

Original Article

Cultural adaptation of the Pan-Canadian Oncology Symptom triage and remote support practice guide for cancer-related fatigue in China: Integration of traditional Chinese medicine nursing evidence



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ABSTRACT

Objective: This study aimed at culturally adapting pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) Cancer-related fatigue (CRF) Practice Guide to enable its use in China. This article focuses on presenting the key cultural adaptation step: supplementing traditional Chinese medicine (TCM) nursing recommendations for CRF symptom management according to evidence.

Methods: Guided by A Guideline Adaptation and Implementation Planning Resource (CAN-IMPLEMENT), the process for cultural adaptation of the CRF guide in the COSTaRS project included translation, expert committee review, acceptability and feasibility assessment, and targeted adaptation to include TCM nursing techniques for CRF management via the Delphi method.

Results: First, an expert committee of nurses, nurse leaders, and researchers was established. The practice guide was translated and verified by the members of the expert committee. Nurses then rated the practice guide for acceptability and feasibility. Concurrently, 83 stakeholders (nurses and patients) identified five relevant TCM nursing techniques: acupuncture, moxibustion, acupressure therapy, Taijiquan, and auricular acupoint embedding. A systematic review of literature identified three clinical practice guidelines and four systematic reviews. Through two rounds of Delphi expert consultation, five TCM care strategies were added into the culturally adapted COSTaRS practice guide.

Conclusions: Cultural adaptation of the Canadian CRF practice guide involved not only language translation but also the addition of relevant TCM evidence. Combining TCM evidence and the Delphi method was a novel aspect of the cultural adaptation process. Further research is needed to investigate the implementation of the guide in appropriate settings in China.

Introduction

As medical advances continue to improve the survival rates of patients with cancer each year, improving patient quality of life is becoming increasingly important.¹ Cancer-related fatigue (CRF) is one of the most common symptoms in cancer survivors and the most troubling adverse effect of cancer treatment. Estimates of CRF prevalence have been reported to range from 30% to 99%.^{2,3} CRF affects patients' personal,

social, and work lives and has profoundly negative effects on overall quality of life.^{4,5} Despite the high prevalence of fatigue and its substantial influence on quality of life, routine screening of patients with cancer for fatigue and guidance for fatigue management has not received adequate attention in China.⁶ This lack of treatment may be because CRF is a subjective perception and may be easily dismissed when the focus is on pain, nausea, vomiting, or other symptoms and because evidence and tools to effectively manage CRF are lacking.⁷

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Many tools have been developed to assess CRF, ranging from unidimensional to multidimensional scales. The seven most frequently used scales include the brief fatigue inventory,⁸ the functional assessment of chronic illness therapy-fatigue scale,⁹ the multidimensional fatigue symptom inventory,¹⁰ fatigue symptom inventory,¹¹ the revised piper fatigue scale,¹² multidimensional fatigue inventory (MFI-20),¹³ and the visual analog scale.¹⁴ However, all these scales are of foreign origin and their clinical use is not yet standardized. Most of these scales are intended to assess the severity, duration, and impact on quality of life of fatigue, but none of them are combined with symptom management for fatigue. The symptom management of CRF is mostly based on the guideline issued by National Comprehensive Cancer Network (NCCN),¹⁵ but there is no Chinese version of the NCCN guideline and it has not been clinically applied in recent years, only some scholars have interpreted it.^{6,16} The only relevant guideline available in China is the Clinical Nursing Guideline for CRF in adults, developed by Tian L et al.,¹⁷ which has evidence on traditional Chinese medicine (TCM) nursing but has not yet been applied in clinical practice due to its recent publication. Furthermore, given that few institutions in China utilizing guidelines,^{18,19} no studies regarding the application of guidelines for symptom management of CRF have come forth. Therefore, it is critical to explore user-friendly practical tools for assessing and managing CRF symptoms to assist nurses in applying guidelines to help oncology patients manage CRF symptoms wisely.

Cancer symptom management by nurses in Canada has been guided by the pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) practice guides, which have been used for more than 10 years.^{20,21} The COSTaRS research team developed 17 practice guides for common cancer symptoms, guided by the CAN-IMPLEMENT framework, and implemented them in nursing practice by following the knowledge to action framework.^{22,23} Each of the practice guides was based on a systematic review of the literature to identify clinical practice guidelines and systematic reviews on evidence-based symptom management. The current version of the practice guides, including one for CRF, published in 2020, was validated by oncology nurses from across Canada.²¹ The strength of the COSTaRS project, in contrast to conventional guidelines, is that the practice guides are designed to be user-friendly by following a standardized format that is easy for nurses to use and includes check-boxes and flowcharts. For example, the CRF guide is divided into five sections: assessing the severity of CRF, classifying patients according to the highest severity for symptom management, reviewing patients' medications for CRF, reviewing patients' self-care strategies, and summarizing and documenting the plan agreed upon with patients.²¹ In addition, the COSTaRS research team has created resources to support implementation by nurses and to evaluate evidence-based nursing practice.²⁴ We received permission to translate and culturally adapt the COSTaRS practice guides for use in China.

