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## Issues in Developing and Evaluating a Culturally Tailored Internet Cancer Support Group

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### Abstract

The purpose of this paper is to explore practical issues in developing and implementing a culturally tailored Internet Cancer Support Group for a group of ethnic minority cancer patients—Asian American cancer patients. Throughout the research process of the original study testing the Internet cancer support group, research team made written records of practical issues and plausible rationales for the issues. Weekly group discussion among research team members was conducted, and the discussion records were evaluated and analyzed using a content analysis (with individual words as the unit of analysis). The codes from the analysis process were categorized into idea themes, through which the issues were extracted. The issues included those in: (a) difficulties in using multiple languages; (b) collaboration with the IT department and technical challenges (c) difficulties in recruitment; (d) difficulties in retention; (e) optimal timing; and (f) characteristics of the users. Based on the findings, we suggested researchers to plan a workable translation process, check technical needs in advance, use multiple strategies to recruit and retain research participants, plan the right time for data collection, and consider characteristics of the users in the study design.

### Keywords

Internet; survey; issues; nursing; research; online cancer patients

In recent years, an increasing number of Web-based interventions have been developed and used with rapid advances in computer and Internet technologies. Among them are Internet cancer support groups (ICSGs). ICSGs are well-known to provide emotional support, information, and interactions with peers and health care professionals for cancer survivors.<sup>1-3</sup> In general, ICSGs target to provide psychosocial support and understanding, offer a discussion forum on cancer-related experience such as diagnosis and treatment process through which cancer patients can share their opinions and experience, provide necessary (sometimes essential) information on various types and aspects of cancer, and offer encouragement, companionship, and hope for cancer patients and their care-givers.<sup>1-3</sup>

Studies have yielded mixed results on the effects of ICSGs on patients' physical and psychological well-being.<sup>4</sup> Some studies on ICSGs reported no significant improvement in the participants' adjustment to cancer, self-rated health, and quality of life.<sup>5,6</sup> In several cases, ICSGs could not enhance mental health outcomes in cancer survivors because of unexpected challenges such as malicious experience, absence of rules, lacking social and non-verbal cues, and inaccuracy of information.<sup>7-9</sup> However, most researchers support the positive effects of ICSGs mainly for increasing self-esteem, self-efficacy, and functional status, decreasing information and communication needs, decreasing uncertainty, social isolation and various types of symptoms and distress, and ultimately improving the patients' quality of life.<sup>2,4,10</sup> The heterogeneity of cancer patients and outcome measures may account for the inconsistent results.<sup>4</sup>

With the well-known benefits, ethnic minorities reportedly have greater benefits from ICSGs compared to their counterparts.<sup>11-14</sup> However, the actual usage of ICSGs by ethnic minorities including Asian Americans is minimal.<sup>3</sup> Also, an analysis showed that only 4 percent of ICSGs aimed at ethnic minorities (only 1% were for Asian Americans), and none of them were culturally tailored and/or used multiple languages.<sup>3</sup> Subsequently, the necessity of culturally tailored ICSGs for ethnic minorities has been asserted to enhance the appeal and accessibility of ICSGs to ethnic minorities.<sup>3</sup> For example, Confucian perspectives of Chinese culture prescribe Chinese American women to keep well balanced social relationships, and prohibit them from showing possibly troublemaking and painful affection to other women.<sup>15</sup> Thus, without considering these cultural perspectives, ICSGs could not effectively provide information and support to ethnic minority cancer patients.

During the period of 2004 to 2015, 245 published articles were found through the PUBMED and CINAHL searches using keywords of cancer patient, nursing and Internet. However, when the literature search was limited with an additional keyword of ethnic minority, only seven articles were retrieved.<sup>11,13,16-20</sup> When the literature search was extended with keywords of "African American," "Hispanic," and "Asian American," only 13 additional articles related to ethnic minority cancer patients were identified. Virtually, no study specifically explored practical issues in developing and implementing a culturally tailored ICSG for an ethnic minority group. Furthermore, no empirical studies discussing practical issues in developing and implementing a Web-based intervention for ethnic minority cancer patients were identified.

The purpose of this paper is to explore practical issues in developing and implementing a culturally tailored Internet cancer support group for a group of ethnic minority cancer patients—Asian American cancer patients. This paper aims to open discussions on practical issues in developing and implementing culturally tailored Internet cancer support groups by sharing the experience from an empirical study as a case example. First, issues in Web-based interventions in general that have been reported in the literature are concisely summarized. A concise summary of the study that is the basis for our discussion on practical issues is provided, and the method used to identify the issues is described. Then, practical issues raised during the study are discussed. Finally, based on the discussion of the issues, future directions for developing and implementing culturally tailored Web-based interventions for ethnic minority cancer patients are proposed.

