

ORIGINAL RESEARCH

Addressing Resiliency and Burnout: A Quantitative Needs Assessment of Oncology Physician Associates

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Authors' disclosures of conflicts of interest are found at the end of this article.

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Abstract

Background: Significant progress has been made in understanding the factors associated with oncology physician associate (PA) burnout. Little is known about what PAs need to mitigate burnout, the availability of resources, and barriers to interventions. **Methods and Materials:** PAs completed a quantitative needs assessment to determine the importance of and their perceived skill levels in topics of self-care, clinical care, and professional development. **Results:** PAs were mostly female (90%), practicing in medical oncology (66%) and in the outpatient setting (66%). Topics most often identified to be of high importance were dealing with difficult patients (93%), dealing with difficult staff (89%), delivering bad news (88%), and coping with death/patient suffering and personal grief (86%). Burnout rates were higher for those with lower perceived skills in resiliency ($p = .03$) and dealing with difficult providers and staff ($p = .03$) but did not differ based on the importance of any other skill sets. Common barriers to employee assistance program (EAP) participation to enhance well-being were lack of time (58%) and concerns about confidentiality and stigma (26%). For PAs with concerns about stigma, resiliency scores were lower (6.4 vs. 7.0; $p < .001$) and burnout rates were higher (73% vs. 48%; $p = .004$). **Conclusion:** Perceived deficiencies in resiliency training and managing difficult work relationships correlate with higher rates of burnout in oncology PAs. Barriers to participation in EAPs, which may help address these deficits, are common and when present are associated with an alarming rate of burnout and lower resiliency.

The understanding, awareness, and importance of the well-being of the oncology team has seen significant advances over the past decade (Shanafelt et al., 2014; Sinsky et al., 2023; Tetzlaff et al., 2022b, 2023). Physician associates (PAs) and nurse practitioners (NPs), collectively known as advanced practice providers (APPs), are key members of the oncology team for which significant

progress has been made in understanding the factors associated with burnout. Given the high rates of burnout reported by PAs in oncology (approximately 50% in the pre-pandemic era), they are a group of providers for which mitigation strategies for improving well-being are clearly needed (Tetzlaff et al., 2022b). PAs, like other members of the care team, are likely to need targeted strategies unique to their concerns, as opposed to broad strategies applied to the entire health-care workforce.

We have previously shown that PAs in oncology are at a greater risk of burnout when organizational context and system-level factors such as workload, rewards, and values do not align with the oncology PA and their work environment (Tetzlaff et al., 2022a). In addition, PAs are at a greater risk of burnout when they feel their contributions to the practice are not valued or acknowledged by their collaborating physicians and their professional goals are not encouraged (Tetzlaff et al., 2018). Finally, the interplay between increasing levels of moral distress reported by oncology PAs and the higher rates of burnout underscore the complexity of addressing well-being and the need for tailored programs and interventions (Tetzlaff et al., 2023).

More recently, actions by organizations to reduce provider burnout and improve work-life integration have been gaining traction (Shanafelt, 2021). Early steps to mitigate burnout have often focused on individual-level interventions to improve self-care and build resilience. However, it has become more widely accepted that larger system-based interventions are needed to address the root causes of professional burnout and distress. As a result, a greater focus is being placed on systems issues and building institutional infrastructure that cultivates provider well-being as opposed to simply reducing burnout. Unfortunately, this evolution in improving provider well-being is slow. While waiting for organizational change, individual participation in a well-being curriculum that focuses on preventing distress and promoting professional fulfillment may complement the systems interventions and provide more immediate and actionable strategies to promote well-being. Unfortunately, it is likely that although well intentioned, there may be a lack of participation in employer-based assistance programs due to concerns

about confidentiality, stigma, and other workplace barriers (Givens & Tjia, 2002; Spiers et al., 2017).

In this study, we conducted a quantitative needs assessment to investigate the importance of and perceived skills of oncology PAs in topics of self-care, clinical care, and professional development, and the relationship between these perceptions and resiliency and burnout. It was anticipated this information would better inform future strategies and programs to improve provider well-being. We also explored the availability of existing employee assistance programs (EAPs), engagement of oncology PAs with the programs, and the barriers to participation.

