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Structuring survivorship care: discipline-specific clinician perspectives

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Abstract

Introduction Several models for survivorship care are prominent within the cancer literature; however, there is little empirical research that examines what oncology clinicians perceive to be the best approach to caring for cancer survivors, what services survivorship programs should include, and how prepared they feel to care for cancer survivors.

Methods An IRB approved web-based survey of all clinical staff was conducted at a NCI designated comprehensive cancer center with a 49.8% response rate (N=377). Data were summarized using frequencies and relative frequencies, and pairwise tests of statistical significance were utilized to evaluate differences between clinician type groups.

Results Overall, the largest proportion of respondents preferred a disease-specific survivorship model (37.6%). This preference was specifically observed in oncology physicians and nurses. When asked where specific survivorship services should be provided, respondents indicated a preference for services directly related to survivors' medical treatment (i.e. information about late effects) to be delivered in a disease-specific survivorship clinic, and ancillary services (i.e. nutrition and fertility counseling) to be housed in a centralized comprehensive survivorship clinic. Physicians felt that they have significantly more information, training, and resources to care for cancer survivors than did oncology nurses.

Discussion/conclusion These results indicate that oncology clinicians prefer a combination of survivorship care delivery models where continuing medical needs are met in disease-specific clinics, and comprehensive wellness services are offered in a centralized comprehensive survivorship clinic. Results also suggest that planning for survivorship initiatives should include additional resources, education, and training for clinical staff.

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Implications for cancer survivors These findings underscore the need for a universally accepted definition of cancer survivorship, and support a model for delivering care to cancer survivors that is a blend of the disease-specific and comprehensive survivorship programs.

Keywords Survivors · Delivery of health care · Psychosocial aspects · Patient care teams

Introduction/background

Advances in cancer treatment have improved the survival of cancer patients, making survivorship an increasingly important aspect of cancer care [1–3]. The American Cancer Society reports that there are nearly 12 million individuals in the US who are living with a cancer diagnosis [4]. While finding ways to meet the needs of this growing group of cancer patients has become a priority, there continues to be debate within the cancer community surrounding how to best structure survivorship care [1–3].

The term *cancer survivor* has several definitions, and while they may differ as to when *survivorship* actually begins, all describe the cancer survivor as a person living with the challenges that may occur as the result of a cancer diagnosis and cancer treatment [5–7]. Cancer survivors often experience a broad range of late or long-term medical and psychosocial sequelae as a result of their cancer diagnosis and treatment, and coordinated care is essential to ensure the highest quality of life for survivors and their families. Because survivors are at risk for recurrence of the original cancer and at risk for developing other cancers, surveillance and prevention are important components of survivorship programs. In addition, a significant proportion of patients have co-morbid conditions that can be exacerbated by the patient's cancer diagnosis and treatment. Finally, the lifestyle changes and psychosocial outcomes of cancer can be as devastating as the medical consequences and also need to be addressed, including but not limited to, relationship issues, activities of daily living, employment accommodations, health insurance, anxiety, living arrangements, and child care [1, 8, 9]. The way that survivorship care is structured and delivered is fundamental for ensuring successful transitions between active treatment and post-treatment life, and optimizing patients' health outcomes and quality of life [1].

There is significant debate within the cancer community as to the best way to deliver care to cancer survivors [8]. Several models have been proposed in the cancer literature [10, 11]. While the specific components and structure of the models proposed may vary, most fit into one of three broad categories: the *community-based shared care model* where care is shared and coordinated between a survivor's oncologist and primary care provider, *disease-specific survivor programs* where the care occurs in the same disease-site setting where a patient received primary cancer treatment, and centralized *comprehensive survivorship programs* that are based in a designated survivorship program and provide coordinated care to survivors of all types of cancers in a single clinical setting [8, 10, 11]. Oncology clinicians' preference for each model, the services they believe survivorship care should include, and their perception of their preparedness to care for survivors are all critical aspects of the design of effective survivorship programs. Despite this, these issues have not yet been fully examined in the literature.