An important difference in the cultural and medical environments between China and Canada is the wide use of TCM nursing in China. At present, Western medicine is widely used to treat CRF in clinical settings, but its effectiveness has a short duration, and the adverse effects of drugs are substantial and may potentially aggravate CRF symptoms. Studies are increasingly using complementary and alternative medicine (CAM) as an intervention measure for patients with cancer and CRF and have achieved good results.²⁵⁻²⁷ The most recent guidelines issued by NCCN also recommend the use of CAM for the management of CRF.¹⁵ Among CAM methods, TCM nursing is an important component of CAM based on syndrome differentiation theory, combining the patient's etiology and symptoms to propose appropriate interventions.²⁸ Although the recommendation level and evidence strength for TCM nursing for CRF in the NCCN guideline are not high, this may be because the systematic reviews included in the NCCN are currently only based on studies published in English and do not include studies published in Chinese.¹⁵ However, in reality, TCM nursing has the unique advantage of simple operation, low treatment cost, good clinical efficacy, and avoidance of the toxic adverse effects of oral drugs, thus helping to improve patient quality of life.²⁹⁻³²

According to TCM theory, CRF is a consumptive disease due to disorders in viscera function, and insufficiencies in the Qi and blood, and Yin and Yang. TCM nursing, such as auricular acupressure, tui-na and musicotherapy, regulate visceral function, reinforce Qi, activate the blood, and restore the balance of Yin and Yang.³³ For example, a study by Chen has described the effect of Taiji in improving CRF symptoms in patients with breast cancer by relieving patients' tension and anxiety.³⁴ A meta-analysis by Han has reported that moxibustion can help patients having cancer relieve symptoms of local fatigue.³⁵ Li's master's thesis has confirmed the relief effects and mechanisms of auricular acupressure on CRF.³⁶ Moreover, the Chinese patients having cancer exhibit a considerable inclination toward embracing TCM nursing and they are proactive in seeking assistance from TCM nursing.^{37,38} Additionally, owing to the robust backing of the national policies for TCM in China, the development of TCM nursing has been remarkably accelerated in recent years,^{39,40} which has achieved some results in the application and dissemination of TCM nursing techniques in clinical practice,⁴¹ as well as produced high-level evidence supporting the effectiveness of TCM nursing in treating CRF.^{17,42,43} It is necessary to supplement the COSTaRS practice guide with evidence from TCM nursing to make the guide more culturally relevant, broaden the guide's evidence base, and provide more diverse symptom management options to enable comprehensive, scientific symptom management for patients with CRF in China and even patients from other countries. Therefore, the main aim of this study was to culturally adapt the COSTaRS CRF practice guide according to evidence from TCM nursing techniques via the Delphi method. Owing to length limitations of this publication, this article focuses on the stage of integration of TCM nursing evidence in the entire process of cultural adaptation; additional stages are presented in [Appendix A](#).

Methods

Study design

The cultural adaptation of the COSTaRS practice guide for CRF was guided by the CAN-IMPLEMENT theoretical framework.²³ Certain steps from the CAN-IMPLEMENT procedure were modified within its primary framework to align with the study's objectives and local circumstances. First, we established a cultural adaptation panel including two evidence-based methodologists and four nursing researchers who provided methodological expertise, as well as two clinical oncology nursing experts and two hospital administrators who provided clinical expertise (selection criteria and information on the experts are detailed in [Appendix B](#)).

The four stages of this study ([Fig. 1](#)) were as follows: (1) translating the CRF practice guide; (2) assessing the acceptability and feasibility of the CRF practice guide; (3) supplementing TCM nursing recommendations for CRF symptom management according to evidence; (4) integrating TCM with Western medicine and evaluating the final CRF practice guide. Stage 3, the focus of this article, included four sub-stages: (1) identification of key TCM nursing techniques; (2) literature retrieval and screening; (3) quality appraisal and evidence synthesis; (4) formulating recommendations for TCM nursing through the Delphi method.

Stage I: Translating CRF COSTaRS practice guide

The CRF COSTaRS practice guide was translated, synthesized, and reviewed by an expert committee with reference to the cultural adaptation guideline developed by American Academy of Orthopedic Surgeons.⁴⁴ For additional information, please refer to [Appendix A](#).

Stage II: Assessing the acceptability and feasibility of CRF COSTaRS practice guide

A questionnaire survey was conducted from July to October 2021 among health professionals who work in oncology departments at three class III grade A hospitals in Beijing using a self-designed questionnaire