METHODS

Participants and Survey Administration

Using the membership database of the Association of PAs in Oncology (APAO), potential participants were invited by e-mail to participate in the current study. Participants were required to confirm that they worked as a PA in clinical practice in the specialty of oncology at any time over the prior 12 months. An e-mail reminder was sent on three occasions to participants who had not completed the survey after the initial invitation. All participants who completed the full survey were provided with a \$10 gift card for their participation. The study was approved by the Fox Chase Cancer Center Institutional Review Board, and all participants provided informed consent prior to participation in the study.

Survey Dimensions

The survey was developed and assembled by the study team. In brief, items included in the survey were created based on a review of the literature on provider burnout and the results from our initial studies exploring oncology PA burnout. The review was performed to understand the current drivers and factors associated with burnout in health-care providers, as well as potential mitigation strategies. The survey was subsequently developed through a series of meetings and reviews, and included items related to provider health, coping strategies, barriers to pursuing and accessing care related to well-being, and mental health. The topics included in the survey were drawn from multiple studies that explored strategies to mitigate burnout in addition

to published commentary and discussion papers from thought leaders in provider well-being and burnout (Dyrbye et al., 2019; Shanafelt et al., 2019; West et al., 2014). The scope of the topics was chosen based on both the shared needs of all health-care professionals and the unique needs of PAs in oncology (Swensen & Shanafelt, 2017).

Information was obtained about participants' personal and professional characteristics (11 items), career and specialty satisfaction (6 items), resiliency (2 items), and burnout (22 items). To understand the importance of potential well-being curriculum topics to oncology PAs, participants were asked to indicate the importance of topics related to self-care (4 items), clinical care (5 items), professional development (5 items), and mentorship/coaching (3 items). Responses were provided on a 5-point Likert scale ("not at all important," "of little importance," "of average importance," "very important," and "absolutely essential"). Participants were also asked to indicate their perceived skill in the potential well-being curriculum topics on a 5-point scale ("very poor," "poor," "average," "good," and "excellent"). Preferences for participation in well-being activities were also examined for presentation format (lecture, workshop, small group, or panel discussion) and location (in person, virtual). Lastly, participants were asked about the EAP benefits offered by their employers to understand services available, barriers to participation, and current or past participation (7 items).

Burnout and Resiliency

The Maslach Burnout Inventory (MBI) was used to assess burnout. Considered the gold standard for the assessment of burnout, the MBI includes three subscales that evaluate emotional exhaustion, depersonalization, and sense of personal accomplishment (Maslach et al., 1996–2018). The MBI has been used in numerous studies to examine burnout among numerous health-care professions and all fields of medicine (Balch et al., 2011; Bourdeanu et al., 2020; Dyrbye et al., 2013; Shanafelt et al., 2014; Shanafelt et al., 2015). Consistent with prior studies, a high score on the emotional exhaustion subscale (≥ 27) and/or a high score on the depersonalization subscale was used to define the presence of professional burnout. To

measure their degree of resiliency, participants completed the Connor-Davidson Resilience Scale (CD-RISC). Participants completed the 2-item scale (CD-RISC2), which is a tested and validated measure of "bounce back" and adaptability (Connor & Davidson, 2021; Vaishnavi et al., 2007). The CD-RISC has been used in numerous studies examining the relationship between resiliency and provider burnout (Boland et al., 2023; Giusti et al., 2023; McGuinness et al., 2023; West et al., 2020). Higher resiliency scores on the CD-RISC indicate higher levels of resiliency.

