



Components of Culturally Tailored Interventions

A Discussion Paper

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The purpose of this article is to propose essential components of culturally tailored interventions through analyzing practical issues in 3 studies that tested culturally tailored interventions among Asian American women. Practical issues in the studies were analyzed using a content analysis according to the evaluation criteria for rigor in cross-cultural research. Seven essential components of culturally tailored interventions were identified through the analysis: (a) respecting cultural uniqueness; (b) understanding cultural contexts; (c) using cultural examples; (d) having flexibility; (e) adopting multiple languages; (f) having bilingual and/or culturally matched research team members; and (g) engaging community consultants and research participants. **Key words:** Asian, culture, intervention, issue, rigor

WITH AN increasing need to support underserved populations, the number of studies developing and testing culturally tailored interventions has drastically increased in recent years. Frequently, health care providers and researchers just provided bilingual or multilingual versions of interven-

tions to make their interventions culturally appropriate to target populations.^{1,3} Or, health care providers and researchers tailored their interventions to specific racial/ethnic groups by adding specific components of interventions that were unique to the populations (eg, community health workers and translators).^{4,5} Here, based on the definition of cultural competence by Spector,⁶ culturally tailored interventions are defined as interventions based on the acknowledgment and affirmation of cultural sensitivity imbedded in cultural knowledge related to target populations.

Cultural competence has been emphasized in cross-cultural research throughout the past several decades.⁷ A number of articles described cultural competence as a major component of nursing care.⁷⁻¹⁰ Many nursing scholars made several propositions for essential components of cross-cultural research, but the suggestions were for descriptive studies rather than for intervention studies.¹¹⁻¹³ The most frequently discussed issues related to cultural competence were methodological concerns related to foreign language translation processes, specifically the conceptualization of words/terms that did not exist in specific cultures.¹⁴⁻¹⁸ Difficulties

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Statements of Significance

What is known or assumed to be true about this topic?

- With an increasing need to support underserved populations, the number of studies developing and testing culturally tailored interventions has drastically increased in recent years.
- Cultural competence has been emphasized in cross-cultural research throughout the past several decades.
- Many nursing scholars made propositions for essential components of cross-cultural research, but the suggestions were for descriptive studies rather than for intervention studies.

What this article adds:

- Researchers need to consider whether their interventions specifically meet culturally unique needs of target populations.
- Researchers need to consider whether their interventions are based on contextual understanding of target cultures.
- Researchers need to be flexible in intervention process (eg, timing and intervention medium) to accommodate special and unique needs of their target populations.
- Multiple languages and bilingual and/or culturally matched research team members need to be included in the design and implementation of culturally tailored interventions.
- Researchers need to include community consultants and research participants as key stakeholders to get their feedback on the interventions and get their necessary assistance in participant recruitment and retention.

in operationalizing culture were also discussed because culture could not be easily quantified into a few variables and accurately assessed using 1 instrument.^{14,15,19,20}

However, little has been discussed about methodological issues in developing and implementing culturally tailored interventions that require cultural competence, and very few guidelines for developing culturally tailored interventions have been proposed. The components that are necessary in the design and implementation of culturally tailored interventions have rarely been discussed.

The purpose of this article is to propose essential components of culturally tailored interventions through analyzing practical issues in 3 studies that tested culturally tailored interventions among Asian American women. First, we describe the evaluation criteria for rigor in cross-cultural research by Im et al.²¹ Then, we concisely present the 3 studies that were the basis for this discussion article. The method used to identify the essential components of culturally tailored interventions follows. Then, based on the analysis, essential components of culturally tailored interventions are proposed according to the evaluation criteria for rigor in cross-cultural research. This discussion article would contribute to advancing nursing science in building the evidence for the implementation science for racial/ethnic minority populations or other populations experiencing health disparities.

