower mean score of “religious fatalism” suggested that participants’ religious beliefs were not a major contributing factor to their resistance to analgesics. However, this is somewhat contradictory to their belief that cancer pain is self-provoked.

Some participants believed that their cancer pain was brought on by their bad temper and unhealthy lifestyle and eating behaviors. They hence deserved getting cancer and having cancer pain and should accept the pain. Acceptance of cancer and its associated pain helped them to relieve their psychological distress and strengthen their ability to cope with their cancer treatment and pain.

The perception of deserving the pain, and a strong desire to control their own pain, influenced the way participants

conceptualized their cancer pain experience, leading them to normalize their pain intensity. This was best exemplified by one participant (P24, male, 87-years-old with pancreatic cancer) who reported having a pain score of “0” for 2 years, even though during the focus group he mentioned suffering pain at night.

#### *“The body can self-heal” – an indirect barrier for using analgesics (focus groups)*

Participants expressed a belief that the body can heal itself. Adopting a health regimen, such as balanced diet and regular exercise, may promote a self-healing process. The cancer pain would be relieved when their body returns to normal functioning. Their belief of self-healing can lessen their interest in using analgesics and lead to a trend of normalization of pain intensity during a pain assessment.

This sub-theme is not associated with any S-BQT subscale but provides a complementary and extended view on the influences of philosophical health beliefs on Chinese people’s pain management practice.

#### *“Cultural values and beliefs” influence Chinese people’s response to cancer pain*

Participants agreed that cultural values and beliefs influence how Chinese people respond to their cancer pain. Three sub-themes were, respectively, related to S-BQT sub-scales of “fatalism”, “disease progress”, “fear of distracting physicians”, and “a desire to be good”, with different consequences.

#### *“Cancer pain is inevitable” (focus groups) and “fatalism” (S-BQT)*

Participants’ higher mean score of “fatalism” reflected their strong belief that “cancer pain is inevitable”, whereby they believed that having cancer pain during their cancer treatment is normal. Since their cancer pain was often triggered by chemotherapy, radiotherapy, and/or other cancer treatment, it seemed impractical to take analgesics for months or years. As a result, they would rather accept the pain and perhaps tell health professionals during a pain assessment that they had no pain.

#### *“Cancer pain is inevitable” (focus groups) and “disease progress” (S-BQT)*

Participants’ belief that “cancer pain is inevitable” and the higher mean score of “disease progress” had a contradictory impact on their help-seeking behavior.

Participants suggested that in Chinese culture, survival from cancer is more important than having their pain relieved, but understanding the cause of their cancer pain would help to reduce the level of distress and ease the pain. While the participants were eager to consult health professionals to discover their causes of pain, they often rejected analgesics because they believed that well-managed pain may conceal signs of cancer progressing or recurring.

#### *“Chinese people express pain differently compared to local people” (focus groups) and “fear of distracting physicians” and “a desire to be good” (S-BQT)*

Participants perceived that, compared to local people (non-Chinese Australians), Chinese people were less likely to talk about their pain for cultural reasons. For some, this difference was shaped by family traditions and social convictions and was most obvious among older Chinese people who tended to be more reserved and more reluctant to bother others with concerns