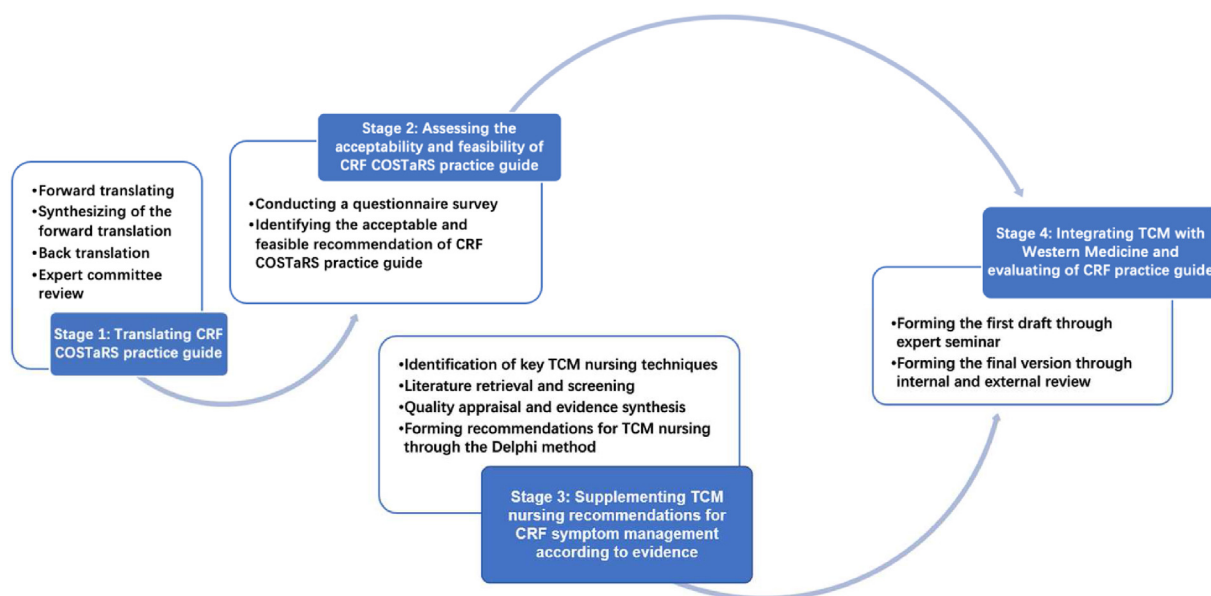


Fig. 1. Summary of the cultural adaptation process.

called “Acceptability and Feasibility Questionnaire of CRF COSTaRS practice guide” (See Appendix C for details.). The respondents were required to rate their perceived acceptability and feasibility regarding each recommendation’s inclusion within the CRF COSTaRS practice guide, using the widely accepted 5-point Likert rating scale (in which “1” represents the lowest level and “5” represents the highest level). Recommendations with acceptability and feasibility scores equal to or greater than 3 points were included. The questionnaire consisted of 15 items, and we obtained our sample size by applying a range between 5 and 10 times the number of questionnaire items. When taking into account a potential follow-up loss of 10%, our estimated sample size is comprised 80–165 individuals. For additional information, please refer to Appendix A.

Stage 3: Supplementing TCM nursing recommendations for CRF symptom management according to evidence

Identification of key TCM nursing techniques

The cultural adaptation panel conducted a preliminary literature search to identify TCM nursing techniques for CRF. On the basis of the findings together with the clinical experience of experts in the panel, the “Questionnaire on key TCM nursing techniques related to symptom management of CRF” was created to elicit information from stakeholders (details in Appendix D).

Purposeful sampling was used to recruit a wide range of experts including clinical staff, nursing administrators, researchers, professional associations such as clinical societies, guideline developers, and patients with cancer and their families. Eligible participants were (1) ≥ 18 years of age; (2) able to read in Chinese to complete the questionnaire independently or under the guidance of the investigator; (3) had some knowledge of CRF.

After consenting to participate in the study, participants were asked to rate the importance of the CRF-related TCM nursing techniques on a scale of 1–5 (where 1 was least important and 5 was most important) and to write a rationale for their ratings or provide comments. TCM nursing techniques with scores greater than or equal to 3 were included. Descriptive analysis reported the means and standard deviations for the importance of each research question. Comments were analyzed to determine whether additional TCM nursing techniques should be added.

Literature retrieval and screening

The methodologists on the team conducted a systematic review to identify evidence supporting TCM nursing techniques. An extensive search was conducted on the following (1) clinical practice guideline websites: National Guideline Clearinghouse, New Zealand Guidelines Group, Guidelines International Network, Registered Nurses’ Association of Ontario, Scottish Intercollegiate Guidelines Network, National Institute for Health and Clinical Excellence, and China Medlive; (2) oncology professional association websites: BC Cancer Agency, Cancer Care Ontario, National Institutes of Health, NCCN, and Oncology Nursing Society; (3) Chinese databases: China National Knowledge Infrastructure, China Biomedical Literature Database, China Science and Technology Journal Database, and WanFang Database; (4) English databases: PubMed, Web of Science, Proquest, Springer, JBI, and Cochrane. The search flowchart is shown in Fig. 2, and search strategies are provided in Appendix E.

The inclusion criteria were as follows: (1) study participants of adult patients with CRF; (2) interventions of key TCM nursing techniques identified in the previous step (IIIa) (acupuncture, moxibustion, Taijiquan, auricular acupoint embedding or acupressure therapy); (3) controls involving routine care, such as daily care, dietary care or psychological care; (4) outcomes of effectiveness and adverse effects of the above TCM nursing interventions; (5) study types of evidence-based guidelines and systematic reviews; (6) publication language of Chinese or English. The exclusion criteria were as follows: (1) duplicate publications; (2) incomplete information related to study participants, interventions, controls, and outcomes; (3) inaccessible full-text literature.

The identified literature was independently screened by two researchers with systematic knowledge of evidence-based medicine. The initial screening was based on titles and subsequently full text. When disagreement arose between screeners, agreement was reached through joint discussion.