THE EVALUATION CRITERIA FOR RIGOR IN CROSS-CULTURAL RESEARCH

A set of evaluation criteria for rigor in cross-cultural research²¹ were proposed based on a review of the literature related to cross-cultural nursing research that were published between 1965 and 2003. Im and her colleagues²¹ initiated the development of the evaluation criteria because of the necessity of unique evaluation criteria for rigor in cross-cultural research. They speculated that cross-cultural research could

not be fully evaluated only with traditional evaluation criteria for rigor in quantitative studies (eg, validity and reliability) or those in qualitative studies (eg, credibility, transferability, confirmability, and dependability). They thought that it would be difficult to simply operationalize culture into several variables (eg, acculturation, self-reported ethnic identity, and country of origin), and it would be necessary to understand culture as a context that circumscribes people's health/illness experience. Because of all the characteristics of culture, they claimed that cross-cultural research would have some inherent barriers that could threaten the validity and reliability of quantitative cross-cultural studies. Also, they posited that many cross-cultural qualitative studies would have difficulties in being evaluated by using the traditional evaluation criteria for rigor in qualitative research because cross-cultural studies sometimes involve incommensurable concepts and phenomena and sociopolitical/historical/religious issues in new environments that would be different from usual research settings.

With these background assumptions and propositions, they developed the criteria that could be used to evaluate rigor in cross-cultural studies. The criteria included: (a) cultural relevance; (b) contextuality; (c) appropriateness; (d) mutual respect; and (e) flexibility. Cultural relevance means "whether the research question can serve a specific cultural group's issues and interests in improving their lives."²¹ Contextuality is inclusive of "sensitivity to structural conditions that contribute to participants' responses and to the interpretations of situations informed by experiences, by validation of perceptions, and by a careful review of existing knowledge."²¹ Appropriateness means "whether the study uses appropriate communication styles, conceptualizations, and translation process."²¹ Mutual respect includes "all aspects in specific cultures of the researchers and the participants of being esteemed, and it can indicate the rigor of the studies."²¹ Finally, flexibility means "whether the researcher was flexible in usage of languages and time for

data collection."²¹ In our analysis of practical issues in the studies that were the basis for this discussion article, we used these evaluation criteria for rigor in cross-cultural research to identify essential components of culturally tailored interventions.

THREE STUDIES: THE BASIS FOR DISCUSSION

The 3 studies were selected as the basis for discussion of this article because the minutes of their research team meetings and the research diaries of their research team members were accessible. The first study (study 1) that was the basis for this analysis aimed to test the efficacy of a support program that was culturally tailored to Asian American breast cancer survivors to enhance their survivorship experience.²² The intervention provided information and coaching/support related to breast cancer survivorship through computers and mobile devices. This was a randomized control group trial with repeated measurements (pretest, post 1-month, and post 3-months). The study targeted to recruit 330 Asian American breast cancer survivors through online and offline communities/groups. The women in an intervention group used the program as well as the American Cancer Society (ACS) Web site on breast cancer for 3 months. The women in an attention control group used the ACS Web site for 3 months. Independent and outcome variables were measured using multiple questions on sociodemographic and disease characteristics, the Functional Assessment of Cancer Therapy Scale-Breast Cancer, the Memorial Symptom Assessment Scale-Short Form, and the Support Care Needs Survey-34 Short Form. All these measurement scales reportedly have high reliability and validity among Asian Americans. An intent-to-treat linear mixed-model growth curve analysis was used for data analyses. Although this study is ongoing, more detailed information about the study is available elsewhere.²²

The second study (study 2) was to determine the preliminary efficacy of a culturally

tailored physical activity promotion program in decreasing sleep-related symptoms among Asian American midlife women.²³ The intervention provided coaching/support for physical activity promotion through computers and mobile devices (with the usages of Fitbits). This was a pilot randomized control trial (14 in an intervention group and 12 in a control group). Multiple instruments measured background characteristics, sleep-related symptoms, and physical activity experiences of the women at 3 time points (pretest, post 1 month, and post 3 months). The data analysis was conducted using an intent-to-treat linear mixed-model growth curve analysis. The findings supported that the intervention group had significant decreases in sleep-related symptoms (the total numbers of psychological and total sleep-related symptoms; $P < .10$) at post 1 month.