**Table 4.** Themes, sub-themes, and examples of quotes identified via focus groups

Themes	Subthemes	Examples of quotes
One theme related to cancer pain experiences		
Negative consequence of living with chronic cancer pain		<i>It has been almost two years since I had operation. However, I wake up every night because of different levels of pain and this problem has lasted for one year. Till now, the pain occurs every time when I roll over my body in bed. Even though the pain is not sharp, it can wake me up which affects my sleep quality and makes me feel bad in the morning. (P3, female, 55-years-old with breast cancer).</i>
		<i>I must be very careful when I am doing something. I don't dare move too much, because I would feel very painful if I move too much. So, when I feel the pain, I do not want to continue. I must sit down to rest until the pain becomes less acute. If I force myself to continue, it would be very painful. (P12, female, 66-years-old with lung cancer).</i>
		<i>The pain makes me feel unwell. My mood is blue, and I have a bad temper due to the pain. Sometimes the pain occurred making me wonder whether I should go to work or not. (P4, female, 61 years old and breast cancer)</i>
		<i>Before I was working like a non-stop car tyre. But now I feel as if I was a flat tyre. I have no energy and I am very tired. I worry whether I would be capable to do my job well as I did before, and I have been under the pressure after being sick for a long time. (P16, female, 48-years-old with nasopharyngeal cancer)</i>
	<i>I do not like myself now. The pain is constantly disturbing me and annoying me ... The quality of our daily life is not good ... I feel that most of time we are suffering from the pain ... In fact, these diseases (cancer) cannot only affect people's cells but also the mind as well as other aspects of people's well-being. When people are under the great pressures, it can affect all aspects of their well-being (P3, female, 55 years old and breast cancer).</i>	
Three themes and seven subthemes related to cultural factors		
Philosophical health beliefs	The body can self-heal	<i>I always think that our bodies also have the ability of self-healing. We should take care of ourselves at all aspects of our diet and daily life. Paying attention to doing the exercises may be helpful. You may help yourself in pain management. (P21, female, 53 years old and breast cancer)</i>
	Cancer pain is self-provoked	<i>Our temper would harm our body. Cancer is caused by the bad temper ... For me, when my doctor said that my pancreas tumour was very large, I was not afraid of it and I was willing to accept it, because I attracted this stuff by myself. ... I want to rely on myself to find the way relieving the pain ... I have not told the doctor about the pain. I feel I may control it myself. It has not reached the level that I could not bear. (P24, male, 87 years old and pancreatic cancer)</i>
Cultural values and beliefs	Cancer pain is inevitable	<i>I did tell the doctor when I had pain ... however, since pain is a part of the cancer treatment, I cannot always take pain medications. The pain will still be here after the effect of pain medication has gone. I know that. I would bear with it as long as I can. (P23, female, 63 years old and bowel cancer)</i>
		<i>Chinese people would think about what disease may have caused the pain and would have the disease treated. The treatment may induce the pain; so, we should accept it. The most important thing is to treat the disease. I feel that most of Chinese would think of this way. (P23, female, 63 years old and bowel cancer)</i>
	Chinese people express pain differently compared to local people	<i>Local people are very straightforward. Compared to us, they accept life, death and disease easily ... I feel that the way how the local people deal with pain is correct. I find they do not care. They would say where the pain is located. We would make self-judgement about the pain first, before we ask the doctor. I feel this is not good ... I think we need to learn this from the local people. (P23, female, 63 years old and bowel cancer)</i>
		<i>(They) pay more attention to the quality of life; while our Chinese people are used to enduring the great hardship for more important tasks. The local people would think if I can get relief and why I have to suffer. (P17, female, 54 years old and breast cancer)</i>
Conflicting views on using opioids for cancer pain	Culture-related negative medication beliefs	<i>I think all the medications are toxins. We have already had too many toxins in our body, because we had cancer and we have already used too many chemo and radiation medications which are very poisonous. If you add more toxins, the liver and kidney would not stand them. So, it is better not to take it. (P17, female, 54 years old and breast cancer)</i>
		<i>She (the doctor) said to me I may take Panadol when I had pain. I thought that the chemotherapy had already damaged both normal cells and cancer cells in my body, so I should not take too many pain medications. Also, I knew that Panadol was not a strong pain medication and I did not think it had effects. So, I did not take it regularly, but took it when I was in pain. I only took one tablet even though I should take two tablets according to the medication instruction. However, the pain was not controlled and became extreme. I eventually fell on the floor and could not stand up after I went to the toilet. So, my husband sent me to the hospital. (P13, female, 45 years old and breast cancer)</i>
Conflicting views on using opioids for cancer pain (Continued)	Western biomedical model-related opioid fears	<i>In the questionnaire I did just now, it asked about addiction of the painkillers. I thought it was likely to be addicted to the painkillers, because it may lead to hallucinations. When the pictures that I never saw before appeared in my mind, I felt that my mind seemed to become unstable. I was afraid when my pain was controlled, where my mind would become chaotic. I did not dare to use (the painkillers). I was afraid that it would become a problem when my mind become chaotic. (P19, male, 67 years old and bowel cancer)</i>

(Continued)

Table 4. (Continued.)