## Issues in Web-based Interventions in General

Im and Chang<sup>21, p. 95</sup> categorized Web-based interventions in health-related areas into: (a) “Web-based education programs,” (b) “Web-based decision support systems,” (c) “Web-based support groups,” and (d) “Web-based games.” They defined Web-based education programs as “a Web-version of traditional education programs that could be accessed through the Internet,” Web-based decision support systems as “decision-making aid programs related to health and illness,” Web-based support groups as Web-based groups through which “the users to communicate their experience and opinions with others through the Internet,” and Web-based games as “educational aids to enhance skills and knowledge for users and to assist users’ decision-making through gaming”.<sup>21, p. 95</sup> They reported that these different types are frequently merged in many cases.<sup>21</sup>

Regardless of these different types of Web-based interventions, one of the common issues in Web-based tailored interventions is a potential selection bias. Indeed, one of the most frequently discussed weaknesses across the different types of Web-based interventions is the bias from having a selected group of participants.<sup>21,22</sup> For instance, the participants of Web-based interventions in general are primarily Whites with high education, and/or high socioeconomic class. Another issue is related to the controllability of researchers on users’ actual participation in the intervention and on users’ access to other Websites.<sup>21,23,24</sup> The data quality generated by the participants totally depends on their willingness and acceptance; the users can easily drop off and stop their participation in the intervention; the users can leave the Website very easily without commitment; and/or the users can feel uncomfortable about using technology.<sup>21,23,24</sup> Subsequently, high dropout rates in Web-based interventions have been frequently identified.<sup>25,26</sup>

The lack of technical expertise of researchers and users was also pointed out as a potential barrier in developing and implementing a Web-based intervention. To develop and implement a Web-based intervention, a multidisciplinary team (including experts in the content area, intervention development, Web information technology, illustrators, etc.) is essential,<sup>24</sup> and other computer-related cost is necessary.<sup>21,24</sup> Consequently, Web-based interventions frequently require high development and maintenance cost.<sup>16,23,24</sup>

Finally, another issue is related to the lengthy time period that is required to develop and implement a Web-based intervention.<sup>16,23,24</sup> Researchers could be burdened by the time necessary for preparing, organizing, managing, and revising/renewing the content of Web-based intervention in addition to the time for adopting and demonstrating the new technology in their interventions.<sup>24</sup> Also, some participants might need more time to get familiar with Web-based interventions,<sup>23</sup> which in turn would delay the time to complete the Web-based intervention.

## The Study as the Case Example

The study that is the basis for this paper was a pilot study to determine the preliminary efficacy of a culturally tailored ICSG among Asian American cancer patients including Chinese, Korean, and Japanese and to identify design and methodological issues. More detailed information on the development process of the Internet cancer support group and the pilot study is available elsewhere.<sup>27</sup> Concisely speaking, the ICSG was developed to provide information and coaching/support for Asian American breast cancer survivors while incorporating culturally unique findings on Asian American breast cancer survivors' survivorship experience from previous studies of the research team (e.g., stigma attached to breast cancer, lack of social support, etc.). The ICSG included three different components—educational modules, online discussion boards with email coaching/support, and online resources. Four different languages (English, Mandarin Chinese, Korean, and Japanese) were used, and culturally unique quotes and examples related to Asian American breast cancer survivors' experience were incorporated into the educational modules and coaching/support process. This pilot study included two phases: a usability test and an expert review (Phase 1) and a preliminary randomized trial (Phase 2). In Phase 1, for the usability test, the first 10 Asian American breast cancer survivors who participated in previous studies of the research team and who agreed to participate in an additional study, were involved in a 1-month online forum. The cancer survivors were asked to visit the forum site, use the ICSG and then post messages with their evaluation of the program within a month. On the forum site, a total of 7 topics on the specific areas for evaluation were posted. The topics were: (a) overall structure, (b) preferences for color, designs, and menus, (c) preferences for the content, (d) technical support and difficulties, (e) areas for additional content, (f) preferences for links to Internet resources, and (g) other issues that should be considered. For the expert review, the evaluation was concentrated on the difficulties users might experience in learning to operate the program. First, a total of 10 experts (health care providers) in breast cancer survivorship were recruited from the cancer center of the institute where the researchers were affiliated. Then, they were sent the Web address of the ICSG and asked to provide their evaluation on the program (e.g., structure, content, technical aspects, etc.) by email within 2 weeks. The emails were printed out as transcripts, and analyzed using the content analysis by Weber.<sup>28</sup> Then, as a group, the research team made decisions on refinement in specific areas, which were incorporated into further development of the program. Phase 2 adopted a randomized repeated measures pretest/posttest (pre-test, post 1 month [Time Point 1], & post 3 months [Time Point 2]) control group design with 56 patients. The intervention group used the ICSG, and the control group used the National Cancer Institute website providing information on breast cancer survivorship. Multiple instruments were used to measure

