Received: 24 July 2021 | Revised: 12 November 2021 | Accepted: 20 November 2021

DOI: 10.1002/pbc.29515

Pediatric Blood & Cancer

SIOP INTERNATIONAL SOCIETY OF PAEDIATRIC ONCOLOGY

aspho The American Society of Pediatric Hematology/Oncology

WILEY

PSYCHOSOCIAL AND SUPPORTIVE CARE: RESEARCH ARTICLE

Interprofessional spiritual care education in pediatric hematology-oncology: A pilot study

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Abstract

Background: Evidence and clinical guidelines call care team members to address the spiritual well-being of pediatric patients, especially adolescents and young adults (AYA), with cancer and blood disorders. However, the lack of relevant training in generalist spiritual care has been a key barrier. Therefore, we aimed to improve clinicians' capabilities by utilizing the Interprofessional Spiritual Care Education Curriculum (ISPEC) to close this gap in pediatric hematology-oncology. A model of interprofessional spiritual care entails that all team members attend to patients' spirituality by employing generalist spiritual care skills and collaborating with spiritual care specialists such as chaplains.

Methods: Interdisciplinary team members providing care for AYA with cancer and blood disorders were recruited to participate in interprofessional spiritual care education. Our intervention combined an evidence-based online curriculum and in-person discussion groups. Pretest-posttest study examined changes in participants' skills and practices to identify, address, and discuss spiritual concerns. Surveys were conducted at baseline and at 1, 3, and 6 months after the intervention.

Results: Participants ($n = 21$) included physicians, advanced practice providers, nurse coordinators, and psychosocial team members. We observed positive changes in participants' ability (36%, $P < 0.01$), frequency (56%, $P = 0.01$), confidence (32%, $P < 0.01$), and comfort (31%, $P = 0.02$) providing generalist spiritual care baseline versus one month, with significant gains maintained through six months (Omnibus $P < 0.05$).

Conclusions: Utilizing ISPEC, interprofessional spiritual care education has a strong potential to develop pediatric hematology-oncology team members' capabilities to

Abbreviations: AYA, adolescents and Young Adults; GWish, The George Washington University Institute for Spirituality and Health; ISPEC, Interprofessional Spiritual Care Education Curriculum.

attend to the spiritual aspect of whole-person care and thus contribute to the well-being of AYA with cancer and blood disorders.

KEYWORDS
Adolescent and young adult (AYA), chaplaincy, interprofessional education, psychosocial, spiritual care, supportive care oncology

1 | INTRODUCTION

As supported by consensus and evidence, all pediatric hematology-oncology care team members play a vital role in contributing to patients' spiritual well-being.[1–5] However, most clinicians report not being prepared or comfortable to address spiritual needs in patient care.[6–12] Therefore, this study aimed to improve team members' capabilities to provide generalist spiritual care for pediatric hematology-oncology patients, especially adolescents and young adults (AYA), and their caregivers. Spirituality is understood as a "dynamic and intrinsic aspect of humanity through which persons seek ultimate meaning, purpose, and transcendence, and experience relationship to self, family, others, community, society, nature, and the significant or sacred."[13] The generalist-specialist model of interprofessional spiritual care in oncology calls on all interdisciplinary team members to attend to patients' spirituality by utilizing generalist spiritual care skills and collaborating with spiritual care specialists such as chaplains.[4,14] Our study focused on clinicians caring for AYA, a distinct population in pediatric hematology-oncology. AYA have unique supportive care needs, including spiritual support, which are largely underserved.[15,16]

Although the entire family bears spiritual resources and distress in the pediatric illness experience, AYA additionally experience unique spiritual struggle. AYA with cancer utilize their spirituality to navigate existential questions, seek meaning, engage faith practices, question existing beliefs, derive hope, maintain relationships, and receive support from others; they do so as they cope with illness during an already tumultuous psychosocial developmental phase.[17,20–29] Furthermore, within pediatric hematology, children and adolescents with sickle cell disease report high levels of spirituality and religious activity and utilize spiritual coping strategies, such as prayer, reading scriptures, seeking God's love, care and forgiveness, finding meaning and acceptance, connecting with others, and looking to God to ease pain and cope with emotions during times of pain or acute illness.[30–33] Incorporating spirituality alongside other coping strategies may be an important factor for AYA and is associated with experiencing better pain management, fewer hospitalizations, and better quality of life.[18,19,34]