While there is a growing body of research that examines the perspective of primary care physicians regarding caring for cancer survivors [12–16], little is understood about the preferences or perspectives of oncology clinicians and their beliefs as to the best way to structure and provide survivorship care. Also, little is known about the perspectives of support services clinicians such as social workers, psychologists, nutritionists, and physical therapists, despite the centrality of these disciplines in many proposed survivorship initiatives [8]. The research that does examine oncology clinicians' preferences underscores problems related to the continuity and coordination of care for cancer survivors [1, 8, 11, 17, 18], and a lack of knowledge about survivorship issues [19]. In order to build effective survivorship programs, it is critical that programs are designed based on a better understanding of oncology clinicians' perspectives on survivorship care. The purpose of the present study is to investigate clinicians' beliefs about when the transition from patient to survivor occurs, what the best model is to deliver survivorship care, where this care should be delivered, who should manage survivors' follow-up care, what services should be offered to cancer survivors, and their preparedness to deliver these services. The single-site design serves both as a model for other cancer centers currently building survivorship programs, and as a preliminary step in expanding evidence-based knowledge of oncology clinicians' preferences for survivorship care. It also contributes the perspectives of clinicians from a range of disciplines who have differing clinical roles and experiences in caring for cancer survivors.

Developing enhanced survivorship care delivery is a major component of Roswell Park Cancer Institute's (RPCI) strategic planning initiatives, and this survey was part of the planning process. At present, there is significant heterogeneity of survivorship care at RPCI, with some clinics providing structured survivorship programs and others utilizing less formalized approaches. Although significant resources for survivors exist, these resources have not yet been structured into a coherent institute-wide survivorship program. Like many cancer centers, survivorship care at RPCI is in a developmental phase, and therefore it is important to obtain data such as those obtained in the present study in order to inform program development [1–3].

Materials and methods

Survey variables

A multidisciplinary team that included clinicians, researchers, and administrators developed a survey instrument based on a review of the literature examining survivorship issues. The questionnaire was pretested with a subsample of clinicians and refined based on their feedback. The survey assessed four major areas: respondent demographic and practice characteristics, definitions of survivorship, preferred models for delivering survivorship care, and perceptions of preparedness to care for cancer survivors. Based on a review of the literature, respondents were asked to select their preferred cancer survivorship definition from the following choices that were most commonly used in the survivorship literature: (a) from initial diagnosis on, (b) 5 years from date of initial diagnosis, (c) 5 years from date of initial diagnosis and 2 years after completion of all cancer therapy, and (d) completion of active cancer therapy and in remission. An open-ended response option was also offered and additional categories were added to the analysis based on open-ended responses. Respondents were also asked to indicate what they believed is the best model for the delivery of care to cancer survivors by selecting from the following choices: (a) disease-specific cancer survivor program (b) centralized comprehensive survivorship program, and (c) community-based shared care model. Respondents were presented with nineteen specific services that could be offered to cancer survivors and asked to rate the importance of each service on a three-point, unipolar scale anchored by unimportant, moderately important, and very important. Respondents were asked to indicate how each of these services should be delivered to patients, that is in a disease-specific cancer survivor program, a comprehensive survivorship program, or a community-based shared care model. Finally, respondents were asked whether they felt they had access to the necessary training, information, and resources to care for cancer survivors. Response options were ranked on a five-point unipolar Likert-type scale ranging from very slightly or not at all to extremely.

Survey administration

A web-based survey was sent to all staff and faculty who are involved in direct patient care at Roswell Park Cancer Institute, a NCI-designated Comprehensive Cancer Center and member of the National Comprehensive Cancer Network (NCCN) in Buffalo, NY. A list of eligible participants was created from departmental listservs, and included the following: all physicians, nurses, social workers, psychologists, clinical dieticians, physical and occupational therapists, and clinical research coordinators. All potential respondents were sent an email invitation that described the study and asked them to follow the link to the survey. Reminder emails were sent once a week for 4 weeks to potential respondents who had not yet participated in the study. Department heads were asked to encourage members of their departments to participate, and Roswell Park's CEO sent an email to all physicians to promote their participation. Additionally, flyers were distributed to potential participants in their department mailboxes, and the study was advertized on the internal website and in an institute-wide electronic newsletter. Respondents who completed the survey were offered the opportunity to enter their name in a drawing for one of four $50 gift cards. Data collection occurred over a 5-week period.