Quality appraisal and evidence synthesis

The included literature was appraised independently by two researchers with systematic knowledge of evidence-based medicine. Clinical practice guidelines were evaluated with AGREE II,⁴⁵ and the quality of systematic reviews was appraised with Assessment of Multiple Systematic Reviews 2.⁴⁶

Because the eligible evidence came from different sources, we developed the following principles for evidence synthesis: (1) when the evidence was consistent, the most concise and clear evidence was chosen;

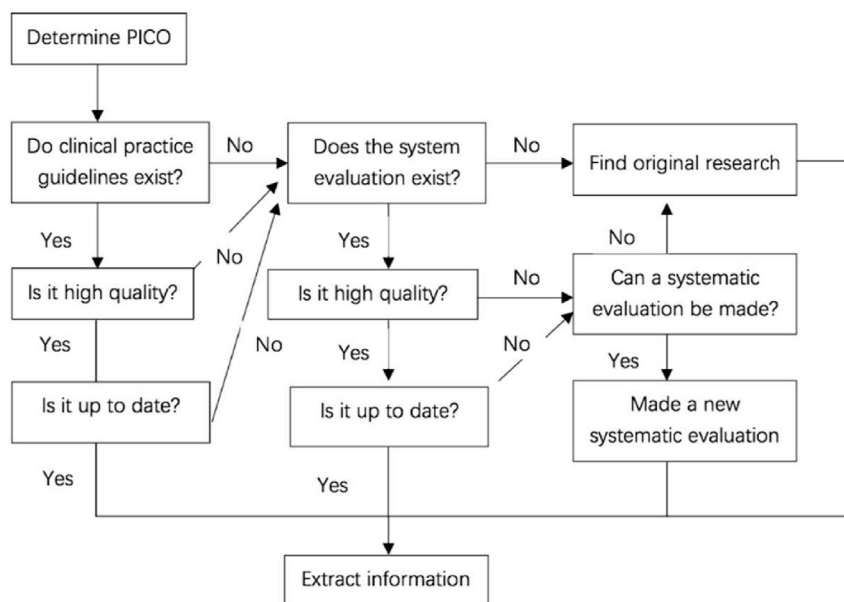


Fig. 2. Flowchart of the search.

(2) when the evidence was complementary, it was combined into a complete paragraph in the recommendation, on the basis of the logical relationship between statements; (3) when the evidence was conflicting, high-quality evidence and the latest published authoritative literature was prioritized; (4) when the evidence was independent, the original statement was retained. Evidence grading was performed by two researchers independently using the JBI evidence pre-grading system to classify the level of best evidence.

Formulating recommendations for TCM nursing through the Delphi method

A two-round Delphi method was used to transform the individual opinions of experts in a field into a group consensus.^{47–49}

Questionnaire development for the round 1 Delphi survey. We developed a questionnaire for expert consultation on the basis of the synthesis and grading of evidence. The round 1 survey included three sections: (1) background introduction, providing a brief introduction to the background, purpose and significance of our study; (2) an expert consultation form for TCM nursing recommendations, including instructions for filling out the form, the source of evidence, level of evidence quality, the terms of the recommendations and their grades; Feasibility, Appropriateness, Meaningfulness and Effectiveness score assessment;^{50,51} the strength of recommendations to be filled in; and an expert opinion column for providing comments; (3) an expert authority survey, including general information, the expert's judgment of the degree of familiarity with the study content and the basis for judgments. Details can be found in [Appendix F](#).

Panel identification and recruitment. A purposeful sampling method was used to recruit an expert panel consisting of Chinese health professionals who were required to have a bachelor's degree or higher and at least 5 years of experience in clinical oncology, nursing management, or nursing education.

Data collection and analysis. Eligible participants were asked to complete the survey. The expert authority coefficient (Q) was used as the statistical index of reliability analysis.⁵² Specific weight assignments and the calculation methods are provided in [Appendix G](#).

The survey statements used a five-point Likert scale to evaluate the feasibility, appropriateness, meaningfulness, and effectiveness of TCM nursing recommendations (where 1 indicated the lowest degree and 5 indicated the highest degree). Participants were asked to select the rightmost column. In an open-ended text box at the end of every section,

participants were also asked to comment on the existing statements or propose new statements.

After round 1, statistical analyses were performed in Stata, and descriptive analysis was conducted to determine the means and standard deviations for the Feasibility, Appropriateness, Meaningfulness and Effectiveness scores of each research question, to provide basis for ranking the order of recommendations. The strength of recommendation cutoff was $\geq 60\%$ of participants: if the selection of recommendation strength did not reach 60%, the statements were re-rated in round 2, whereas statements rated as retainable by $\geq 60\%$ of participants in round 1 were immediately included in the CRF practice guide.⁵³ Comments were analyzed and, if they included new and actionable information, were written into items and included in the round 2 survey.

Stage IV: Integrating TCM with western medicine and evaluating the final CRF practice guide

In this stage, we formed the first draft of the TCM and Western medicine CRF practice guide through an expert seminar and finalized it through an internal review and external review. For additional information, please refer to [Appendix A](#).