Addressing spirituality in patient care is an emerging standard in pediatric oncology. The Psychosocial Standards of Care Project for Childhood Cancer acknowledged spiritual care as integral for the care team to support and contribute to the well-being of children with cancer.[35,36] It recommended that all professionals engaged in psychosocial support should assess "the interplay between cultural and spiritual beliefs and practices in the context of the family's and patient's reactions to illness and treatment."[1] Early, routine, and systemic assessment of spiritual needs and ongoing spiritual care during and after treatment were recommended as standards of care in pediatric oncology.[2] Additionally, the American Society of Clinical Oncology and the National Comprehensive Cancer Network encourage all providers, nurses, and other care team members to (a) have basic, generalist spiritual care skills to recognize and manage spiritual needs, (b) receive training to develop those competencies, and (c) refer to and collaborate with spiritual care specialists to address patients with a higher burden and complexity of spiritual issues.[3–5] Interprofessional spiritual care education efforts have been shown to help care team members develop generalist spiritual care competencies.[37]

In 2018, a comprehensive interprofessional spiritual care education was developed by the George Washington University's Institute for Spirituality and Health called Interprofessional Spiritual Care Education Curriculum (ISPEC).[14] This consists of an online ISPEC course and a train-the-trainer course where trainers learn skills and develop goals for implementing the ISPEC course in their clinical settings. The follow-up data from ISPEC illustrated its ability to support implementation of participant goals that can potentially lead to system change.[38] This paper reflects the work of one of the ISPEC teams' successful goal implementation.

Our study's goal was to improve pediatric hematology-oncology team members' capabilities to provide generalist spiritual care by an interprofessional spiritual care education intervention, demonstrating a pilot use of the online ISPEC combined with facilitated in-person group discussions. By recruiting and training clinicians working with AYA, we had a particular focus on improving the spiritual care of AYA with cancer and blood disorders.

2 | METHODS

2.1 | Design

The study employed a pretest-posttest survey design to examine changes in participants' skills and practices to identify, discuss, and address spiritual concerns with patients and families, associated with interprofessional spiritual care education.

2.2 | Participants

Participants were identified within the Division of Pediatric Hematology-Oncology at Riley Hospital for Children at Indiana

University Health and Indiana University School of Medicine. Eligible participants were physicians, advanced practice providers, nurse coordinators, social workers, and psychologists providing care for AYA (age 12-25) with (a) either cancers that are treated by the solid tumor, leukemia, and stem cell transplant teams or (b) benign chronic blood disorders such as chronic bleeding/thrombosis, sickle cell disease, or bone marrow failure syndromes, treated by the hematology and sickle cell teams, in inpatient and outpatient settings. Ineligible were those who had already completed ISPEC training in an earlier quality improvement project in pediatric neuro-oncology.[39] Potential participants received study information and had opportunities to ask questions during the informed consent process. The study was approved by the Indiana University Institutional Review Board.

2.3 | Interprofessional spiritual care education intervention

The study's intervention involved interprofessional spiritual care education with two main components: (a) the standardized ISPEC curriculum delivered online and (b) in-person discussion groups to interact with each ISPEC module's content more deeply. The training was carried out by two authors, a pediatric oncologist (spiritual care generalist) and a chaplain (spiritual care specialist), who completed the GWish ISPEC train-the-trainer course before this study. Two venues were utilized in the fall of 2019. Participants had a choice of either a weekend retreat format or six weekly lunchtime sessions at the hospital. Both venues included identical intervention and content.

2.4 | Interprofessional spiritual care education curriculum (ISPEC)

ISPEC was developed by GWish in partnership with City of Hope. It is an evidence- and consensus-based online curriculum for spiritual care in diverse healthcare settings. The goal of ISPEC is to train interdisciplinary clinicians as spiritual care generalists to address patients' spiritual distress and strengths and to collaborate with spiritual care specialists.[14] The six online modules of ISPEC use the best available evidence, clinical guidelines, case studies, and videos to increase participants' knowledge and competence to engage in interprofessional spiritual care within their scopes of practice (Table 1).