The web-survey was IRB approved. An informed consent statement appeared before the online survey. Respondents' consent was implied through their completion of the survey.

Statistical analysis

Frequencies and relative frequencies for each survey question were obtained. Differences among groups defined by clinician type were statistically assessed using the Wilcoxon Rank Sum test in the case of ordinal responses and the Pearson Chi-Square test for categorical responses. A nominal significance level of 0.05 was used in all testing, and the Bonferroni adjustment was used to correct for multiple comparisons when evaluating pairwise differences between clinician type groups.

Findings

The survey was sent to 812 potentially eligible participants. Of these, 55 were ineligible because they were no longer employed at RPCI or had transferred out of a clinical patient care department. The final sampling frame consisted of 757 potential respondents, of which 377 completed the survey. The final response rate was 49.8% (response rates for subsamples: physicians=49.6%, mid-level providers=44.9%, nurses=45.6%, and support service clinicians=73.3%). The final sample includes 57 physicians, 31 mid-level providers (nurse practitioners and physician assistants), 207 nurses, and 33 support service clinicians (11 social workers, 5 psychologists, 12 physical and occupational therapists, 4 clinical dieticians, and 1 pharmacist). Eighty-three percent of the sample was female, and 39% had been in oncology practice for 5 years or less (Table 1).

The two definitions of survivorship most commonly endorsed by respondents were “From initial cancer diagnosis on” and “Completion of active therapy and in remission” (38.7% and 34.5%, respectively). Eight and a half percent of respondents defined cancer survivorship as occurring “5 years from date of initial diagnosis.” This lack of consensus was also seen within clinician types (Table 2). For example, 38.6% of physicians defined survivorship as “From initial diagnosis on” while 36.8% selected “Completion of active therapy and in remission.” When asked to identify the best model for delivering care to cancer survivors, the largest percentage of respondents selected disease-specific survivorship programs (37.6%), while 25.9% selected comprehensive survivorship programs, and 20.6% chose the community-based shared care model. Using chi square tests we explored whether respondents definitions of cancer survivorship, years in oncology practice, or cancer subspecialty were related to their preferences for models of survivorship care and found no statistically significant relationships.

Table 1 Sample characteristics

		Frequency	%
Clinical Role	Physician	57	(15.1%)
	Nurse Practitioner/Physician Assistant	31	(8.2%)
	Nurse	207	(54.9%)
	Clinical Research Coordinator	25	(6.6%)
	Social Worker	11	(2.9%)
	Psychologist	5	(1.3%)
	Physical and Occupational Therapist	12	(3.2%)
	Clinical Dietician	4	(1.1%)
	Pharmacist	1	(0.2%)
	No Response/Other	24	(6.4%)
	Total	377	(100%)
Gender	Male	51	(13.5%)
	Female	313	(83.0%)
	No Response/Other	13	(3.4%)
	Total	377	(100%)
Years in oncology practice	0–5 years	148	(39.3%)
	6–10 years	62	(16.4%)
	11–15 years	33	(8.8%)
	16–20 years	48	(12.7%)
	20 years or more	70	(18.6%)
	No Response/Other	16	(4.2%)
	Total	377	(100%)
Clinical specialty[a]	Blood and Marrow Transplant	48	(12.7%)
	Breast	47	(12.5%)
	Urology	30	(8.0%)
	Gynecology	35	(9.3%)
	Head and Neck	24	(6.4%)
	Leukemia	45	(11.9%)
	Upper GI	27	(7.2%)
	Lower GI	28	(7.4%)
	Lung	37	(9.8%)
	Lymphoma	48	(12.7%)
	Sarcoma	25	(6.6%)
	Pediatrics	22	(5.8%)
	Pain	22	(5.8%)
	Neuro-Oncology	17	(4.5%)
	No Response/Other	132	(35.0%)

[a] Total exceeds sample size because some respondents selected multiple specialties