The third study (study 3)²⁴ was to test the preliminary efficacy of a culturally tailored cancer pain management program for Asian American breast cancer survivors in improving their cancer pain experience. The intervention provided information and coaching/support related to cancer pain and pain management through computers and mobile devices. This study also used a randomized control design among 94 Asian American breast cancer survivors. The measures were the Brief Pain Inventory-Short Form, Support Care Needs Survey-34 Short Form, and Mishel Uncertainty in Illness Scale-Community. Data analysis was conducted using descriptive and inferential statistics including repeated-measures analysis of covariance. No significant differences in pain, but significant changes in perceived isolation, personal resources, support care need, and uncertainty were found in the intervention group between the pretest and posttest ($P < .01$).

METHODS

To find the themes indicating essential components of culturally tailored interven-

tions, practical issues in the 3 studies were identified first. In each study, the practical issues were identified by analyzing the meeting minutes of the research team and the research diaries by all research team members using a content analysis. Throughout the intervention process of all 3 studies, research team kept daily diaries on practical issues in implementing the culturally tailored intervention and also had the written minutes of research team meetings. The minutes of research team meetings included an average of 1 to 2 pages per meeting (over 150 pages for study 1 and about 40 pages for studies 2 and 3). The research diaries were written at individual research encounters by each research team members (1- to 3-page per encounter; over 200 pages for study 1 and about 50 pages for studies 2 and 3). The unit of analysis was words in the diaries and minutes. Line-by-line coding was done first. Then, categories representing practical issues were made. A total of 17 analysts were involved in the analyses of the practical issues across the studies. More details on the practical issues could be found elsewhere.²⁵⁻²⁹ In short, the issues included: (a) bilingual translators' language orientations; (b) cultural sensitivity requirement; (c) low response rate, interest, and retention; (d) issues in implementation logistics; (e) difficulties and issues in recruiting and retaining bilingual research team members; (f) consistency in translation process; (g) cultural and conceptual equivalence; (h) repeated institutional review board (IRB) protocol modifications; (i) existing translated versions; (j) technological aspects related to electronic multiple-language versions; (k) subethnic differences in research participation; (l) the use of culturally matched research team members and multiple languages; (m) the necessity of gatekeepers; (n) the necessity of various motivation strategies; (o) the use of ethnic-specific communication apps; and (p) trust building.

For this article, using a content analysis, the practical issues were analyzed to extract the themes that reflected the essential components of culturally tailored

interventions. First, upon the agreement of 2 analysts, the practical issues from the 3 studies (with quotes from the minutes and diaries) were grouped by the evaluation criteria for rigor in cross-cultural research (cultural relevance, contextuality, flexibility, appropriateness, and mutual respect). For instance, the use of ethnic-specific communication apps was grouped into flexibility while trust building was grouped into mutual respect. Then, in each group, the quotes on practical issues from the minutes and diaries were re-coded to identify the commonalities in the issues that made the interventions to be culturally tailored. The codes reflecting the commonalities were categorized, and the categories were compared and finalized while eliminating redundancies. The codes and categories were finalized upon the agreement of the 2 analysts. Then, themes reflecting the essential components of culturally tailored interventions were extracted by linking the codes in individual categories. Finally, the themes from individual categories were compared while eliminating possible redundancies, and the themes were finalized upon the agreement of the 2 analysts.

ESSENTIAL COMPONENTS OF CULTURALLY TAILORED INTERVENTIONS

Seven essential components of cultural tailored interventions were identified through the analysis: (a) respecting cultural uniqueness; (b) understanding cultural contexts; (c) using cultural examples; (d) having flexibility; (e) adopting multiple languages; (f) having bilingual and/or culturally matched research team members; and (g) engaging community consultants and research participants. The Table summarizes these components by the evaluation criteria for rigor in cross-cultural research.

Respecting cultural uniqueness

Again, cultural relevance refers to “whether the research questions can serve a

specific cultural group’s issues and interest in improving their lives.”²¹ It is important to determine cultural relevance in cross-sectional research because it would be difficult to investigate if a concept or phenomenon is not culturally acceptable or relevant to their target populations.