participant's health-related outcomes (social support, needs for help, uncertainty, self-efficacy, physical and psychological symptoms, and quality of life). The instruments included: the Personal Resource Questionnaire,<sup>29</sup> the Perceived Isolation Scale,<sup>30,31</sup> the Support Care Needs Survey-34 Short Form,<sup>32</sup> the Mishel Uncertainty in Illness Scale-Community,<sup>33</sup> the Self-efficacy Items of the Cancer Behavior Inventory,<sup>34</sup> the Memorial Symptom Assessment Scale-Short Form,<sup>35</sup> the Brief Pain Inventory,<sup>36</sup> and the Functional Assessment of Cancer Therapy Scale-Breast Cancer.<sup>37</sup> The data were analyzed using descriptive and inferential statistics, including the repeated ANOVA.

## Practical Issues in the Study

During the research process, the research team made written records of practical issues and plausible rationales for the issues using team meeting logs/minutes and research memos written by the team members. Weekly group discussion among research team members was done, and the discussion records (meeting logs/minutes) were also saved. Then, all the records were reviewed and analyzed using the content analysis by Weber<sup>28</sup> (with individual words as the unit of analysis). First, the data from the written records (word by word) were coded by individual members. Then, the codes were categorized, and the categories were classified into idea themes reflecting practical issues in the research process. Finally, the team members reviewed the idea themes, and the final idea themes were extracted as the issues through unanimous agreement of the team members. The idea themes include: (a) difficulties in using multiple languages; (b) collaboration with the IT department and technical challenges (c) difficulties in recruitment; (d) difficulties in retention; (e) optimal timing; and (f) characteristics of the users. The issues within the idea themes are discussed as follows.

### Difficulties in Using Multiple Languages

The number of studies using multiple languages has increased in recent years.<sup>38–40</sup> The use of multiple languages in one research study reportedly enhances research participants' comprehensiveness of educational materials and/or questionnaires and their research participation.<sup>38–40</sup> To culturally tailor the ICSG, multiple languages including English, Mandarin Chinese, Korean, and Japanese were adopted in the study reported in this paper. Among over 71 sub-ethnic groups of Asian Americans,<sup>41</sup> only three sub-ethnic groups (Chinese, Korean, and Japanese) were selected for this study for the convenience of the approach (e.g., language). Chinese are the largest sub-ethnic group within Asian Americans,<sup>42</sup> Koreans are the fastest growing sub-ethnic group within Asian Americans,<sup>42</sup> and Japanese are the sub-ethnic group at the highest risk of breast cancer within Asian Americans.<sup>45–47</sup> Thus, these multiple languages were chosen because they are the major languages of these sub-ethnic groups.

As mentioned above, the ICSG included three components including an online forum, online educational sessions, and online resources. Whereas the messages in English were translated into three different languages (Mandarin Chinese, Korean, and Japanese), those in Mandarin Chinese, Korean, or Japanese were translated into English by bilingual interventionists and consultants. To develop multiple language versions of online educational sessions and online

resources, the English version was developed first. Then, the English version was directly translated into the different languages by international colleagues who were bilingual researchers with at least a master's degree in a healthcare field (mostly with PhDs). Afterwards, the translated versions were reviewed and back-translated/approved by another bilingual researchers with similar qualifications. There were frequent necessities for additional translations that often delayed the development and implementation of the ICSG. For example, we needed to change the screening questions because of some changes in the study administration, which required changes in the consent form and study announcements. These changes surely required additional translation in every aspect of the study.

Despite the translation process, language disparities within the same ethnic group still remain unaddressed. Whereas the participants from Mainland China and Taiwan spoke the same language, the written characters were different, with simplified Chinese characters for those from Mainland China and traditional Chinese characters for those from Taiwan. Given that we used traditional Chinese characters in the Chinese ICSG website and RedCap system (a secure application for developing and administering online surveys and databases), some participants from Mainland China complained about difficulties reading and understanding the included resources and survey questions. Thus, we needed to switch their preferred language from Mandarin Chinese to English during the study due to requests by the participants.