Table 2 Survivorship definition & model preference

	Frequency	%
Below are some commonly used definitions of cancer survivorship. Please select the one that is closest to your own definition of survivorship.		
From initial diagnosis on	146	(38.7%)
Five years from date of initial diagnosis	32	(8.5%)
Five years from date of initial diagnosis and 2 years after completion of all cancer therapy	26	(7.0%)
Five years after the completion of all cancer therapy	11	(2.9%)
Completion of active cancer therapy and in remission	130	(34.5%)
Defined by the individual patient	2	(0.5%)
Greater than 5 years after remission	1	(0.3%)
No opinion	29	(7.6%)
Total	377	(100%)
What do you think is the best model for delivering care to cancer survivors?		
Disease-specific cancer survivor program	142	(37.6%)
Comprehensive survivorship programs	98	(25.9%)
Community-based shared care model	78	(20.6%)
No opinion	28	(7.4%)
Other	10	(2.6%)
No response	21	(5.5%)
Total	377	(100%)

Differences were observed with respect to preferences for survivorship care models when responses were grouped by clinician type (physicians, mid-level providers, nurses, and support clinicians). The disease-specific survivorship program received the most support from physicians (43.9%), followed by the comprehensive survivorship program (21.1%) and the community-based shared care model (15.8%). Oncology nurses also preferred the disease-specific survivorship program (40.1%). Mid-level providers and support clinicians, however, preferred the comprehensive survivorship program model (38.7% and 45.5%, respectively). The largest proportion of physicians, mid-level providers, and support clinicians believed that a mid-level provider should manage patients' follow-up care throughout survivorship (24.5%, 51.6% and 39.3%, respectively). The largest proportion of oncology nurses (40.6%) believed that a nurse should manage survivors' care (Table 3).

While the largest proportion of respondents indicated a preference for a disease-specific cancer survivor program, respondents indicated more nuanced preferences for structuring survivorship care when asked about the delivery of specific services to survivors. Table 4 shows that the largest percentages of respondents believed that information about late effects, information and education for families, the creation of survivorship care plans, and facilitation of communication with the primary care provider should be based in disease-specific survivor clinics. When considering broader survivor support dimensions, however, respondents preferred a centralized comprehensive survivor clinic for programs such as physical activity and weight management, opportunities to interact with other survivors, support groups, fertility counseling, financial counseling, support accessing health insurance, social work, physical and occupational therapy, genetic counseling, pain and symptom management, psychology, lifestyle recommendations to help avoid or reduce late effects, and nutrition. The greatest percentage of respondents indicated that complimentary care services and employment counseling should be referred to community resources.

Finally, we asked respondents if they felt they had the necessary training, information, and resources to care for cancer survivors. When asked if they felt they had access to the necessary training to care for cancer survivors, 50.8% of physicians selected 'quite a bit' or 'extremely,' compared to 25.8% of mid-level providers, 21.3% of nurses, and 48.5% of support clinicians. Post hoc tests revealed that physicians and support clinicians felt they had significantly more survivorship-related training than nurses. Thirty-eight percent of physicians selected 'quite a bit' or 'extremely' when asked if they felt they had access to the necessary information to care for cancer survivors, compared to 32% of mid-level providers, 15.5% of nurses, and 30.3% of support service clinicians. The comparison of physicians and nurses was statistically significant. Finally, 35.1% of physicians, 32.3% of mid-level providers, 15.4% of nurses, and 30.3% of support clinicians selected 'quite a bit' or 'extremely' when asked if they had access to the necessary resources to care for cancer survivors. Again, physicians indicated that they had significantly more survivorship-related information than nurses (Table 5).

Discussion

These findings indicate that the clinicians within our single-site sample hold diverse views in regard to the preferred model for the delivery of survivorship care, with a slight preference for disease-specific survivorship clinics. This preference was most evident in the physicians, direct care nurses, and clinical research services groups, and received less endorsement from the mid-level providers and support clinicians. Since there was not consensus among clinicians in our sample regarding their definitions of survivorship, it is possible that these differing conceptions of survivorship impact where and how they believe survivorship care should be delivered.