In studies 1 to 3, it was frequently noted that making the participants actively engaged in the intervention was very important due to participants’ cultural hesitance to discuss their health issues/concerns. Although many participants frequently did not report or discuss any issue or concern related to the research topics (survivorship experience and cancer pain), it did not always mean that they did not have any. Indeed, Asian Americans reportedly have lower quality of life during their survivorship process.³⁰⁻³² They frequently experience unnecessary burden of pain and symptoms because they rarely report and often delay seeking necessary information or coaching/support due to their cultural values, beliefs, and language barriers.³⁰⁻³² This cultural hesitance could be related to “relevance” because the participants might not perceive the necessity of discussions on their health issues/concerns due to their culture or because their culture simply made them not to discuss any of women’s body experience including health/illness experience with strangers including health care providers (not culturally acceptable behaviors). However, even when the participants did not perceive the necessity of the discussion, the discussion on their survivorship and pain experience would be important issues/concerns that health care providers should address for the participants’ quality of life and survivorship process.

The design of all 3 culturally tailored interventions that were used in studies 1 to 3 considered this cultural hesitance, which was unique to this specific cultural group. Asian culture cannot be easily lumped into just a single culture.⁶ Rather, Asian culture is pretty diverse; even just Chinese culture has over 50 subgroups.⁶ However, Asian cultures across the groups share some commonalities, which

Table. Essential Components of Culturally Tailored Interventions by the Evaluation Criteria for Rigor in Cross-cultural Research

Criteria	Definitions	Components of Culturally Tailored Intervention	Studies
Relevance	“Whether the research question can serve a specific cultural group’s issues and interests in improving their lives.” ²¹	Meeting culturally unique needs <ul style="list-style-type: none">• Cultural attitudes/values related to topics• Cultural examples from previous studies	Studies 1-3 Studies 1-3
Contextuality	“Sensitivity to structural conditions that contribute to participants’ responses and to the interpretations of situations informed by experiences, by validation of perceptions, and by a careful review of existing knowledge.” ²¹	Understanding cultural contexts <ul style="list-style-type: none">• Cultural attitudes related to research• Using cultural examples• Cultural examples	Studies 1-3 Studies 1-3
Flexibility	“Whether the researcher was flexible in usage of languages and time for data collection.” ²¹	Having flexibility in intervention process <ul style="list-style-type: none">• Flexibility in timing• Flexibility in intervention medium	Studies 1-3 Study 1
Appropriateness	“Whether the study uses appropriate communication styles, conceptualizations, and translation process.” ²¹	Adopting multiple languages <ul style="list-style-type: none">• Language diversities even within the same ethnic group Having bilingual and/or culturally matched research team members <ul style="list-style-type: none">• Bilingual interventionists• Culturally matched research team members	Study 1 Studies 1-3 Studies 1-3
Mutual respect	“Whether all aspects in specific cultures of the researchers and the participants are respected/esteemed.” ²¹	Engaging community consultants and research participants <ul style="list-style-type: none">• Community consultants for feedback on interventions and participant recruitment• Research participants for feedback on interventions and participant recruitment	Studies 1 and 3 Study 2

include this cultural hesitance. Confucianism in most Asian cultures emphasizes the unity of the self and the traditional god and harmonious relationships among people.³³ Taoism and Buddhism also emphasize balances in relationships among people and a harmonious, orderly, and peaceful world.^{34,35} Thus, Asian Americans, especially Asian American women, would try to avoid any conflicting and uncertain situations by not reporting any issues or concerns (including symptoms and pain) that they might have.

This cultural hesitance was frequently found in all 3 studies, and it was essential to incorporate and consider this cultural hesitance in designing and implementing the interventions. For instance, in studies 1 to 3, during the intervention process, the research team needed to frequently remind the participants that their responses/answers would be anonymous and kept confidential. Also, the research team members needed to emphasize that the participants' responses/answers would not affect the participants' future relationships or treatments in the health care systems that the researchers belonged to. Despite these reminders, the participants' responses still tended to be very short.

Understanding cultural contexts

Im et al²¹ proposed that researchers should be sensitive to structural conditions that might influence research participants' responses, subsequently influencing the interpretation of study findings. They claimed that cross-cultural research phenomenon could not be fully understood without contextual understanding of a specific culture.