2.5 | In-person discussion groups

Six in-person, hour-long discussion group sessions accompanied the six online ISPEC modules. Participants completed the ISPEC modules online before the in-person sessions. Group sessions aimed to have participants discuss the applications of ISPEC for their patient care and professional development after each module. Principal investigators, who served as facilitators, developed a set of open-ended questions corresponding with the ISPEC content (Table 1). Although including limited content on child and adolescent spiritual development, ISPEC focused on adult patient and family caregiver populations. A pediatric version of ISPEC had not been published at the time of this study. Therefore, discussion sessions were the primary means by which the content was related and applied to the participants' clinical work with AYA and other pediatric patients and their family caregivers across the disease trajectory in inpatient and outpatient settings. Participants readily engaged in conversations about their professional experiences regarding spirituality and spiritual care. An analysis of participants' qualitative perspectives will be delineated in a separate publication.

2.6 | Outcome measures

Our pre-post surveys measured participants' perceived ability, frequency of spiritual care activities, confidence, and comfort to identify, discuss, and address spirituality with patients and families as part of their patient care. A systematic review of 55 studies on spiritual care education for healthcare professionals showed that survey instruments to evaluate education outcomes widely varied.[37] There was a lack of consistency in validated instruments as 11 of the 13 quantitative and mixed-methods studies with interdisciplinary samples had surveys developed by researchers. Nevertheless, self-reported spiritual care competence was an outcome domain consistently measured across spiritual care education studies,[37] as clinicians report inadequate preparation for spiritual care.[6,8,10,11] Moreover, the synthesis of qualitative and quantitative findings reflected the importance of increasing confidence to provide spiritual care.[37] Clinicians' comfort level with discussing spirituality was also identified as a significant factor in their readiness to address spirituality in patient care.[7,12,37] Finally, we measured frequency to examine practice change in how often participants engaged in interprofessional spiritual care activities.

We developed and adopted survey items to match the consensus-based and inclusive definition of spirituality, the learning objectives, and the generalist-specialist spiritual care model in ISPEC. We modified select items from a prior study measuring outcomes of a five-month fellowship in spiritual care for interdisciplinary clinicians.[40] In the ability domain, we adopted two items about identifying and responding to spiritual issues and added items about participants' ability to screen for spiritual distress, take a spiritual history, and document spiritual history or distress, which are key aspects of the ISPEC training. Regarding frequency, in addition to conversations regarding spiritual concerns, we added items about collaborating with interprofessional colleagues and chaplains, a hallmark of the interprofessional spiritual care model. We significantly rewrote the confidence domain to align with ISPEC learning objectives, whereas the original study's aim was to measure confidence regarding participants' religious concordance and discordance based on religious affiliation. Instead, we asked participants about providing spiritual care to those with different faith backgrounds or no religious affiliation and incorporated items to measure confidence with spiritual care activities taught in ISPEC. Lastly, we included an item about overall comfort working with patients who express their spiritual needs, in addition to the original item about

TABLE 1 ISPEC and discussion questions

Interprofessional Spiritual Care Education Curriculum (ISPEC) modules from The George Washington University Institute for Spirituality and Health (GWish)	Facilitation questions for in-person discussion, developed by the authors
Module 1:	Discussion Group Session 1:
Introduction and background	• What are your reflections on the definition of spirituality? • What do you think about caring for the whole person in body, mind, and spirit? How do you see that in clinical practice? • How have your patients expressed their spirituality? Share an example.
Module 2:	Discussion Group Session 2:
Spiritual distress	• What examples of spiritual distress have you seen in your clinical work? • How have you responded? What worked well? What would you have done differently? • What examples of spiritual growth have you observed in your patients?
Module 3:	Discussion Group Session 3:
Compassionate presence	• What do you think about the idea of compassionate presence? • What is an example of compassionate presence you have witnessed or experienced? • What it is like to be fully present with someone? To be a compassionate presence for another? What does it look like in your clinical care?
Module 4:	Discussion Group Session 4:
Communication about spiritual issues and spiritual assessment	• How would you go about taking a spiritual history in your practice? • How would FICA assist you in taking a spiritual history and incorporate spirituality in your care? • Share a time when you recognized (or recognize now) that a patient's spiritual history has played a significant role in their care. • What would help *you* make spiritual history taking a regular practice?
Module 5:	Discussion Group Session 5:
Whole-person assessment and treatment plan	• How would you document spiritual concerns and resources of your patients? • Have you read someone else's documentation of spiritual history? What did you think? How was it useful? • Think of one of your patients—What would a whole-person care plan look like for them?
Module 6:	Discussion Group Session 6:
Ethics and professional development	• What ethical dilemmas have you encountered regarding spiritual care? • What have you learned from ISPEC that would have been helpful in that situation? • What brings you a sense of meaning and purpose in your work? • How do you see the role of spirituality in your professional development? • What are some spiritual practices that you have found sustaining? Or what are some spiritual practices that you would like to explore in the future?