Themes	Subthemes	Examples of quotes
	Opioids extend life for people with terminal cancer	<p><i>When the time comes, I would eat any kind of pain medications. At that time, it doesn't really matter. (P11, female, 62 years old and breast cancer)</i></p> <p><i>I feel that if my health condition is so serious, I should take it and accept it. Because I heard from my friend that if the pain is unbearable, we must take it. Only pain medications, like morphine, may stop that kind of pain so that we may sleep well at night ... So, I would take it, because I do not want to have this kind of pain and I do not want to suffer. (P14, female, 59 years old and breast cancer)</i></p> <p><i>This is right. We – the cancer patients – have thoughts of death. We think of the death every day. Taking these pain medications would extend the life. (P12, female, 65 years old and lung cancer)</i></p>

about their difficulties in life, including pain. The findings were confirmed by participants' higher mean score of "fear of distracting physicians" and moderate mean score of "a desire to be good".

Participants also reached a consensus that local people's willingness to openly speak about their cancer pain and taking pain medication freely to control their pain reflected the value they placed on their quality of life. In contrast, both female and male participants highlighted a cultural view that Chinese people, in particular Chinese men, were socially obliged to bear their pain with stoicism rather than complaint.

Participants' attitudes towards cultural differences did not negatively portray the views of local people. On the contrary, they acknowledged that the culture of asking for help might lead to better cancer pain management and they should learn from the local people.

#### **"Conflicting views on using opioids" at different stages of cancer**

Participants suggested that Chinese people hold a range of complex and often conflicting beliefs and views about the use of opioids and other weak analgesics to manage their cancer pain, which would have an impact on their decision of using opioids at different stages of cancer. As revealed in the following three sub-themes and results of S-BQT subscales, these views are nuanced and inextricably linked to both culture and cancer stages, as summarized below.

#### **"Culture-related negative medications beliefs" (focus group) and "side-effects" (S-BQT)**

Participants' extreme resistance to opioids appeared to be associated with their strong "culture-related negative medications beliefs" and is confirmed by the higher scores of "side-effects".

They suggested that negative medication beliefs are broadly held by Chinese people, with many believing that all medications, including anti-cancer and pain medications, are considered toxic. It was perceived that chemotherapy and other anti-cancer treatments caused an accumulation of toxins in the body. Taking strong analgesics while receiving cancer treatment was perceived to be an extra burden to the body and thus best avoided.

Although weak analgesics were considered less harmful, participants even stopped taking paracetamol to avoid further damage to their bodies during their cancer treatment.

#### **"Western biomedical model-related opioid fears" (focus group) and "side-effects", "addiction" and "as needed" (S-BQT)**

Apart from "culture-related negative medication beliefs", "western biomedical model-related opioid fears", such as concerns on addiction, side-effects, and unexpected health implications also

led participants to reject or poorly adhere to opioids. There was also a perception that the side-effects of opioids might be amplified during the cancer treatment.

Because of a misconception that taking too much medication could cause dependence and tolerance, they would only take weak analgesics even when they were in severe pain. These barriers to using opioids were confirmed by participants' higher scores of "side-effects", "addiction", and "as needed".