Statistical Analysis

Standard descriptive statistics were used to describe the personal and professional characteristics of the oncology PAs. For each curriculum topic (including self-care skills such as mindfulness, clinical care skills such as delivering bad news, and professional development skills such as mentoring), the association between resiliency score and PA ratings on the topic's importance was assessed using analysis of variance (ANOVA) to compare the mean resiliency scores by importance (5 levels from "not at all" to "essential"). For each self-care and clinical care curriculum topic, mean resiliency scores by PA perceived skill (5 levels, "very poor" to "excellent") were compared using ANOVA. For mentoring and career coach training, instead of asking perceived skill level, respondents were asked if they are mentors, mentees, or have had coach training (yes/no format); resiliency scores were compared by t-tests. Chi-square or Fisher's exact tests were used to compare the rates of burnout by PA ratings on the topic's importance, by PA perceived skill level, and by the yes/no questions on mentoring and coach training.

The EAP-related items were asked in a yes/no format (some items included "not sure" or "prefer not to answer"); burnout rates were compared by yes/no responses within each item using Chi-square or Fisher's exact tests. Statistical analyses were performed using two-sided tests and type I error of 0.05, with SAS software, version 9.4 (SAS Institute, Cary, NC).

RESULTS

There were 191 participants who consented to participate in the study out of the 1,256 email

invitations that were sent (15.2% response rate). Of these, 171 completed the full-length MBI and the CD-RISC and needs assessment items, and were included in the full analysis.

Consistent with prior studies of oncology PAs, participants in this study were 41.7 years old on average and had been a PA in any setting for 13.6 years (mean) and in oncology specifically for 10.5 years (mean). Participants more commonly identified as female (89.5%), White/Caucasian (78.4%), and were married (74.9%). Most participants worked more than 40 hours per week (55.5%), in the outpatient setting (65.5%), and were in the medical oncology subspecialty (66.1%) at an academic medical center (59.1%; Table 1).

Perceptions of Topics for a Well-Being Curriculum

PAs reported the level of importance for topics related to the development of a well-being curriculum (Figure 1). Topics PAs reported as “high importance” included ratings of “very important” or “absolutely essential.” The topics that PAs most commonly reported as having high importance were dealing with difficult patients (93%), dealing with difficult staff (89%), delivering bad news (88%), and coping with death, patient suffering, and personal grief (86%). Topics that were the least likely to be of high importance included mindfulness training (53%), having a professional coach (59%), being a professional mentor (61%), and leadership skills training (68%).

PAs also reported their level of perceived skills in the well-being curriculum topics. “Highly skilled” topics included ratings of “good” or “excellent” in the PAs’ perceived skill. Similarly, PAs reported themselves as being highly skilled in dealing with difficult patients (75%), delivering bad news (72%), and coping with death, patient suffering, and personal grief (69%). PAs least often reported their perceived skill levels as being highly skilled in mindfulness training (42%), cognitive behavioral training (addressing maladaptive thought patterns, improving emotional regulation, and enhancing coping skills; 57%) and resiliency training (59%).

Burnout, Resiliency, and Associations With Well-Being Curriculum Topics

Overall, 55% of PAs were considered to have professional burnout, reporting either high scores

on emotional exhaustion and/or depersonalization subscales. High scores on emotional exhaustion, depersonalization, or both were reported by 24.6%, 8.8%, and 21.6% of PAs respectively. The mean and median scores for the subscales were: emotional exhaustion (25.4/25.0), depersonalization (7.3/6.0), and personal accomplishment (38.5/40). No significant differences in the rates of burnout were found based on the reported importance of the well-being topics. However, the rates of burnout were significantly lower for PAs who reported higher levels of skill in either resiliency training or dealing with difficult providers and staff. As compared to 100% and 90% of PAs who reported very poor or poor skills ($p = .033$), only 36% of PAs with excellent ratings of resiliency training reported burnout. Similarly, 39% of PAs with excellent skills in dealing with difficult providers and staff reported burnout compared to 80% of PAs with poor skills ($p = .032$). The rate of burnout was also significantly lower for PAs who reported serving as a professional mentor compared to those who did not (44% vs. 61%; $p = .035$; Table 2).