Note: "Interprofessional Spiritual Care Education Curriculum (ISPEC) is an international, evidence-based curriculum for teaching all types of healthcare providers to address their patients' spiritual needs in a daily healthcare practice. Designed to be taken together with an area chaplain or spiritual director, ISPEC is a compilation of over two decades of research, education, and clinical best practices."[56] To learn more about ISPEC©, go to: https://smhs.gwu.edu/spirituality-health/program/transforming-practice-health-settings/interprofessional-spiritual-care-education-curriculum.

comfort with using spiritual language with patients. Our survey items to measure outcomes are shown in Table 2.

We collected baseline and demographic data before and posttest measures at 1, 3, and 6 months after the intervention. All surveys were administered online via REDCap. Participants rated their *ability to provide generalist spiritual care* by indicating their agreement with five statements on a five-point scale ranging from (1 = "Strongly disagree" to 5 = "Strongly agree") (baseline Cronbach's alpha = 0.87). Participants reported their *frequency of interprofessional spiritual care activities* in which they engaged for the last two weeks in their work, using a five-point scale (0 = zero times, 4 = four times or more) (baseline Cronbach's alpha = 0.71). Self-efficacy was measured by asking participants to rate their *confidence providing generalist spiritual care* on six items with a five-point scale (1 = "Strongly disagree" to 5 = "Strongly agree) (baseline Cronbach's alpha = 0.72). Two items measured participants' *comfort with generalist spiritual care* on a 0-10 scale (0 = "Not at all comfortable" to 10 = "Completely comfortable") (baseline Cronbach's alpha = 0.91). Responses were averaged to get the overall score of each instrument.

2.7 | Statistical analyses

Basic descriptive statistics were generated for demographic and clinical characteristics. Analyses were then performed to determine if there were significant changes in the survey items from baseline to the three follow-up time periods. Generalized mixed linear models were used to model the data and to determine the change from baseline to each follow-up, which accounts for participant attrition by analyzing all possible data for each participant. This generated both the overall omnibus *P* value from the F-test and then compared each pairwise change from baseline, using a Bonferroni adjustment to control for type I errors. All analytic assumptions were verified and analyses were performed using SAS v9.4 (SAS Institute, Cary, NC). Cronbach's alphas were also determined using SAS' correlation procedure.

3 | RESULTS

3.1 | Participant characteristics

Twenty-one participants enrolled in the study out of the 61 eligible members of the pediatric hematology-oncology team, yielding a 34% response rate. The sample consisted of 10 physicians, four advanced care providers, four nurse coordinators (RNs), and three psychosocial team members (social workers or psychologists). Most participants reported being female (81%), in the 31–40-year-age range (52%) and White (86%). The majority identified as "spiritual and religious" (43%), followed by "religious" (33%), "spiritual, not religious" (19%), and "neither" (5%) (Table 3). All 21 participants completed both the interprofessional spiritual care education and the baseline survey, 17 (81%) completed the 1- and 3-month post-training surveys and 12 (57%) the 6-month survey.

3.2 | Interprofessional spiritual care education outcomes

Results indicated positive changes in the study outcomes. At baseline, participants rated their interprofessional spiritual care abilities and confidence moderately at 2.88 and 3.0 (using Likert scale ranges 1-5), the frequency of spiritual activities low at 1.6 (Likert scale range, 0-4), and their comfort level at 5.43 (Likert scale range, 0-10). The post-training surveys showed statistically significant increases in each of these variables after completing the interprofessional spiritual care education (Table 2).