Table 3 Survivorship model preference by clinician type

	Physicians		Mid-level providers		Nurses		Support clinicians		Clinical research coordinators	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
What is closest to your own definition of survivorship?										
From initial diagnosis on	22	(38.6%)	10	(32.3%)	79	(38.2%)	15	(45.5%)	10	(40.0%)
Five years from date of initial diagnosis	5	(8.8%)	1	(3.2%)	21	(10.1%)	3	(9.1%)	2	(8.0%)
Five years from date of initial diagnosis and 2 years after completion of all cancer therapy	5	(8.8%)	2	(6.5%)	18	(8.7%)	0	(0%)	1	(4.0%)
Completion of active cancer therapy and in remission	21	(36.8%)	14	(45.2%)	66	(31.9%)	12	(36.4%)	8	(32.0%)
No opinion/other	3	(5.3%)	3	(9.7%)	20	(9.7%)	1	(3.1%)	3	(12.0%)
No response	1	(1.7%)	1	(3.1%)	3	(1.4%)	2	(6.1%)	1	(4.0%)
Total	57	(100%)	31	(100%)	207	(100%)	33	(100%)	25	(100%)
What is the best model for delivering care to cancer survivors?										
Disease-specific cancer survivor program	25	(43.9%)	6	(19.4%)	83	(40.1%)	8	(24.2%)	10	(40.0%)
Comprehensive survivorship program	12	(21.1%)	12	(38.7%)	48	(23.2%)	15	(45.5%)	6	(24.0%)
Community-based shared care model	9	(15.8%)	8	(25.8%)	47	(22.7%)	8	(24.2%)	4	(16.0%)
No opinion	5	(8.8%)	1	(3.2%)	13	(6.3%)	0	(0.0%)	4	(16.0%)
Other	3	(5.3%)	3	(9.7%)	2	(1.0%)	2	(6.1%)	0	(0.0%)
No response	3	(5.3%)	1	(3.2%)	14	(6.8%)	0	(0.0%)	1	(4.0%)
Total	57	(100%)	31	(100%)	207	(100%)	33	(100%)	25	(100%)
What type of clinician should manage patient's follow-up throughout survivorship?										
A nurse	9	(15.8%)	4	(12.9%)	84	(40.6%)	7	(21.2%)	7	(28.0%)
A mid-level provider	14	(24.6%)	16	(51.6%)	39	(18.8%)	13	(39.4%)	3	(12.0%)
An oncologist	10	(17.5%)	1	(3.2%)	47	(22.7%)	6	(18.2%)	7	(28.0%)
A family practice physician or primary care physician	11	(19.3%)	5	(16.1%)	13	(6.3%)	4	(12.1%)	3	(12.0%)
No opinion	7	(12.3%)	3	(9.7%)	9	(4.3%)	3	(9.0%)	4	(16.0%)
No response	6	(10.5%)	2	(6.5%)	15	(7.2%)	0	(0%)	1	(4.0%).
Total	57	(100%)	31	(100%)	207	(100%)	33	(100%)	25	(100%)

When asked about the delivery of specific services, clinicians revealed more nuanced preferences for the best setting to provide specific components of survivorship care. The results indicated that the largest proportions of oncology clinicians believed that services associated with survivors' medical follow-up should be provided in disease-specific survivorship clinics. However, clinicians expressed support for a centralized comprehensive survivorship clinic for the delivery of support services such as nutrition services, support groups, psychosocial support, physical therapy, and occupational therapy. Clinicians, therefore, preferred to follow their patients and provide medically related care in the primary disease clinic setting, while shifting broader support to a survivorship wellness center. This suggests that a combination of survivorship models may be appropriate, with continuing medical needs met in disease specific clinics, and wellness related programs based in multisite centralized clinics.

Strikingly, the findings reported herein illustrate a lack of consensus among respondents regarding the concept of survivorship itself. Close to 40% of respondents define survivorship as beginning on the day of diagnosis, while 34% believe the period of survivorship begins after patients have completed active therapy and are in remission. These differing conceptions of what constitutes survivorship have real implications when developing resources and services for cancer patients and survivors. At the most fundamental level they impact at what point within the care continuum patients are offered survivorship-specific resources and care. Acceptance of a common definition of survivorship would help to establish mechanisms that help ease transitions in the care continuum and ease the processes that connect patients with services. Results also indicate that the perceptions of preparedness to care for cancer survivors vary significantly by clinical role. Oncology nurses and mid-level providers reported feeling less prepared to take on these roles than physicians.