Ethical considerations

The study was approved by the Ethics Committee of Beijing University of Chinese Medicine (IRB No. 2021BZVLL0307). All participants provided written informed consent.

Results

Stage I: Translation of COSTaRS practice guide for CRF

Following the conclusion of the expert committee, there existed six statements that require modification. Please refer to [Appendix A](#) for an illustrative instance.

Stage II: Assessing the acceptability and feasibility of CRF COSTaRS practice guide

96 valid questionnaires were included and the scores were all greater than or equal to 3, forming the Chinese version of the

Table 1
Characteristics of stakeholders ($n = 83$).

Stakeholder status	n (%)
Patients and their families	27 (32.53)
Nursing staff	57 (68.67)
Clinicians/healthcare workers	2 (2.41)
Organizations of professional associations	2 (2.41)
Research worker	17 (20.48)
Guideline developers	3 (3.61)
Policy makers/decision makers	1 (1.20)
Other	1 (1.20)

Because the same person might have had multiple identities, the number of stakeholders may exceed 83, and the number (%) may sum to $> 100\%$.

COSTaRS CRF guide. The corresponding scores can be found in [Table A.1](#) of [Appendix A](#).

Stage III: Supplementing TCM nursing recommendations for CRF according to evidence

Identification of key TCM nursing techniques

Of the 84 questionnaires sent out, 83 were valid (response rate 98.81%). The largest proportion of stakeholders comprised nursing staff (68.67%); patients and their families (32.53%); researchers (20.48%) ([Table 1](#)). The importance scores in the questionnaires all exceeded 3 ([Table 2](#)). Participants added an additional nursing technique (auricular embedding) to the four TCM nursing techniques on the questionnaire. The five TCM nursing techniques were acupuncture therapy, moxibustion therapy, acupressure therapy, Taijiquan, and ear point embedding.

Literature retrieval and screening

The initial search of the literature for this study in July 1, 2021 yielded 257 articles. After title screening and subsequent full-text screening, the results included three guidelines (including an updated guideline from NCCN) and four systematic reviews ([Table 3](#)). Seven randomised controlled trials (RCTs) were included (details in [Appendix H](#)) but were used only for expert reference during the Delphi expert consensus procedure rather than as evidence directly included.

Quality appraisal and evidence synthesis

The quality scores for the three guidelines were high overall, and all were of A quality ([Table 4](#)). The overall quality of the four systematic reviews was low because none declared the pre-implementation study protocol, the source of funding for individual studies, or the authors' conflicts of interest ([Table 5](#)).

For each TCM nursing technique, we identified recommendations regarding the applicable population, effectiveness, methods of intervention, frequency of intervention, duration, and adverse effects, on the basis of the principles of evidence synthesis. The level of evidence was determined. As an example, the evidence synthesis table for moxibustion for CRF is provided in [Appendix J](#).

Table 2
Importance rating for TCM nursing techniques for symptom management of CRF.

TCM nursing techniques	n	Mean \pm SD
Acupuncture	83	3.49 \pm 1.17
Moxibustion therapy	83	4.15 \pm 1.10
Acupressure	83	3.81 \pm 1.09
Tai chi	83	3.64 \pm 1.20
Auricular embedding ^a	1	5.00

Range 1 to 5. TCM, traditional Chinese medicine; CRF, cancer-related fatigue.

^a TCM nursing techniques added by stakeholders.

Formulating recommendations for TCM nursing through the Delphi method

A total of 16 experts with research interests in oncology treatment, oncology nursing, nursing management, and nursing education were included. The familiarity of experts within the research field was 0.80–1.00, the coefficient of judgment basis was 0.8–1.00, the authority coefficient of academic level was 0.70–0.90, the authority coefficient of individual experts was 0.80–0.90, and the overall authority coefficient of experts was 0.85. The results of this expert validation were reliable and representative.

Because no consensus was reached regarding the retention of one recommendation and the strength of two recommendations after the first round of expert consultation, the second round of expert consultation mainly discussed these two recommendations. A total of 34 recommendations regarding five TCM nursing techniques, including the applicable population, effectiveness, intervention time, intervention frequency, duration, and adverse effects, were finally drafted. Of these, 33 had strong recommendations, and one had weak recommendations. The scores given by the experts in the two rounds are shown in [Appendix K](#). The results of the evidence synthesis, ie, the recommendations, eg, for moxibustion therapy, are detailed in [Table 6](#).

On the basis of the consensus results, five TCM care strategies were added into the culturally adapted COSTaRS practice guide.

Stage IV: Integrating TCM with western medicine and evaluating the final CRF practice guide

The TCM and Western medicine CRF practice guide has passed both the internal and external review with high scores, as indicated in [Tables A.2](#) and [A.3](#). Following feedback from our internal review, we have incorporated explanatory materials to assist nurses in rapidly and accurately implementing the guide. The added material includes background information on the guide, usage methods, specific implementation techniques for each TCM nursing recommendation, along with other relevant content. For details regarding the final version of this guide and the explanatory material, kindly refer to [Appendix L](#) and [M](#).

Differences in statements between the guides for China and Canada

As summarized in [Table 7](#), no statements from the guide for Canada were excluded, but three statements were adapted culturally, and six new statements were added in the adapted guide; one section was added in the tutorial for nurses.