One important cultural context that was considered in studies 1 to 3 was the participants' tendency of providing only positive and socially desirable responses. A common aspect of various subcultures within Asian culture is its patriarchal heritage. Because of this cultural heritage, Asians tended to be very cooperative with authorities, which frequently made them view health care providers as authorities that they

should follow.⁶ This tendency is also from Asian culture that emphasizes harmonious relationships.³³ If the participants provide only socially desirable responses, then this would result in systematic bias. This social desirability was clearly noted in study 2 where the research team found significant changes of physical activities in both the intervention and control groups although only the intervention group had significant changes in sleep-related symptoms. The participants probably perceived that the study's focus would be physical activities since the study announcements explicitly emphasized physical activity promotion. Then, they could try to give desirable responses to the questions on physical activity that the research team would want to have (positive changes in physical activity), but not to the questions on sleep-related symptoms.

Using cultural examples

To ensure cultural relevance²¹ of the interventions, it is important to include cultural examples in the content of interventions. In studies 1 and 3, cultural examples from previous studies^{36,37} were used to promote the discussion on participants' experience related to cancer survivorship and pain experience and to facilitate the understanding on educational content included in the interventions. For instance, traditional Asian culture highly respects stoicism toward pain and symptoms, which frequently makes Asian American cancer patients not to report their pain and symptoms during their survivorship process. Thus, in the intervention process, the interventionists initiated the intervention by providing this example so that the participants could start to discuss their pain and symptom experience with their peers within the cultural contexts.

In study 2, the research team used cultural examples related to Asian American midlife women's attitudes toward physical activity from previous studies.^{38,39} For example, Korean American midlife women tended to have a holistic view on physical activity (eg, even

breathing as physical activity) and considered only death as physical inactivity.³⁹ Because of this broad definition, these women thought they were doing adequate physical activities during their daily life, and perceived no necessity for increasing physical activity. Thus, in the intervention process with Korean American midlife women, the interventionists initiated the discussion on physical activity by asking the participants to firstly define physical activity from their own perspective. Also, the interventionists provided an example of reasons for physical activity, including “not having enough physical activity through daily activities.” These examples promoted the discussion on participants’ physical activity experience within the cultural contexts where the participants could experience their physical activity.

Having flexibility in intervention process

Im and her colleagues²¹ also emphasized that rigorous cross-cultural studies should have flexibility in timing. They emphasized that time flexibility could provide adequate time for building trust, identifying mutual/reciprocal goals, developing plans for actions, and completing research and/or practice process effectively (subsequently getting adequate desired data).

In studies 1 to 3, the participant recruitment was nationally done due to a small number of Asian Americans in a local area. The use of the Internet was expected to facilitate the recruitment and help overcome geographical and time constraints.⁴⁰⁻⁴² However, timing was still an issue as in other previous studies.⁴³⁻⁴⁷ In these studies, time zone differences between the participants and interventionists were frequently a concern. To be flexible for the participants’ needs, the interventions were scheduled at the participants’ convenience. This flexibility promoted active participation of the participants, but gave a heavy burden to the interventionists (eg, not within normal working hours of the interventionists). Also, the

recruitment and retention rates during major holidays (eg, Chinese Spring Festival and Christmas holidays) and vacations (summer and winter) were lower than those in nonholiday or vacation time. Indeed, many participants wanted to delay their participation in the interventions during the holidays and vacations, and the research team needed to accommodate their requests.

One unique aspect of studies 1 and 3 was: many participants (who were breast cancer survivors) originally came from different Asian countries and they frequently made international trips for cancer treatment and symptom management because their countries of origin (eg, China, Taiwan, Japan, and South Korea) had national insurance systems through which they could get medical care/services at a cheaper price. Many participants requested to stop the intervention during their international trips, then wanted to restart when they were back to the United States. Thus, flexibility in the intervention timing was necessary for many cases.