This study presents the perspectives of clinicians from a broad range of disciplines on how to best structure survivorship care. However, several limitations should be

Table 4 Clinicians' preferences for delivery of specific survivorship services

	Disease-specific cancer survivor program		Comprehensive survivorship program		Community-based shared care model		No response	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Information and education about potential late effects	162	(42.9%)	105	(27.8%)	41	(10.8%)	69	(18.3%)
Information and education for families	129	(34.2%)	116	(30.7%)	59	(15.6%)	73	(19.3%)
The creation of a treatment summary and survivorship plan of care	149	(39.5%)	80	(21.2%)	84	(22.2%)	64	(16.9%)
Facilitate communication with primary care provider	134	(35.5%)	82	(21.7%)	87	(23.0%)	74	(19.6%)
Physical activity and weight management programs	51	(13.5%)	142	(37.6%)	110	(29.1%)	74	(19.6%)
Opportunities to interact with other survivors	48	(12.7%)	137	(36.3%)	119	(31.5%)	73	(19.3%)
Survivorship focused support groups	48	(12.7%)	136	(36.0%)	120	(31.8%)	73	(19.3%)
Fertility counseling and resources	78	(20.6%)	129	(34.2%)	95	(25.2%)	75	(19.8%)
Financial counseling	43	(11.4%)	175	(46.4%)	86	(22.8%)	73	(19.3%)
Support accessing health insurance	50	(13.2%)	165	(43.7%)	87	(23.0%)	75	(19.8%)
Access to a social worker	84	(22.2%)	156	(41.3%)	62	(16.4%)	75	(19.8%)
Access to physical therapists	71	(18.8%)	147	(38.9%)	82	(21.7%)	77	(20.4%)
Access to occupational therapists	70	(18.5%)	148	(39.2%)	82	(21.7%)	77	(20.4%)
Access to genetic counselors	95	(25.2%)	157	(41.6%)	48	(12.7%)	77	(20.4%)
Pain and symptom management programs	120	(31.8%)	127	(33.6%)	55	(14.5%)	75	(19.8%)
Psychological treatment	68	(18.0%)	147	(38.9%)	90	(23.8%)	72	(19.1%)
Lifestyle recommendations to help avoid or reduce late effects	79	(20.9%)	142	(37.6%)	81	(21.4%)	75	(19.8%)
Nutrition counseling	66	(17.5%)	163	(43.2%)	72	(19.1%)	76	(20.1%)
Complimentary services	30	(7.9%)	131	(34.7%)	139	(36.8%)	77	(20.4%)
Employment counseling	29	(7.6%)	130	(34.4%)	137	(36.3%)	81	(21.4%)

kept in mind when interpreting these findings. First, all respondents were recruited from one comprehensive cancer center. Responses may not represent the experiences of clinicians who practice in different parts of the country, in different settings, or have direct experiences with active clinical survivorship care programs. It is noteworthy, however, that even within one institution, where one might expect a certain degree of consistency of responses, responses regarding both definitions of survivorship and preferences for survivorship care were strikingly heterogeneous. Comparisons of the study sample and clinicians who did not respond reveal that study participants have a greater proportion of nurses and females, and it is possible that these characteristics are related to preferences for survivorship care. As survivorship programs are best structured to address local patient and institutional cultures, focused, institution-based research on these topics is an important contribution to the literature as well as providing models for the developmental process necessary for creating appropriate care programs. The diverse views of clinicians in our sample underscore the need to obtain institution-based data and evidence to develop programs that have the highest likelihood of being successful. Future research should examine these domains with a larger, more diverse sample.