Discussion

In view of the differences in cultural and clinical milieus between China and other countries, and the abundant local evidence resources in China, particularly for TCM nursing, in this study, we culturally and linguistically adapted the Canadian COSTaRS CRF practice guide to assess the severity and support the management of CRF in China. The cultural adaptation process required an extensive systematic review to identify evidence for TCM nursing techniques and subsequently used the Delphi method to determine the consensus regarding TCM nursing techniques for CRF. All initial statements in the guide for Canada were included in the adapted guide for China, thus suggesting broad agreement between China and Canada regarding providing symptom management to oncology patients with CRF. However, TCM and TCM nursing, whose relevant evidence is not covered in the COSTaRS CRF guide, are indispensable treatment methods in China, whose integration was critical for the use of the CRF practice guide in the Chinese context.

The cultural adaptation of evidence-based guides should consider the evaluation of clinical applicability. Owing to differences in policy, law, cultural background, and professional differences between countries, the recommendations of foreign evidence-based guides may not be applicable for use in China. For example, some nurses abroad have the right to prescribe medications for patients (eg, licensed nurse practitioners),

Table 3
Characteristics of the included literature.

Incorporation of literature	Year of publication	Literature sources	Type of literature	Subject of the literature
NCCN ¹⁵	2021	NCCN	Evidence-based guidelines	Assessment and intervention for CRF
AHS ⁵⁴ a	2017	AHS	Evidence-based guidelines	Care of CRF in adults
Tian Li ¹⁷	2017	CNKI	Evidence-based guidelines	Care of CRF in adults
Han JQ ⁴²	2021	CNKI	Systematic reviews	Moxibustion intervention to relieve CRF
Yuan C ⁵⁵	2020	CNKI	Systematic reviews	Acupuncture, moxibustion intervention to relieve CRF
Huang SY ⁵⁶	2021	CNKI	Systematic reviews	Moxibustion intervention to relieve CRF
Hu Y ⁵⁷	2020	Wanfang	Systematic reviews	Acupuncture, moxibustion intervention to relieve CRF

a This guideline was already included in the COSTaRS 2020 version, but no evidence of acupuncture for CRF symptom management had previously been extracted. NCCN, National Comprehensive Cancer Network; CRF, cancer-related fat

whereas nurses in China cannot prescribe medications.⁶¹ Cannabis/cannabinoids are approved for the treatment of nausea and vomiting in the COSTaRS Practice Guides and are publicly available for over-the-counter purchase in Canada and some other countries. In contrast, narcotic drugs are strictly controlled in China, and Chinese patent medicines are more widely used⁶² but are less likely to be included in clinical practice guidelines elsewhere worldwide. Therefore, we added corresponding columns to the table in Section 3 to facilitate evaluation by Chinese nurses. As indicated by Amer et al,⁶³ the higher the clinical applicability of guides, the greater the extent to which they can be promoted and used in clinical practice. Therefore, in the cultural adaptation of evidence-based guidelines, attention should be paid to the evaluation of their clinical applicability and recommendations that are not relevant or are illegal in the medical context in China should be excluded.

Cultural adaptation of evidence-based practice guides must consider that many professional terms are used in the medical profession, and the translation must conform to the conventions and customs relevant to the target users. For example, "skipped heartbeat" in the medical profession should be translated to "心少跳" rather than the literal translation of "漏跳的心跳". The COSTaRS practice guide refers to patient support groups, but these types of groups are not available in China. Hence, cultural adaptation involves more than only translation into another language and requires careful review of the actual items in the practice guides.

Our findings on the acceptability and feasibility of CRF COSTaRS revealed that Chinese oncology medical staff did not pay sufficient attention to CRF and its management, and their related knowledge was not adequate, in agreement with the findings of Zhang et al.⁶⁴ For example, in our survey, some oncology medical staff believed the following: "Fatigue differs from pain. Fatigue does not belong to the category of disease, but is more caused by the condition of oncology patients, and nursing intervention may be problematic." In addition, the recommendation with the lowest acceptability and feasibility scores was item 13: "Have you tried home-based bright white light therapy?" Chinese researchers have only recently studied bright white light therapy interventions in patients with CRF.⁶⁵ Therefore, medical staff in China may not have substantial knowledge of the effects of this therapy in oncology, and the lack of knowledge and high-quality evidence in the context of CRF leads to low acceptability and feasibility, thus hindering CRF management. The above results suggested that understanding of

CRF itself and its management among medical staff must be improved. In this regard, the accompanying instructions and explanatory material developed in this study should help promote the use of techniques to achieve user-friendly guides.