#### **"Opioids extend life for people with terminal cancer pain" (focus group) and "tolerate" (S-BQT)**

Despite these negative medication beliefs and opioid fears, participants stated that they would not hesitate to take these medications if they were at the end of life, due to fear of being touched by severe pain associated with disease progress. Some participants even believed that opioids might act to extend their life by reducing the severe pain. This belief was associated with a higher score of "tolerate". Since participants perceived that opioids should be saved for severe pain at the end-stage of cancer, they would endure their pain and postpone taking opioids as long as they felt they were able to control their pain.

## **Discussion**

The findings suggest that Chinese migrants living with cancer experienced uncontrolled chronic cancer pain, which has negatively affected their physical and psychosocial well-being. The drivers underpinning their reluctance to report pain and/or resistance to opioids are culture-related and require culturally congruent ways to ensure optimal pain management.

While Chinese migrants' western biomedical model-related opioid fears are similar to those of people from western or Chinese cultures (Yates et al., 2002; Jacobsen et al., 2009; Oldenmenger et al., 2009; Flemming, 2010; Luckett et al., 2013; Xu et al., 2018), their culture-related negative medication beliefs have deepened this fear. Their beliefs about being poisoned by cancer therapy drugs and the harm of opioids to their bodies may result in their extreme resistance to opioids and poor adherence to weak analgesics, particularly during their cancer treatment.

These culture-related negative medication beliefs are likely rooted in the ancient theory of TCM. Chinese people have an old saying that "a medication has three-point of poison components" (Wang, 2018). This saying warns Chinese people about the side-effects of medications and addresses the importance of medication safety. Yet, some Chinese people may be overcautious about medication use if they interpret the side-effects as being toxic (Wang, 2018).

Routine pain screening at each clinic visit combined with close monitoring of opioid side-effects may enable early educational

**Table 5.** Integration of the focus group findings and S-BQT results

Focus group findings (QUAL)		S-BQT (qual)					
Themes	Sub-themes	Key elements extracted from themes/subthemes	Consequence	Results of Subscale	Item descriptions*	Convergence label	
Conflicting views on using opioids for cancer pain	Culture-related negative medication beliefs	All medications are harmful	Rejection of opioids	Higher score of "side-effects"	Pain medication will cause harm to kidney or liver or stomach	Confirmed and deepened	
		All medications including anti-cancer and pain medications are toxic Opioids are poisons and are harmful to the vital organs	Endurance of pain or only taking weak analgesics Reduction of the dose or rejection of weak analgesics during cancer treatment				
	Western biomedical model-related opioid fears	Extreme concerns about side-effects of opioids Frightened of severe opioid side-effect experiences	Rejection of opioids Endurance of pain				
		Fear of addiction to opioids	Rejection of opioids or poor adherence to opioids Denial of being using opioids	Higher score of "addiction"	I am afraid to get addicted to pain medication	Confirmed and deepened	
		Taking too many medications can cause drug resistance and dependence	Only taking opioids when needed	Higher score of "as needed"	Pain medications are better given on an as-needed instead of on an around-the-clock basis	Confirmed and deepened	
Opioids extend life for people with terminal cancer	Afraid of losing control to extreme pain Fear of being tortured to death by the severe pain Strong pain relief extending life at the end stage of cancer	Saving opioids for severe pain Being willing to take opioids at the end stage of cancer	Higher score of "tolerate"	Pain medication should be "saved" in case of pain	Confirmed and deepened		
Cultural values and beliefs	Cancer pain is inevitable	Pain is an inevitable part of cancer treatment	Rejection/delay in receiving pain treatment	Higher score of "fatalism"	Pain medication cannot really control the pain	Confirmed and deepened	
		Cancer treatment taking precedent over pain management	Acceptance of pain Normalization of pain				
		Survival more important than the pain relief					
	Chinese people express their pain differently compared to local people	Cancer pain the indication of cancer recurrence	Eager to find the cause of pain but rejecting pain medications	Moderate score of "disease progress"	The experience of pain is a sign that illness has become worse	Contradicted	
		More reserved	Unwilling to ask for help for pain Normalization of pain	Higher score of "a desire to be good"	Doctors and nurses might find it annoying to be told about pain	Confirmed and deepened	
High expectation of bearing pain	Endurance of pain	Moderated score "fear of distracting physicians"	The patients often complain to doctors about the pain, which might distract the doctor's attention from curing the disease	Confirmed and deepened			

(Continued)

Table 5. (Continued.)