In summary, these findings underscore the need for a universally accepted definition of cancer survivorship, and support a model for delivering care to cancer survivors that is a blend of the disease-specific and comprehensive survivorship programs. Future research should explore clinicians' differing definitions of cancer survivorship in more depth to better understand how varying definitions of survivorship affect existing survivorship care, as well as planning initiatives for future survivorship programs. Future research should also examine clinician perspectives on structuring survivorship care across a wider range of practice and patient care settings. These results also suggest that planning for survivorship initiatives should include additional resources, education, and training for clinical staff. There is a need for further research on the specific

Table 5 Comparisons of clinicians' perceptions of preparedness to care for cancer survivors

	Physicians		Mid-level providers		Nurses		Support clinicians		Clinical research coordinators		Other		Statistically Significant Pairwise Comparisons
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	
I feel I have the necessary TRAINING to care for survivors right now.													
Very slightly or not at all	4	(7.0%)	2	(6.5%)	26	(12.6%)	3	(9.1%)	4	(16.0%)	2	(8.3%)	Physicians vs. Nurses $p<.001$
A little	7	(12.3%)	11	(35.5%)	45	(21.7%)	2	(6.1%)	5	(20.0%)	2	(8.3%)	
Moderately	11	(19.3%)	8	(25.8%)	73	(35.3%)	11	(33.3%)	9	(36.0%)	8	(33.3%)	Nurses vs. Support Clinicians $p<.05$
Quite a bit	19	(33.3%)	4	(12.9%)	37	(17.9%)	14	(42.4%)	6	(24.0%)	1	(4.2%)	
Extremely	10	(17.5%)	4	(12.9%)	7	(3.4%)	2	(6.1%)	0	(0.0%)	2	(8.3%)	
No response	6	(10.5%)	2	(6.5%)	19	(9.2%)	1	(3.0%)	1	(4.0%)	9	(37.5%)	
Total	57	(100%)	31	(100%)	207	(100%)	33	(100%)	25	(100%)	24	(100%)	
I feel I have access to the necessary INFORMATION to care for survivors right now.													
Very slightly or not at all	7	(12.3%)	4	(12.9%)	29	(14.0%)	3	(9.1%)	3	(12.0%)	2	(8.3%)	Physicians vs. Nurses $p<.05$
A little	7	(12.3%)	10	(32.3%)	48	(23.2%)	6	(18.2%)	4	(16.0%)	2	(8.3%)	
Moderately	13	(22.8%)	6	(19.4%)	70	(33.8%)	14	(42.4%)	8	(32.0%)	7	(29.2%)	
Quite a bit	16	(28.1%)	7	(22.3%)	26	(12.6%)	8	(24.2%)	6	(24.0%)	3	(12.5%)	
Extremely	6	(10.5%)	3	(9.7%)	6	(2.9%)	2	(6.1%)	0	(0.0%)	1	(4.2%)	
No response	8	(14.0%)	1	(3.2%)	28	(13.5%)	0	(0.0%)	4	(16.0%)	9	(37.5%)	
Total	57	(100%)	31	(100%)	207	(100%)	33	(100%)	25	(100%)	24	(100%)	
I feel I have the necessary RESOURCES to care for survivors right now.													
Very slightly or not at all	7	(12.3%)	1	(3.2%)	30	(14.5%)	2	(6.1%)	2	(8.0%)	3	(12.5%)	Physicians vs. Nurses $p<.05$
A little	7	(12.3%)	13	(42.0%)	47	(22.7%)	11	(33.3%)	7	(28.0%)	1	(4.2%)	
Moderately	15	(26.3%)	7	(22.3%)	70	(33.8%)	9	(27.3%)	9	(36.0%)	9	(37.5%)	
Quite a bit	12	(21.1%)	8	(25.8%)	28	(13.5%)	8	(24.2%)	5	(20.0%)	1	(4.2%)	
Extremely	8	(14.0%)	2	(6.5%)	4	(1.9%)	2	(6.1%)	0	(0.0%)	1	(4.2%)	
No response	8	(14.0%)	0	(0.0%)	28	(13.5%)	1	(3.0%)	2	(8.0%)	9	(37.5%)	
Total	57	(100%)	31	(100%)	207	(100%)	33	(100%)	25	(100%)	24	(100%)	

training needs of clinicians, and models of integrating this training into survivorship planning initiatives.

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