In terms of resiliency, the mean score on the CD-RISC2 was 6.8 for the entire cohort, with scores ranging from 3 to 8. There were no differences in resiliency scores based on gender, race/ethnicity, relationship status, clinical subspecialty, practice setting, or hours worked. When examined as continuous variables, age, years in clinical practice, and years as a PA in oncology were shown to be statistically significantly associated with resiliency. Unlike burnout, when the importance of well-being topics was examined, the mean resiliency scores significantly increased with the increasing importance of topics related to mindfulness skills training, cognitive skills training, being a professional mentor, professional coaching support, leadership skills training, and debriefing following significant events. When perceived skills set was examined, all topics had significant increases in resiliency scores with increasing perceived skill levels for the given topic (Table 2; Figure 2).

Employee Assistance Programs

The majority (77.8%) of PAs reported that their work offered an employee assistance program,

Table 1. Personal and Professional Characteristics of Participants (N = 171)

	<i>n</i>	%
Age (yr), mean (median)	41.7 (39)	
Gender		
Female	153	89.5
Male	18	10.5
Race/ethnicity		
White/Caucasian	134	78.4
Asian	15	8.8
Black/African American	4	2.3
Hispanic/Latinx	8	4.7
Mixed	5	2.9
Prefer not to answer	5	2.9
Relationship		
Single	28	16.4
Married	128	74.9
Partnered	10	5.8
Divorced/widowed	5	2.9
Years as a PA (any setting), mean (median)	13.6 (12)	
Years as a PA in oncology, mean (median)	10.5 (9)	
Primary practice setting		
Inpatient	26	15.2
Outpatient	112	65.5
Both/flex between	33	19.3
Practice type		
Academic medical center	101	59.1
Hospital owned, private practice	24	14.0
Physician owned, private practice	35	20.5
Other	9	5.3
Subspecialty		
Medical Oncology	113	66.1
Surgical Oncology	37	21.6
Radiation Oncology	9	5.3
Other	12	7.0
Hours worked per week		
≤ 30	12	7.0
31–40	64	37.4
41–50	78	45.6
> 50	17	9.9

with only 5.3% reporting no program was available, and 17% were not sure (Table 3). The distribution of PAs in academic and private practice without EAP programs (or not sure) was not significantly different. The most common services used were activities related to well-being (14.6%), online shopping discounts (5.9%), and financial management (4.1%). Notably, 32.2% of PAs reported participating in a non-EAP activity related to well-being or burnout at their place of work within the last 12 months.

To the question, “If you felt mentally or emotionally unwell, would you contact your EAP program on your own?” only 63.7% responded yes. PAs reported being more likely to contact their EAP if feeling unwell with a recommendation by a PA or NP colleague (82.5%), NP or PA supervisor (77.2%), or their collaborating physician (73.1%). Of note, 68.5% of PAs who reported they would not contact their EAP had burnout compared with 46.8% of PAs who reported they would contact their EAP if they felt unwell ($p = .015$). Barriers to participation in EAP programs included lack of time (58%), worry about confidentiality or stigma (26%), not knowing what services were offered (20%), and services not being of interest (12%). Alarming, the rates of burnout were significantly higher for PAs who identified barriers to participation in EAP programs based on time (66.7% vs. 38.9%; $p < .001$) and worry about confidentiality and stigma (73.3% vs. 48.3%; $p = .004$) compared to those who did not identify those barriers. The rates of burnout were also lowest for PAs who did not report barriers to EAP participation compared to those who did identify barriers (27.9% vs. 64.1%; $p < .001$). Resiliency scores were also lower for PAs reporting stigma and confidentiality barriers (6.38 vs 7.0; $p \leq .001$) compared to those who did not report that barrier. Lastly, resiliency was higher for PAs reporting no barriers to EAP participation (7.3 vs. 6.7; $p = .002$) compared to PAs who reported any barrier present (independent of actual participation in an EAP).

DISCUSSION

The prevalence of burnout among oncology PAs is alarming and poses a significant threat to the delivery of high-quality care to patients with cancer (Tetzlaff et al., 2018; Tetzlaff et al., 2022b, 2023).