Focus group findings (QUAL)				S-BQT (qual)		
Themes	Sub-themes	Key elements extracted from themes/subthemes	Consequence	Results of Subscale	Item descriptions*	Convergence label
Philosophical health beliefs	Cancer pain is self-provoked	Deserving of the pain as cancer is self-provoked Acceptance of pain can relieve psychological distress	Acceptance of cancer and cancer pain Endurance of pain	Lower score of "religious fatalism"	I am predestined to bear pain	Contradicted
	The body can self-heal	Human being's body can self-heal Strong-willed in self-control of the pain	Preference for using a healthy regimen to promote self-healing and avoid the harm of opioids Normalization of pain	Not applicable		Complemented and extended

\*The scores of S-BQT and its subscales are graded as lower (0–1), moderate (2–3) and higher (>3) (Chou et al., 2011).

interventions (Australian Adult Cancer Pain Management Guideline Working Party, 2016) addressing Chinese migrant cancer patients' potential negative medication beliefs and cultural values and beliefs in relation to cancer pain, to assist them overcoming barriers of pain reporting and use of opioids when they are receiving cancer treatment.

Health professionals also need to be aware that Chinese migrant cancer patients' attitudes towards opioids may change over time, especially as their cancer progresses. Being cognisant of the potential for this change in Chinese migrants' acceptance of opioids is important for health professionals, in that they could adjust the focus of their consultations and interventions accordingly to introduce opioids towards the end of life of these patients.

As well as considering the role of Chinese migrants' philosophical health beliefs in shaping the barriers to cancer pain reporting and using opioids, health professionals should understand that people's philosophical views can also make positive contributions to their capacity of coping with the difficulties related to their illness (Leininger, 2002a). An acceptance of cancer pain and, at the same time, strong willingness to control pain themselves, were central for participants in the current study to maintain their social identity and psychological well-being. These beliefs may drive them to find other healthy ways of strengthening their body and controlling their pain. For many patients, this means that a health regimen and non-pharmacological management including TCM may be more preferable over opioids for their pain treatment.

This preference is in keeping with the value Chinese people place on harmony, which is a philosophical idea originating from ancient Chinese culture and underpinning TCM (Chen and Yan, 2010; Ip, 2014). The strong willingness to self-control pain may reflect cancer patients' desire to regain a sense of control over their life that has been eroded by both disease and its treatment (Narayan, 2010). Health professionals need to be careful not to undermine such positive contributions when trying to address related barriers. Managing this balance requires nuanced negotiation with each individual to explore the culturally acceptable parameters of behavioral change.

There are a number of methodological limitations to this study. Patients with poor health conditions were not able to

participate, and most of the participants were older women with breast cancer recruited via three Chinese cancer support groups in Sydney. Men made up only 2/24 of the sample, especially limiting generalizability to male Chinese migrants with cancer. This is important because previous research with nationalist Chinese people with cancer has found men to be more accepting of pain (Xu et al., 2019) but women to be more hesitant to take analgesics (Chou et al., 2018). Indeed, such cultural factors may themselves have been responsible for the low participation rates by men. The findings also may not represent the perspectives of younger Chinese migrants, those living in other parts of Australia or other Western countries, or those who have not been proactive and/or culturally interested enough to join a Chinese cancer support group. Caution is especially needed not to derive any conclusions from the quantitative results alone, since the value of quantitative data in mixed methods studies lies in their integration with the qualitative component rather than in any stand-alone sense (Creswell and Plano Clark, 2018). Future quantitative research with a large, representative sample is needed to test the generalizability of our findings to the whole population of Chinese migrants with cancer and pain.