Additionally, one online forum serving three language groups might have discouraged the participants to engage in the online discussion. Each week, the interventionists posted questions related to the specific week's assigned educational modules (e.g., "After reading Education Module 12 'Types, Causes of Pain,' did you find any information interesting? Is there anything you would like to know more?") in four different languages including English. Although at least 9 questions in total (3–4 questions per language) were posted each week, the online forum site was programmed to display only 4–5 postings for discussion on its first page. Thus, participants had to search for the right questions in the right language to leave their messages.

### **Collaboration with IT Department and Technical Challenges**

As pointed out above, the lack of technical expertise is a potential barrier in developing and implementing a Web-based intervention in general.<sup>24</sup> The administration of the ICSG as a Web-based intervention required substantial assistance from the IT department of the institution where the study was conducted, which often delayed the research process due to miscommunication and/or differences in the priority of tasks between the two parties. For example, creating and using a new email account exclusive for the research project were authorized by the IT department such that the research team could efficiently communicate with participants. Although this task could have been completed seamlessly, the actual process was delayed for more than 5 weeks because of miscommunication between the IT department and the research team.

Because the project servers needed an update to accommodate questionnaires in different languages, we had to change the Internet survey software to the REDCap adopted by the university where the researchers were affiliated. Consequently, a revised IRB was submitted



because of the change in the computer software for the Internet survey, which subsequently delayed the research process. In terms of the Redcap surveys, we did not enable the notification function at first, which delayed our response to several participants who filled out the online screening survey via the Web-link that was provided in the study announcement. Additionally, since some of the participants failed to leave their email addresses in the screening survey, we were not able to contact them for further participation.

Another technical issue was related to compatibility between different computer systems. The principal investigator and an engineering co-investigator used a Macintosh (Mac), and RAs used a PC. When Korean versions generated in a PC were read in a Mac, unexpected symbols including musical notes (e.g., ♯) appeared at the end of each sentence. Also, some stylistic Korean fonts were not even shown in a Mac. Therefore, the only one plain font (e.g., Myungjo) should be used for Korean characters. Additionally, there were Web-display issues because the platform for the ICSG should be compatible to adopt multiple language versions and multiple devices (tablets, smart phones). Special programming process was essential to address this issue.

### Difficulties in Recruitment

Based on our previous studies that we recruited an enough number of ethnic minority cancer patients including breast cancer survivors in a timely manner, we did not expect difficulties in recruiting Asian American breast cancer survivors through Internet communities/groups. However, mainly due to changes in Internet dynamics, it was difficult to recruit the target number of participants only through Internet communities/groups. First of all, the number of Internet communities/groups that Asian American breast cancer survivors might have a membership has diminished dramatically possibly due to recently increasing spam and fraud incidents on the Internet. Also, we could not get as many responses from the webmasters and/or web-owners of the Internet communities/groups as we did in our previous studies, which might be due to the increasing spam and fraud incidents as well. For example, when we contacted 201 Internet communities/groups, only 14 agreed to post the announcement of our study. It was difficult to recruit even one participant per study announcement. When we posted the study announcement through 44 Internet communities/groups, we recruited 30 participants. Compared with our previous study that recruited 412 cancer patients for 3 years,<sup>43</sup> the number of participants that we recruited appeared to be minimal.

Although many organizations originally agreed to send out the study announcement to their members, it was also difficult to check if, when, and how they really sent out the study announcement. Some of the organizations did not prioritize the study announcement due to the limited space in their newsletters, and others required us to go through their IRB approval process to send an e-announcement to their members. Even in some public websites where people freely posted messages, we experienced difficulties as well: their webmasters not only barely replied to our contact emails, but also deleted the study announcements posted on their websites by the research team members.

Finally, we needed to extend the recruitment settings to other clinical/community settings where Asian American breast cancer survivors might attend (e.g., the California and New York division of American Cancer Society, the Asian Health Coalition in Philadelphia). We



contacted formal and/or informal leaders of Internet communities/groups through personal emails and/or telephone calls. It is interesting to note that when a culturally matched research assistant (RA) contacted the leaders (e.g., a Chinese RA to contact a leader of Chinese communities/groups), the response rate was higher than when a RA from a different sub-ethnicity contacted the same person. Also, the response rate was higher when the leaders were contacted by telephone calls rather than by emails.