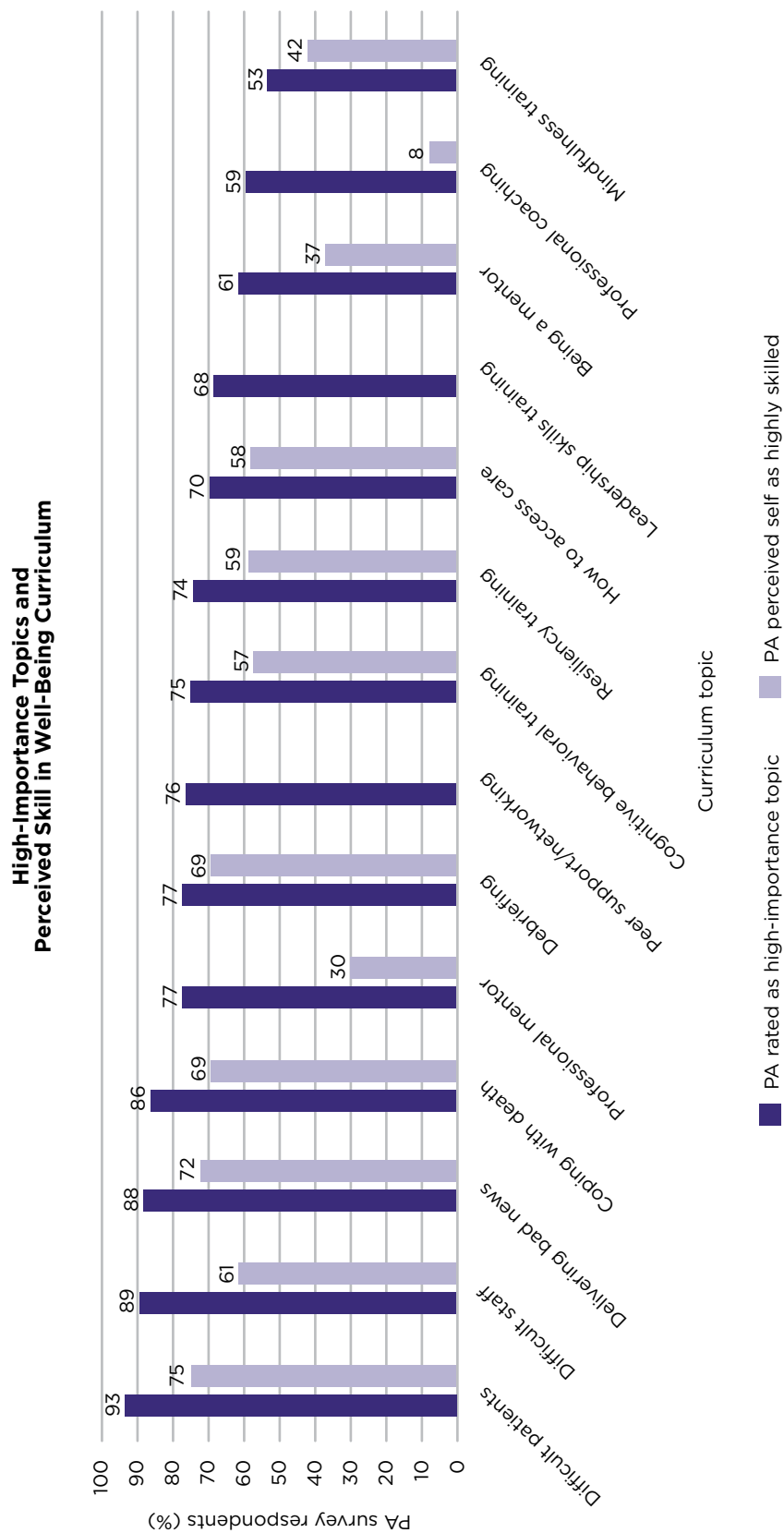


Figure 1. Frequency of topics perceived to be of high importance to include in a well-being curriculum and the reported perceived skill for each topic. Leadership and peer/support items did not have a skill assessment. Mentor/mentee items and professional coaching report the percentage of PAs that reported participation in that item.