Strengths of this study include the fact it was undertaken by a multi-disciplinary group of researchers, which included people with both Chinese and Anglo-Australian cultural backgrounds and associated languages. Inclusion of both emic and etic perspectives is likely to have improved the likelihood that culture-related data were not missed, and added to the richness of interpretation at analysis. At the same time, the similarity in views expressed by participants in the current study with those conducted in other Chinese populations suggests that findings may be generalized to people who strongly maintain a Chinese identity regardless of where they are living.

## Conclusion

Cultural values and beliefs, as well as philosophical health beliefs of Chinese migrant cancer patient in relation to cancer, cancer pain, and opioids, may have an impact on their pain reporting and willingness to take opioids. There is a need to integrate conversations about these beliefs into routine cancer pain assessment



and to work collaboratively with the person to devise an optimal culturally congruent pain management plan, which should include non-pharmacological strategies wherever possible and consider the use of TCM.

**Acknowledgments.** The authors would also like to express their gratitude to all investigators, care coordinators, and/or research nurses at the study sites, and CanRevive in Sydney for their assistance in promoting this study.

**Funding.** This study was funded by an Annual Research Grant of Cancer Nurses Society of Australia in 2017. It was part of the doctoral project of Dr Xu who was supported by an Australian Government Research Training Program.