Participants' self-reported ability to provide generalist spiritual care increased by 36% (3.91 1-month post-training; $P < 0.01$). The two lowest-rated items at baseline were the ability to screen patients for spiritual distress and take patients' spiritual history (both at 2.48), which also showed the most improvement by 56% (3.88 1-month post-training) and 47% (3.65 1-month post-training), respectively. Respondents rated their ability to identify spiritual issues with patients and families the highest at baseline (3.33), which increased by 24% (4.12 1-month post-training).

The frequency of interprofessional spiritual care activities was rated low (1.6) at baseline, meaning that participants engaged approximately three spiritual care activities in four weeks on average. This showed an overall 56% increase (2.5 1-month post-training; 0 vs 1: $P = 0.01$) to about five activities in four weeks. Participants indicated that their frequency of collaboration with interprofessional colleagues in addressing spiritual concerns improved the most (70% increase), followed by discussing those concerns with chaplains (50% increase) and conversations with patients and families about spiritual concerns (48% increase).

Participants' overall confidence providing generalist spiritual care improved by 36% (3.96 1-month post-training; $P < 0.01$). Participants reported the greatest increase (64%) in their confidence providing spiritual care to patients and families without religious affiliation. At baseline, they felt most confident making referrals to chaplains (3.76) and discussing their patients' spiritual concerns and resources with their team (3.57), both of which further increased by 19% 1-month post-training.

Participants' overall comfort with generalist spiritual care significantly increased by 31% (7.09 at 1-month post-training; $P = 0.02$). Their comfort using spiritual language with patients and families showed the greatest improvement by 52% (4.48 baseline vs 6.82 1-month post-training).

Additionally, these gains in outcomes were sustained in the long term as indicated by the 3- and 6-month surveys after training. Participants maintained improvements in their interprofessional spiritual care abilities (Omnibus $P < 0.01$), confidence (Omnibus $P < 0.01$), and comfort (Omnibus $P = 0.02$), even though a slight dip in comfort was observed at 3 months (Figure 1A, 1C, and 1D). Surprisingly, the average

TABLE 2 Pre and post changes in interprofessional spiritual care education outcomes

	Outcomes and survey items	Baseline pre-training (mean)	1 Month post-training (mean)	% Change 0 vs 1	3 Months post-training (mean)	6 Months post-training (mean)
	Ability to provide generalist spiritual care (1-5 scale)					
	How would you rate your ability in these areas?					
1	I am able to identify spiritual issues with patients and families	3.33	4.12	24%	4	4
2	I am able to respond to spiritual issues initiated by patients and families	3.48	4.06	17%	3.83	4
3	I am able to screen patients for spiritual distress	2.48	3.88	56%	3.75	3.91
4	I am able to take patients' spiritual history	2.48	3.65	47%	3.5	3.92
5	I am able to document patients' spiritual history or distress	2.62	3.82	46%	3.58	4
	Overall ability:	2.88	3.91	36%[b]	3.73	3.97[d]
	Frequency of interprofessional spiritual care activities (0-4 scale)					
	For the last two weeks in my work					
1	I engaged in conversations regarding spiritual concerns with patients and families	1.9	2.81	48%	2.25	1.75
2	I collaborated with my interprofessional colleagues in addressing spiritual concerns of patients and families	1.62	2.75	70%	2.08	2.08
3	I discussed the spiritual concerns of patients and families with chaplains	1.29	1.94	50%	1.5	1.58
	Overall frequency:	1.6	2.5	56%[a]	1.94	1.81[c]
	Confidence providing generalist spiritual care (1-5 scale)					
	How would you rate your confidence in these areas?					
1	I feel confident providing spiritual care to patients and families without religious affiliation	2.33	3.82	64%	3.67	3.75
2	I feel confident providing spiritual care to patients of different faith backgrounds	2.43	3.65	50%	3.42	3.5
3	I feel confident responding to the spiritual distress of patients and families	2.95	3.88	32%	3.83	3.83
4	I feel confident discussing patients' spiritual concerns and resources with my team	3.57	4.24	19%	4	4
5	I feel confident documenting how patients' spiritual issues impact their care	2.95	3.71	26%	3.67	3.83
6	I feel confident making referrals to chaplains to address the spiritual concerns of patients and families	3.76	4.47	19%	4.25	4.58
	Overall confidence:	3.0	3.96	32%[b]	3.81	3.92[d]
	Comfort with generalist spiritual care (0-10 scale)					
1	How comfortable are you using spiritual language with patients and families?	4.48	6.82	52%	6.08	6.33
2	Overall, how comfortable are you working with patients and families who express their spiritual needs as part of their care?	6.38	7.35	15%	6.82	7.25
	Overall comfort:	5.43	7.09	31%[a]	6.38	6.79[c]