In study 1, we also identified that researchers needed to be flexible in intervention medium as well. For example, the researchers originally expected that the participants using mobile phones or tablets would not have any problem in using the program because the program was available for mobile phones or tablets. However, the participants using mobile phones did not want to use the program through their Internet browsers included in their devices because they preferred not to login to the program or because they felt uncomfortable of typing. Rather, they chose to use their ethnic-specific social network service (SNS) programs such as WeChat, Line, or Kakaotalk because they were frequently using the SNS programs and/or because they had voice-recognition systems. Subsequently, the intervention process needed to be modified to fit with the participants’ preferences. This flexibility made the participants have easy access to the interventionists and the program, but this also gave a burden to the interventionists. The research team needed to develop the

standard process for the use of ethnic-specific SNS programs for the intervention.

Providing flexibility in intervention process required repeated IRB approvals for modifications in all 3 studies. Usually, the US institutes require English versions of study materials (eg, consent forms, questionnaires, and study announcement flyers), and other language versions are required or optional depending on institutional IRB policies. In studies 2 and 3, the institute (studies 2 and 3 were conducted in the same institute) did not require all language versions, yet the institute required to provide the methods that would be used to ensure the accuracy of translation. In study 1, the institute (different from studies 2 and 3) required all language versions other than English, the certification of translation accuracy for each language version, and curriculum vitae (CVs) of all translators. The research team needed to repeatedly go through IRB approvals whenever a change was made to be flexible for the participants. Also, making a change in one language version required additional changes in other language versions and subsequent IRB approvals.

Adopting multiple languages

Im et al²¹ posited that “flexibility” of using multiple language versions of questionnaires or informed consents could enhance the rigor of cross-cultural research. Also, they suggested that “appropriateness” of communication styles, conceptualization, and translation process is essential in getting adequate and credible data. Indeed, the appropriateness of communication styles, conceptualization, and translation process was important in studies 1 to 3 to provide culturally tailored interventions.

First of all, language tailoring was important in all the interventions. In studies 1 and 3, 4 languages (English, Mandarin Chinese, Korean, and Japanese) were adopted. In study 2, 3 languages (English, Mandarin Chinese, and Korean) were also adopted. The adoption of multiple languages was essential

in the interventions because most of the participants were not native English speakers and did not feel comfortable about using only English in their communication. Because of the adoption of multiple languages, communication for the intervention could be effectively done between the participants and interventionists.

Simply adopting multiple languages, however, would not adequately work for cross-cultural research though. For instance, in study 1, the research team found that Asian American breast cancer survivors tended to select a midpoint (3) on a 5-point Likert scale rather than an extreme value such as 1 or 5. Many characteristics of Asian American cultural groups could cause this tendency, which could include collectivism, power distance, and avoidance of uncertainty.^{34,35} Also, another example found in study 1 was differences in the meanings of “fatigue” and “tiredness.” Although Mandarin Chinese differentiates these 2 words with different meanings and literal translations, these words need to be clearly specified for other Chinese people who were not using Mandarin Chinese.

Translation could be highly different depending on the characteristics of translators (eg, knowledge, experience, skills, age, and immigration generation).²⁸ In study 1, the research team frequently found that translation of some words could be different depending on when the translators came to the United States. For instance, a translator who came to the United States about several decades ago translated “survivors” into a Korean word, “생존자 (*saengzonja*)” that literally means “survivors.” However, a translator who came to the United States in recent years tended to translate “survivors” into a Korean word, “환우 (*hwanwoo*)” that means “patient friends.” A possible reason would be: “생존자 (*saengzonja*)” could have negative connotation and subsequent potential stigma to cancer survivors.

Translation of medical terms, furthermore, could be another dimension that could impact the quality of translation because even

well-trained and highly qualified professional translators could lack knowledge on medical terms and just do literal translation without delivering cultural nuances and/or implications.⁴⁸ Also, translators might not share beliefs and values of native English speakers or native second-language speakers.⁴⁸ They could experience difficulties in translating slangs, jargons, colloquial phrases, and/or idiomatic or emotionally charged words/terms.⁴⁸ Translators' own understanding/interpretation of specific words could heavily influence the translation process.⁴⁸

Having bilingual and/or culturally matched research team members

To ensure the "appropriateness" of communication styles, bilingual and/or culturally matched research team members were included in studies 1 to 3. For instance, in studies 1 and 3, interventionists who were culturally matched and bilingual in 4 languages (eg, English-Mandarin Chinese bilingual interventionist and English-Korean bilingual interventionists) were hired. In study 2, interventionists who were culturally matched and bilingual in 3 languages were also hired. Bilingual and/or culturally matched interventionists were essential in the interventions because most of the participants were not comfortable about using English only in their verbal and nonverbal (written) communication. The use of bilingual and/or culturally matched interventionists effectively facilitated the communication with the participants.