**Conflict of interest.** The authors have no conflicts of interest to declare.

## References

- American Cancer Society** (2019) *Facts About Cancer Pain*. Available at: <https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/pain/facts-about-cancer-pain.html>
- Australian Adult Cancer Pain Management Guideline Working Party** (2016) *Cancer Pain Management in Adults*. Available at: [http://wiki.cancer.org.au/australia/Guidelines:Cancer\\_pain\\_management](http://wiki.cancer.org.au/australia/Guidelines:Cancer_pain_management) (Retrieved 15 June).
- Australian Bureau of Statistics** (2017) *Census of Population and Housing: Reflecting Australia – Stories From the Census, 2016*. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/2071.0> (Retrieved 26 November).
- Bazeley P** (2013) *Qualitative Data Analysis: Practical Strategies*. London, UK: Sage.
- Chen L-Y and Yan S-Y** (2010) Embodiment of “harmony” in the concept of well-being of China. *Zhonghua yi shi za zhi (Beijing, China: 1980)* **40**(5), 274–277.
- Chou P-L, Rau K-M and Lin C-C** (2011) Development and psychometric testing of a short version of the barriers questionnaire-Taiwan form for cancer patients. *International Journal of Nursing Studies* **48**(9), 1071–1079.
- Chou P-L, Fang S-Y, Sun J-L, et al.** (2018) Gender difference in cancer patients’ adherence to analgesics and related outcomes of pain management. *Cancer Nursing* **41**(6), E11–E18.
- Creswell J and Plano Clark V** (2018) *Design and Conducting Mixed Methods Research*. Los Angeles, California, USA: Sage Publications, Inc.
- Dayer-Berenson L** (2014) *Cultural Competencies for Nurses: Impact on Health and Illness*. Burlington, MA, USA: Jones & Bartlett Publishers.
- Dein S** (2005) *Culture and Cancer Care: Anthropological Insights in Oncology*. Maidenhead, UK: McGraw-Hill Education (UK).
- Federation of Ethnic Communities’ Councils of Australia** (2010) *Cancer and Culturally and Linguistically Diverse Communities*.
- Flemming K** (2010) The use of morphine to treat cancer-related pain: A synthesis of quantitative and qualitative research. *Journal of Pain and Symptom Management* **39**(1), 139–154.
- Guest G and MacQueen KM** (2008) Reevaluating guidelines in qualitative research. *Handbook for team-based qualitative research*, 205–226.
- Ip P-K** (2014) Harmony as happiness? Social harmony in two Chinese societies. *Social Indicators Research* **117**(3), 719–741.
- Jacobsen R, Moldrup C, Christrup L, et al.** (2009) Patient-related barriers to cancer pain management: A systematic exploratory review. *Scandinavian Journal of Caring Sciences* **23**(1), 190–208.
- Leininger M** (2002a) Culture care theory: A major contribution to advance transcultural nursing knowledge and practices. *Journal of Transcultural Nursing* **13**(3), 189–192.
- Leininger M** (2002b) Part I. The theory of culture care and the ethnoscience research method. *Transcultural Nursing: Concepts, Theories, Research and Practice* **13**, 71–98.
- Luckett T, Davidson PM, Green A, et al.** (2013) Assessment and management of adult cancer pain: A systematic review and synthesis of recent qualitative studies aimed at developing insights for managing barriers and optimizing facilitators within a comprehensive framework of patient care. *Journal of Pain and Symptom Management* **46**(2), 229–253.
- McFarland MR and Wehbe-Alamah HB** (2015) The theory of culture care diversity and universality. In McFarland MR & Wehbe-Alamah HB (eds.), *Leininger’s Cultural Care Diversity and Universality: A Worldwide Nursing Theory*, 3rd edn. Burlington, MA: Jones & Bartlett Learning. 1–71.
- Narayan MC** (2010) Culture’s effects on pain assessment and management. *AJN The American Journal of Nursing* **110**(4), 38–47.
- Oldenmenger WH, Smitt PAES, van Dooren S, et al.** (2009) A systematic review on barriers hindering adequate cancer pain management and interventions to reduce them: A critical appraisal. *European Journal of Cancer* **45**(8), 1370–1380.
- Tashakkori A, Johnson RB and Teddlie C** (2020) *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences*. Los Angeles, California, USA: Sage Publications.
- Van Den Beuken-Van MH, Hochstenbach LMJ, Joosten EAJ, et al.** (2016) Update on prevalence of pain in patients with cancer: Systematic review and meta-analysis. *Journal of Pain and Symptom Management* **51**(6), 1070–1090.
- Wang J** (2018) Correct Interpretation of “A Medication has Three-Point of Poison Components”. <http://www.wsjsw.gov.cn/jtyx/20180729/56203.html> (Retrieved 22 February).
- Wehbe-Alamah HB and McFarland MR** (2015) Leininger’s enablers for use with the ethnoscience research method. In McFarland MR & Wehbe-Alamah HB (eds.), *Leininger’s Cultural Care Diversity and Universality: A Worldwide Nursing Theory*, 3rd edn. Burlington, MA: Jones & Bartlett Learning. 73–100.
- Wells N, Johnson RL and Wujcik D** (1998) Development of a short version of the barriers questionnaire. *Journal of Pain and Symptom Management* **15**(5), 294–297.
- Williamson M and Harrison L** (2010) Providing culturally appropriate care: A literature review. *International Journal of Nursing Studies* **47**(6), 761–769.
- World Health Organization** (2015) *WHO’s Cancer Pain Ladder for Adults*. <http://www.who.int/cancer/palliative/painladder/en/> (Retrieved 10 September).
- Xu X, Luckett T, Wang AY, et al.** (2018) Cancer pain management needs and perspectives of patients from Chinese backgrounds: A systematic review of the Chinese and English literature. *Palliative & Supportive Care* **16**(6), 785–799.
- Xu X, Ou M, Xie C, et al.** (2019) Pain acceptance and Its associated factors among cancer patients in mainland China: A cross-sectional study. *Pain Research and Management* **2019**, 9458683. doi:10.1155/2019/9458683
- Yarbro CH, Frogge MH and Goodman M** (2004) *Cancer Symptom Management*, Vol. 1. Burlington, MA: Jones & Bartlett Learning.
- Yates PM, Edwards HE, Nash RE, et al.** (2002) Barriers to effective cancer pain management: A survey of hospitalized cancer patients in Australia. *Journal of Pain and Symptom Management* **23**(5), 393–405.