Note: [a]0 vs 1 pairwise (Bonferroni corrected): $P < 0.05$.
[b]0 vs 1 pairwise (Bonferroni corrected): $P < 0.01$.
[c]Omnibus $P < 0.05$.
[d]Omnibus $P < 0.01$.

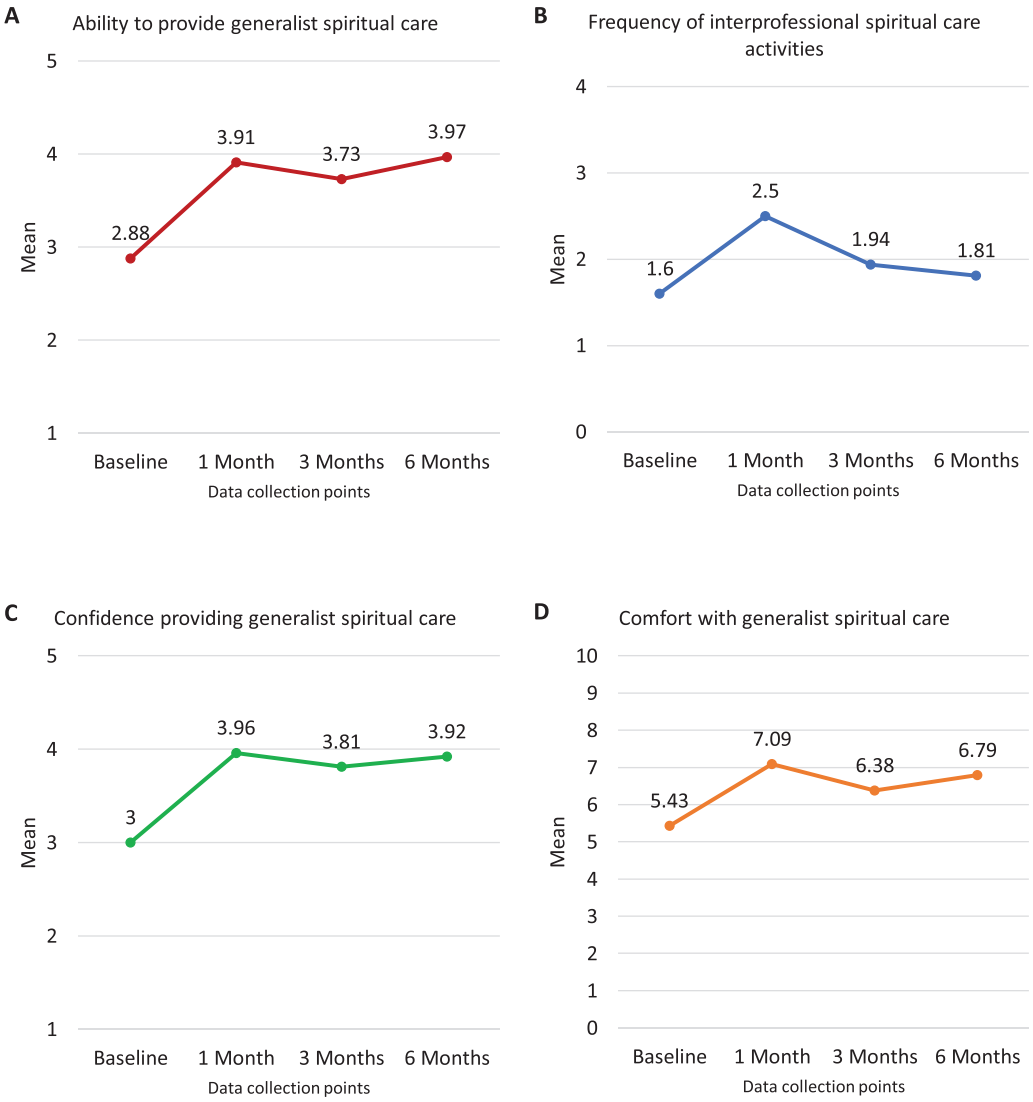

FIGURE 1 Changes over time in outcomes associated with interprofessional spiritual care education. Means are shown for participants' (A) ability to provide generalist spiritual care**, (B) frequency of interprofessional spiritual care activities*, (C) confidence providing generalist spiritual care**, and (D) comfort with generalist spiritual care* at baseline, 1 month, 3 months, and 6 months (Note: * Omnibus $P < 0.05$; ** Omnibus $P < 0.01$)

of one item on the frequency of conversations about spiritual concerns trended down after the initial increase and ultimately dropped below baseline at six months. However, despite tapering off after the marked initial increase, the average of all frequency items still arrived moderately above baseline after six months (1.6 vs 1.81; Omnibus $P = 0.02$) (Figure 1B).

4 | DISCUSSION

The present study was designed to improve care team members' capabilities to provide generalist spiritual care for pediatric hematology-oncology patients, especially AYA, and their caregivers by participating in interprofessional spiritual care education. We observed positive and sustained changes in participants' abilities, frequency, confidence, and comfort providing generalist spiritual care for six months after training. Outcomes suggest that ISPEC may offer an effective way to close the gap between the spiritual needs of AYA and care team members' preparation and practices addressing those needs.

Our findings were consistent with prior studies on spiritual care education for interdisciplinary healthcare professionals, generally showing positive effects on participants' competencies and readiness to provide generalist spiritual care.[14,39–47] Although they consider spiritual care beneficial, interdisciplinary clinicians report barriers to providing generalist spiritual care, such as insufficient training and competencies, perceiving it as not integral to their roles, and discussing spiritual issues with their patients infrequently and inconsistently.[6–9] Although a larger sample with stricter follow-up is needed, our study suggests the ISPEC educational intervention addressed these barriers by increasing participants' abilities, frequency, confidence, and comfort to attend to their patients' spirituality.