In China, TCM nursing techniques, including cupping, moxibustion, acupuncture, auricular point pressing, and ear tip bloodletting, are extensively used and are favored by all types of patients because of their simplicity and affordability.^{66,67} Studies have shown that 42% of Americans have experienced CAM methods, a large portion of which are TCM nursing techniques, thus indicating high potential applicability and acceptability internationally.⁶⁸ In addition, existing research has indicated that TCM nursing effectively alleviates CRF, and combinations of treatment methods can effectively alleviate the clinical symptoms in oncology patients.⁶⁹ Considering the wealth of local evidence resources available, it is crucial to incorporate pertinent TCM nursing evidence beyond the confines of language. This will facilitate the utilization of complementary benefits inherent in both Chinese and Western medicine, resulting in a guide more suitable for China and enhanced international dissemination of TCM nursing techniques. In general, TCM syndrome types are highly summarized descriptions of various symptoms. Given the differences between the TCM and Western medicine systems, western medicine nurses often find the diagnosis and treatment anchored on Dialectical nursing obscure and difficult. Nevertheless, symptoms are universal to both TCM and Western medicine. Henceforth, this symptom guide represents a commendable effort and exemplar of complementary advantages from TCM nursing and modern medicine. However, challenges persist in the systematic and comprehensive evaluation of TCM nursing techniques. For example, our study found that moxibustion therapy was included in two guidelines and four systematic reviews; whereas, auricular embedding was included in only two RCTs rated to have a high risk of bias, given the difficulty in implementation of blinding. Although these original studies cannot be directly included as evidence in the CRF practice guides, they were still used as reference information in Delphi consensus. Even if the intervention information regarding TCM nursing techniques described in these studies is not directly included in the final practice guides, they nonetheless provide validation and add to the evidence supporting the intervention to some extent, and therefore may inspire rigorous original research in the future.

Table 4
Results of quality appraisal of clinical practice guidelines with AGREE II.

Incorporation of literature	Percentage (%) standardized for each area of the guide						Overall quality	Recommendation level ^a
	Scope and purpose	Stakeholder involvement	Rigor of development	Clarity of presentation	Applicability	Editorial independence		
NCCN ¹⁵	100.00	77.78	75.00	94.44	66.67	91.67	6.0	Grade A
AHS ⁵⁴	100.00	100.00	77.08	88.89	83.33	100.00	7.0	Grade A
Tian Li ¹⁷	100.00	100.00	87.50	83.33	91.67	100.00	7.0	Grade A

a Referring to the requirements of AGREE II⁵⁸ and previous studies,^{59,60} the results of the guideline appraisal are divided into three recommended levels: Grade A (recommended) for all six domains with scores $\geq 60\%$; Grade B (recommended, with modifications) for no less than three domains with scores $\geq 30\%$; Grade C (not recommended) for no less than three domains with scores $< 30\%$. NCCN, National Comprehensive Cancer Network.

Table 5
Quality appraisal of the systematic reviews with AMSTAR 2.

Authors, year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Rating
Han JQ et al, 2021 ⁴²	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	PY	Y	Y	N	Low
Yuan C et al, 2020 ⁵⁵	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Low
Huang SY et al, 2021 ⁵⁶	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Low
Hu Y et al, 2020 ⁵⁷	Y	N	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Low

Y, yes; PY, partial yes; N, no.

The numbers 1–16 represent the item numbers in AMSTAR 2; Appendix I includes the full list of questions and critical domains.

Table 6
Recommendations for moxibustion for CRF.

Categories	Recommendations	Recommended strength
Applicable patients	Moxibustion is suitable for adult patients with cancer who are under active treatment or have completed treatment, and is more effective after completion of anti-tumor treatment ^{15,55}	High
Validity	Moxibustion can relieve CRF in patients with cancer ^{15,17,42,55–57}	High
Security	Compared with the control group receiving routine care, a placebo control or another therapy consistent with the trial combination, moxibustion has a better safety profile for CRF ^{56,57}	High
Adverse effects	Compared with the control group receiving routine care, a placebo control or another therapy consistent with the trial combination, moxibustion has fewer adverse effects and may cause mild burns that are self-absorbing and do not require treatment ^{55,56}	High
Mode of intervention	Local moxibustion can relieve patients' fatigue; wheat moxibustion is the most effective, and medicinal moxibustion has high effectiveness ^{55,56}	High
Intervention points	Moxibustion acupuncture points can be chosen from the Foot San Li, San Yin Jiao, Qi Hai, Guan Yuan, and the acupuncture points of the five viscera and six internal organs ⁵⁶	High
Mixed interventions	Combined with other therapies, moxibustion can significantly improve the total effectiveness of CRF treatment ⁵⁷	High

CRF, cancer-related fatigue.

In summary, this study integrated TCM nursing evidence for CRF, used the expert consensus method to obtain recommendations and assess their strength, and used evidence-based reasoning to strengthen the rigor and scientific support of the cultural adaptation of the guide. The final CRF guide integrating TCM and Western medicine is rich in content, is based on strong evidence, and has high applicability for use in China. It may be used as a reference for Chinese nurses in systematic and scientific management of CRF symptoms. To some extent, this study can attract the attention of international scholars toward the exceptional advantages of TCM nursing techniques in the field of oncology. It can further advance TCM nursing techniques in China and abroad via the dissemination and application of the user-friendly TCM and Western medicine CRF practice guide. Additionally, the global diversity of populations indicates a vital requirement for cultural adaption of guidelines. The process of translating, adapting, and validating a guideline for cross-cultural research is a time-consuming activity that demands careful planning and adoption of

rigorous methodological approaches to yield a reliable and valid guideline targeting the population under consideration. This study could potentially serve as a methodological point of reference for the process of cross-cultural adaptation of guides while deploying an evidence-based expert consensus procedure. Importantly, this method of integrating existing TCM nursing evidence by expert consensus was used to address the current transitional stage, although some of the evidence remains relatively weak with insufficiently rigorous evaluation.^{67,70} When sufficient literature on TCM nursing techniques has accumulated to provide additional high-quality evidence, the practice guides should be updated.^{71,72}