### Difficulties in Retention

As discussed above, it is frequently difficult to retain research participants in Web-based interventions in general<sup>25,26</sup> mainly due to lack of researchers' controllability on users' actual participation and access to the intervention.<sup>21,23,24</sup> Indeed, there were several retention issues in the study reported in this paper. First of all, it was difficult to retain and motivate some participants, especially Chinese participants, who were assigned to the control group. Originally, the control group was not allowed to use the online forum and educational resources of the ICSG. Because of the longitudinal nature of the intervention, RAs sent individualized timetables of the requested activities to each participant and clearly informed the participants of the study schedule. However, some participants lost their interests in the study, and were dropped out of the study before they were allowed to use the ICSG. Furthermore, some participants in the control group complained about not being allowed to use the ICSG despite their desire to do so. Although they were allowed to use the ICSG at the completion of their participation, they said that they could not wait until the end of the third month. Thus, the original plan for the control group had to be changed to a wait-list control group; the control group was allowed to join the intervention group and use the ICSG at the beginning of the second month.

The participants' perceived usefulness of the ICSG and participation burden might largely influence the retention as well. While some thought that visiting the ICSG at 10 times per month was burdensome, others perceived the requirement was reasonable and the content was helpful. Those who perceived the usefulness of the ICSG and considered the participation requirement as reasonable were more likely to respond to individual and group coaching/support and remained in the study by the end of the intervention. To keep the participant on track with the coaching/support, we incorporated individual coaching/support into the original group coaching/support. Individual coaching/support certainly improved the participants' involvement compared with when only group coaching/support was used.

### Optimal Timing

Timing issues have been frequently pointed out in Web-based research in general.<sup>44-46</sup> Because of delays in many administrative aspects of the study, we could start the data collection when the spring semester ended. One of the problems was that the previous RA needed to leave for the summer due to her personal reasons. Thus, we had to hire a new RA who could temporarily replace her position during the summer time, which required extra orientation and training period that were not planned at the beginning. In addition, conducting the expert review during summer was difficult because many of the experts were out of town or out of country. Similarly, the involvement of participants was limited during vacation seasons or religious holidays. For example, during the Spring Festival (a 15-day

holiday in China), the participants' visits at the ICSG website were drastically reduced, and the response to online surveys was delayed in Chinese participants.

### Characteristics of the Users

Characteristics of the participants in Web-based research have been pointed out as a major factor influencing the research process.<sup>44,45,47</sup> Indeed, culturally unique meanings, values, and beliefs related to breast cancer influenced the administration of the ICSG. Because breast cancer is a stigmatized condition to this specific population, the women tended to be silent and invisible from the beginning of the study. Interestingly, visible sub-ethnic differences were observed between Korean and Chinese participants in their attitudes and behaviors related to research participation. Chinese participants tended to be more active in contacting the research team and participating in the online forum while Korean participants tended to be passive and hesitant to post their questions or thoughts on the online forum site. Although these sub-ethnic differences have not been reported in the literature, there might be prominent sub-ethnic differences in the women's attitudes and behaviors related to research participation, which could come from sub-ethnic differences in the women's culture and history related to research in general.

The participants' level of computer skills also influenced the administration of the ICSG, which agrees with the previous findings on Web-based research in general.<sup>44,45,47</sup> Based on the results from the usability test (Phase 1), the research team assumed that the participants of Phase 2 who had access to the Internet through computers or mobile devices would not have any problem in using the ICSG. However, many participants needed direct guidance by the research team to sign up and log on the study website, which led us to develop and distribute a step-by-step manual. Furthermore, some participants asked us to retrieve or reset their passwords at multiple times because they frequent forgot their passwords. The participants' forgetfulness of passwords due to their health and treatment conditions (e.g., chemo-brain) has been previously reported in a Web-based study.<sup>45</sup>

### Future Directions

Based on the discussion on the issues identified above, this paper concludes with the following suggestions for future development and implementation of culturally tailored Web-based interventions for ethnic minority cancer patients (see Table 1 for the summary of the issues and related suggestions). First of all, to culturally tailor a Web-based intervention for ethnic minorities, adopting multiple languages would be essential because most cultural tailoring requires the target populations' understanding of educational materials. When using multiple languages, translation is also essential to make the participants to communicate with peers and health care professionals. Thus, it would be essential to plan a workable translation process in advance. The standard-back translation process would be ideal. However, in many cases, the feasibility of the standard-back translation is very low because of the large volume of messages that would be involved in Web-based interventions. In our study, we used the standard-back translation process only for the informed consent and questionnaires while using the accuracy check by bilingual translators for educational modules because of a large volume of educational modules. We also experimented the

Google translator as a supplementary translation method for posted messages, which worked well with double-checks and modifications by bilingual research team members.