TABLE 3 Participant characteristics

Characteristic	Sample ($n = 21$)
Age range, years, *n* (%)	
21-30	3 (14)
31-40	11 (52)
41-50	3 (14)
51-60	4 (19)
Gender, *n* (%)	
Male	4 (19)
Female	17 (81)
Other gender identity	0 (0)
Prefer not to answer	0 (0)
Hispanic, *n* (%)	0 (0)
Race, *n* (%)	
American Indian or Alaska Native	0 (0)
Asian	0 (0)
Black or African American	1 (4.8)
Native Hawaiian or Other Pacific Islander	0 (0)
White	18 (86)
More than one race	1 (4.8)
Other	1 (4.8)
Prefer not to answer	0 (0)
Religious/spiritual, *n* (%)	
Religious	7 (33)
Spiritual, not religious	4 (19)
Spiritual and religious	9 (43)
Neither	1 (4.8)
Prefer not to answer	0 (0)
Clinical role, *n* (%)	
Physician (attending or fellow)	10 (48)
Advanced practice provider (e.g., NP or PA)	4 (19)
Nurse coordinator	4 (19)
Psychosocial team member (social worker or psychologist)	3 (14)

Note: Values are frequencies (percentages). Frequencies may not add to column totals due to missing data.

A recent systematic review of spiritual care education for healthcare professionals highlights the distinctiveness of our own study.[37] In this review, most training groups involved clinicians from mixed adult specialties. Fewer than a third of studies included multidisciplinary participation. Teaching methods varied widely in their content, length, and modalities. Out of the 55 studies reviewed, only three were in pediatric hospitals,[42,48,49] of which only one had interdisciplinary participants.[42] Only two studies with online course delivery included online discussion activities but no in-person groups.[49,50] Only two had a six-month post-training measurement.[51,52] This illustrates the paucity of spiritual care education with interdisciplinary participants in pediatrics. Moreover, it highlights the unique design of our study that entailed a cohesive pediatric hematology-oncology interprofessional team, combined online course and in-person discussion group teaching methods, and examined sustained effects for six months post-training. Our novel approach integrated the benefits of a robust, evidence-based, practice-oriented, and standardized online course content developed by leading experts in the field and the in-person group discussions to apply participants' learning in their clinical work in pediatric hematology-oncology.