This study has two main limitations. First, owing to time and funding limitations, the questionnaire method used in this study to evaluate the acceptability and feasibility of the CRF COSTaRS practice guide was limited to three class III grade A hospitals in Beijing. However, these three hospitals are among the top hospitals integrating TCM and Western

Table 7
Changes made to culturally adapt the CRF COSTaRS practice guide for China.

Changes (n)	Statements in English	Statements in Chinese
Added (1)	Section 3: Review medications patient is using for fatigue, including prescribed, over the counter, and/or herbal supplements Examples of medications for fatigue: Chinese Patent Medicine	第三部分: 回顾患者用于疲乏的药物, 包括处方药、非处方药和/或草药补充剂 疲乏药物示例: 中成药
Adapted (3)	Section 4: Review 3 or more self-care strategies Do you take part in any support groups or have family/friends you can rely on? Have you tried home-based bright white light therapy ? If you need a tailored plan, have you spoken to or would you like to speak with a health care professional to help guide you in managing your fatigue? (eg, rehabilitation specialist)	第四部分: 回顾不少于3项自我照护策略 您参加过任何 病友会或病友群 和/或有可以依靠的家人/朋友吗? 您尝试过 居家明亮白光照射疗法 吗? 如果需要量身定制健康计划, 您曾与 专门的医护人员 谈过吗? 或者您愿意与他们交谈以指导您管理疲乏吗? (例如康复专家)
Added (5)	Have you tried moxibustion therapy ? Have you tried acupuncture therapy ? Have you tried Tai Chi ? Have you tried auricular embedding therapy ? Have you tried acupressure therapy ? Additional materials: A Tutorial for Nurses	您尝试过 艾灸疗法 吗? 您尝试过 针刺疗法 吗? 您尝试过 太极拳 吗? 您尝试过 耳穴埋豆 吗? 您尝试过 指压疗法 吗? 附加材料: 护理技术使用说明
Added (1)	The reference method of each recommendation in the guide (Appendix O)	实践指南中各推荐意见的参考方法

CRF, cancer-related fatigue.

medicine in China, and their health professionals have contact with many patients throughout the country. Second, the practical application of the final TCM and Western medicine CRF practice guide requires further formal evaluation because of time and funding constraints. When it was implemented in a class III grade A hospital in Beijing for 2 weeks, it received good feedback from nurses and patients. In the future, relevant research may be performed to explore how to integrate the guide into nurses' daily practice from the perspective of implementation science, to achieve translation from theory to practice. Although TCM nursing techniques have been demonstrated to be safe and efficacious for improving CRF in a Chinese patient population, larger studies in more racially/ethnically diverse populations are needed to confirm the benefits of TCM nursing techniques for fatigue in patients with cancer. The main advantage of this study is the integration of TCM nursing evidence, which is available for nurses and patients to access themselves and can help extend TCM nursing for CRF through inclusion in the user-friendly COSTaRS practice guides.

Conclusions

Our study successfully culturally adapted the COSTaRS practice guide for CRF by incorporating TCM nursing techniques. In the cultural adaptation of evidence-based guides, in addition to addressing language differences and evaluating the appropriateness of recommendations in local contexts, evidence-based supplementation of recommendations for local care can clearly lead to richer content, a wider audience for guidelines, and a more diverse selection of recommendations. However, this process can be challenging for Chinese nursing, because of the lack of evaluation of these TCM nursing techniques. Therefore, given the inadequacy and low quality of the TCM nursing literature, this study explored the use of a combination of evidence-based thinking and used the Delphi method to integrate TCM nursing recommendations, combine evidence and clinical experience, and provide a reference for culturally adapting practice guides from other countries.

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CRediT author statement

Meiqi Meng: Conceptualization, Methodology, Data curation, Formal analysis, Writing. **Xuejing Li:** Conceptualization, Methodology, Writing – revised draft preparation. **Ke Peng:** Conceptualization, Methodology, Project administration, Writing – original draft preparation. **Xiaoyan Zhang:** Methodology, Data collection, Writing – original and Revised draft preparation. **Dan Yang:** Data curation, Formal analysis. **Jingyuan Zhang:** Data curation, Formal analysis. **Yufang Hao:** Conceptualization, Methodology, Writing – view & editing. **Dawn Stacey:** Conceptualization, Methodology, Writing – view & editing. All authors had full access to all the data in the study, and the corresponding authors had final responsibility for the decision to submit for publication. The corresponding authors attest that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted.

Declaration of competing interest

The authors declare no conflict of interest.

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Ethics statement

The study was approved by the Ethics Committee of Beijing University of Chinese Medicine (IRB No. 2021BZVLL0307). All participants provided written informed consent.

Data availability statement

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.apjon.2023.100252>.

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