Using bilingual interventionists did not always guarantee that language barriers were adequately removed though. In study 1, the research team found that bilingual interventionists from different geographical areas, from different immigration periods, and/or from different immigration generations selected different wordings and sentence compositions to express the same words or sentences. For instance, while Chinese bilingual interventionists from China used "lady,"

Chinese bilingual interventionists from Taiwan used "Miss."

Having culturally matched research team members was also important for the participant recruitment and retention in studies 1 to 3. Although the content of the interventions was culturally tailored using both surface tailoring (through adopting multiple languages) and deep tailoring (through providing cultural examples from previous studies), it was difficult to recruit and engage research participants without culturally matched research team members. For instance, in study 2, the research team found difficulties in engaging community consultants (gatekeepers) in the research process without culturally matched research team members. The research team could not recruit any participants for 3 months until culturally matched research team members were hired. Once culturally matched research team members were in place, 35 potential participants were referred and recruited through community consultants (gatekeepers) without formerly established relations.

Engaging community consultants and research participants

The criterion of "mutual respect" was suggested by Im and her colleagues to evaluate cross-cultural research because mutual respect is essential to fully understand the cross-cultural research phenomenon. They emphasized that rigorous cross-cultural research should be based on "fluid boundaries" and mutual respect between researchers and research participants.²²

In studies 1 and 3, researchers included community consultants who helped reach out to potential research participants and provide their feedback on the study. Their assistance was essential in recruiting the participants and making the interventions culturally sensitive to the participants. The difficulty in recruiting research participants has been frequently reported in racial/ethnic minority research in general.⁴⁹ Indeed, Asian American communities are well-known about

their closeness to outsiders.³⁶ Partially due to this cultural tendency, Asian Americans are also known to be a difficult group to recruit in research. However, when they were contacted through their networks of family members and friends, they favorably responded to the research team and easily decided to participate in the study. Mutual trust and respect that existed between the community consultants and the participants were the facilitator in the recruitment and intervention process.

In study 2 that was a small pilot study, having community consultants was impossible because of its small budget. Thus, rather than having community consultants who could help recruit the participants and provide their feedback on the intervention, the research team tried to involve research participants themselves in the study process by asking them to provide their feedback on the project Web sites and the content included in the intervention. Many of them referred their friends to the studies because they themselves were satisfied with the intervention and perceived that the intervention would be helpful for other potential participants. Thus, involving research participants as research team members worked very well in this study.

CONCLUSIONS AND IMPLICATIONS

In this article, based on practical issues in 3 studies that tested culturally tailored interventions, 7 essential components of culturally tailored interventions were extracted. Researchers working with culturally diverse populations need to consider these

components in designing and implementing culturally tailored interventions for their target groups. They need to consider whether the planned interventions specifically meet culturally unique needs of their target populations. Also, in designing culturally tailored interventions, they need to understand and consider the specific cultural contexts where the participants have their health/illness experience. Researchers also need to be flexible in research process to accommodate special and unique needs of their target populations. To ensure effective communication, conceptualizations, and translation process, researchers need to adopt multiple languages and bilingual and/or culturally matched research team members. Finally, researchers need to include community consultants and research participants as key stakeholders to get their feedback on the intervention and get their necessary assistance in participant recruitment and retention.

Because these components were proposed based on practical issues in the 3 studies, the components might have limitations in their applications. All the 3 studies that provided the basis for this article were conducted among subgroups of Asian Americans. Furthermore, all the 3 studies included technology-based interventions that used computers, mobile devices, and tablets. Subsequently, the interpretation of the findings reported in this article needs to be carefully made. Also, with changes in future nursing practice and research, new components that were not identified in this article could emerge through future cross-cultural studies. Researchers working with diverse cultural groups need to be continuously open for future changes in cross-cultural research.

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