It is important to bear in mind that our study addressed barriers at the individual level and used self-report measures. For instance, gains in participants' confidence may imply their growing self-efficacy, which is understood as one's perception and judgments about "how well one can execute courses of action required to deal with prospective situations."[53] It is considered as an essential aspect of one's behavioral, cognitive, and affective patterns, which is related to intrinsic motivation, self-determination, and goal-directed action.[53,54] In such a motivational factor, participants' self-efficacy may help them put their learning into action. However, it is not a sufficient element for behavioral change in itself, since systems and environments play key roles in implementing and maintaining behavior and practice changes. At least partially, this may explain the downward trend in the overall frequency of spiritual care activities after the initial increase. It is possible that structural changes were needed in order to sustain or even protect those activities that were already present at baseline.

Although it was beyond the scope of the study to assess or address structural barriers and facilitators of implementation, such barriers might include factors such as time commitment for spiritual care education and limited access to spiritual care specialists. The extent to which a hospital or healthcare system assigns a low or high value to spirituality as an aspect of health respectively might serve as a barrier or facilitator. The inclusive nature of the ISPEC framework may itself facilitate interprofessional spiritual care practice in various cultural contexts, geographic regions, healthcare specialties, in both secular and religiously affiliated institutions. In addition, setting standards of practice for generalist spiritual care would foster adoption and maintenance of interprofessional spiritual care across care teams and hospitals. Thus, future research should examine system-level factors and barriers for implementation and collect outcome data on changes in clinician behavior, patient experience, and systems of care. Enduring training outcomes and changes are key not only to sustaining interprofessional spiritual care practice in teams but also to making the case for investing in education and implementation by health systems.

There were several limitations to our study. It involved a small sample with considerable attrition on follow-up surveys. Results must be interpreted with caution due to potential selection bias, which may

have contributed to overestimating the impact of training. It could be argued that more engaged participants continued to respond to post-training surveys. While exemplifying the interprofessional practice of various disciplines, our sample did not include broad racial and religious diversity. The study was limited by its single-institutional design because geographic and demographic variations may play a role in how readily healthcare workers engage in spiritual care conversations.[55] Finally, these findings may be somewhat limited by not utilizing a validated survey instrument due to the scarcity of consistent instruments that were developed for and validated with interprofessional samples and that closely fit the interprofessional spiritual care model and objectives of ISPEC. Developing and validating such an instrument warrant further study.

Within pediatric hematology-oncology, the AYA population presents distinct supportive care needs, including support for their use of spirituality to cope with illness. Therefore, clinicians should screen for spiritual distress, take spiritual history, and incorporate spiritual concerns and spiritual resources into the care plan based on the research evidence and clinical standards. However, a marked disparity exists between the extent of spiritual needs and interdisciplinary team members' readiness to address them. Utilizing ISPEC, we found interprofessional spiritual care education may present a significant way to close this gap. Our findings support that it may help team members develop and employ generalist spiritual care skills and thus contribute to the whole-person well-being of pediatric hematology-oncology patients and their caregivers.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

ACKNOWLEDGMENTS

The study was funded by the Values Grant from the Indiana University Health Values Fund for the Integration of Spiritual and Religious Dimensions in Healthcare. The Interprofessional Spiritual Care Education Curriculum (ISPEC©) was used with permission from The George Washington University Institute for Spirituality and Health (GWish).

Open Access funding enabled and organized by Projekt DEAL.

DATA SHARING

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

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How to cite this article: Szilagyi C, Lion AH, Varner Perez SE, et al. Interprofessional spiritual care education in pediatric hematology-oncology: a pilot study. *Pediatr Blood Cancer*. 2022;69:e29515. https://doi.org/10.1002/pbc.29515