Second, the use of culturally matched interventionists would be essential in a culturally tailored Web-based intervention. In the study reported in this paper, culturally matched interventionists were mandatory not only for effective communication for participant recruitment and retention, but also for effective administration of individual and group coaching/support. The literature is clear that culturally matched bilingual health care providers are required in ensuring efficacy in coaching/support, limit harmful communications, provide reliable and objective information and resources, moderate and monitor liability or risk management issues that might arise in groups, and nurture a positive group culture in culturally appropriate and sensitive ways.<sup>48–50</sup>

Cultural characteristics of the users also need to be carefully examined and incorporated into the study design. As the findings indicated, characteristics of the users, especially cultural characteristics, could influence the research process. Although we carefully incorporated cultural characteristics of our target population in the design of the ICSG, there were prominent differences between Chinese participants and Korean participants (e.g., different attitudes toward research participation). We incorporated their general cultural attitudes toward breast cancer (e.g., stigma attached to breast cancer) in the intervention component and the study design. However, we could not incorporate the sub-ethnic differences in their cultural attitudes related to research participation because we did not expect these differences at the beginning of the study (no literature supporting the differences).

As discussed above, the technical world keeps changing in a high speed. The technology that works today would not work for tomorrow. Thus, when developing a culturally tailored Web-based intervention and planning an implementation plan, technical needs of the study need to be examined in advance, and necessary resources need to be incorporated into the study plan and budget in advance. A small technical change may need a change in the study protocol and subsequently requires an IRB modification. Thus, it is wise to check the technical aspect of the study beforehand.

The Internet has been reported to be an excellent channel to approach national and international populations. In our study, it was difficult to recruit the participants solely through local hospitals, clinics, and community groups because very few Asian American breast cancer survivors were available in the settings. However, the study presented in this paper supported that the Internet was an excellent channel to reach a national sample of Asian American breast cancer survivors. As suggested for Web-based research in general, attention-getting techniques in the study announcements would succeed because face-to-face recruitment could be unfeasible in Web-based intervention studies. Also, researchers need to be creative because it is still not well-known which specific motivational strategies would work better in Web-based research. For example, bolding the information on reimbursement or using a sound or music would easily attract potential participants to the study announcement. We also recommend the use of supplementary recruitment methods. For example, in our study, the use of culturally matched research team members to contact

informal and formal leaders with follow-up phone calls was essential to recruit Asian American breast cancer survivors as a supplementary recruitment method.

Finally, because timing could influence the research team and study plan, timing issues should be considered in the study plan. As discussed above, data collection in summer would be one of the worst cases. Also, Thanksgiving, Christmas, and New Year's Day holidays would be bad timing for data collection as well. Ethnic-specific holidays (e.g., Spring festival for Chinese) also need to be avoided to recruit and retain ethnic minorities.

## Conclusions

In this paper, we discussed practical issues in developing and implementing a culturally tailored ICSG by using an intervention study in Asian American breast cancer survivors as a case example. The issues included those in: (a) difficulties in using multiple languages; (b) collaboration with the IT department and technical challenges (c) difficulties in recruitment; (d) difficulties in retention; (e) optimal timing; and (f) characteristics of the users. Some of these issues have been reported in the literature on Web-based interventions in general, but rarely reported in the literature on ICSGs. Based on the findings, we suggested researchers to plan a workable translation process, use culturally matched interventionists, check technological needs in advance, use multiple strategies to recruit and retain research participants, plan the right time for data collection, and consider characteristics of the users in the study design. Yet, generalization of the findings reported in this paper needs to be carefully done because the ICSG was limitedly developed for and implemented in Asian American breast cancer survivors.

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**Table 1**

Practical issues and suggestions for future research.

| <b>Practical Issues</b>                   | <b>Suggestions</b>   |
|---|--|
| Developing Multiple Language Versions     | Planning a Workable Translation Process                      |
| Difficulties in Recruitment and Retention | Using Multiple Strategies for Recruitment and Retention      |
|   | Using Culturally Matched Interventionists                    |
| IT Office and Technical Challenges        | Checking Technical Needs in Advance                          |
| Optimal Timing                            | Planning the Right Time for Data Collection                  |
| Characteristics of the Users              | Considering Characteristics of the Users in the Study Design |

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