Table 2. Resiliency and Burnout Scores Within Each Curriculum Topic Based on Importance and Perception of Skills

	Importance of skill					Perceived skill level						
	Not at all		Average		Essential	Very Poor		Average		Excellent		
	0	1	2	3	4	0	1	2	3	4	p value	
Resiliency score (mean)												
Mindfulness skills training	6.0	6.8	6.6	7.0	7.4	.007	5.9	6.5	6.8	7.0	7.7	<.001
Cognitive skills training	5.0	5.6	6.9	6.9	6.9	.053	5.5	6.6	6.4	7.0	7.7	<.001
Resiliency training	6.0	6.1	6.9	6.8	7.0	.29	5.0	6.0	6.4	7.0	7.7	<.001
Delivering bad news	-	6.3	6.2	6.8	7.0	.055	-	7.7	6.7	6.7	7.3	.012
Dealing with difficult patients	-	6.0	7.0	6.8	6.9	.81	-	-	6.4	6.9	7.3	<.001
Dealing with difficult providers and staff	-	7.0	6.6	6.7	7.0	.44	-	6.5	6.3	7.2	7.4	<.001
Debriefing following significant events	-	5.2	6.8	6.9	7.0	.006	6.0	6.7	6.8	6.8	7.7	.041
Coping with death, patient suffering, or personal grief	-	6.5	6.4	6.8	7.0	.19	-	7.1	6.5	6.9	7.3	.019
Use of skill/support												
								Yes		No		
Having a professional mentor	6.5	7.0	6.5	6.8	7.2	.12		7.02		6.78		.19
Developing skills to be a professional mentor	5.0	6.4	6.6	6.9	7.5	<.001		7.08		6.71		.039
Professional coaching support	6.3	6.0	7.0	6.7	7.3	.037		7.46		6.8		.040
Networking/peer support	5.0	6.4	6.6	6.9	7.0	.22		-		-		
Leadership skills training	5.0	5.7	6.6	6.9	7.3	.001		-		-		
Note: p values for resiliency score from ANOVA tests; p values for burnout are Chi-square or Fisher's exact tests.												
$n = 1$												
$n = 2$												
$n = 3$												

Note. *p* values for resiliency score from ANOVA tests; *p* values for burnout are Chi-square or Fisher's exact tests.

¹*n* = 1

²*n* = 2

³*n* = 3

Table 2. Resiliency and Burnout Scores Within Each Curriculum Topic Based on Importance and Perception of Skills (cont.)

	Importance of skill						Perceived skill level					
	Not at all		Average		Essential		Very Poor		Average		Excellent	
	0	1	2	3	4	p value	0	1	2	3	4	p value
<i>Burnout (%)</i>												
Mindfulness skills training	67	53	54	59	44	.74	80	58	62	43	50	.13
Cognitive skills training	100 ¹	60	42	60	55	.35	100 ²	73	64	48	39	.075
Resiliency training	100 ²	71	37	62	51	.062	100 ¹	90	62	51	36	.033
Delivering bad news	-	67	53	52	58	.87	-	33	69	53	46	.099
Dealing with difficult patients	-	-	55	49	62	.22	-	-	64	53	49	.33
Dealing with difficult providers and staff	-	-	44	53	61	.21	-	80	66	49	39	.032
Debriefing following significant events	-	60	51	54	60	.87	100	73	53	54	50	.54
Coping with death, patient suffering, or personal grief	-	50	55	53	57	.97	-	83	60	55	40	.21
	Use of skill/support											
	Yes						No					
Having a professional mentor	100 ²	100 ²	60	52	52	.55			49		58	.31
Developing skills to be a professional mentor	100 ¹	70	58	53	46	.61			44		61	.035
Professional coaching support	100 ³	40	47	65	45	.056			46		55	.51
Networking/peer support	100 ¹	60	63	50	57	.66			-		-	
Leadership skills training	100 ¹	57	61	55	46	.64			-		-	

Note. *p* values for resiliency score from ANOVA tests; *p* values for burnout are Chi-square or Fisher's exact tests.

¹*n* = 1

²*n* = 2

³*n* = 3

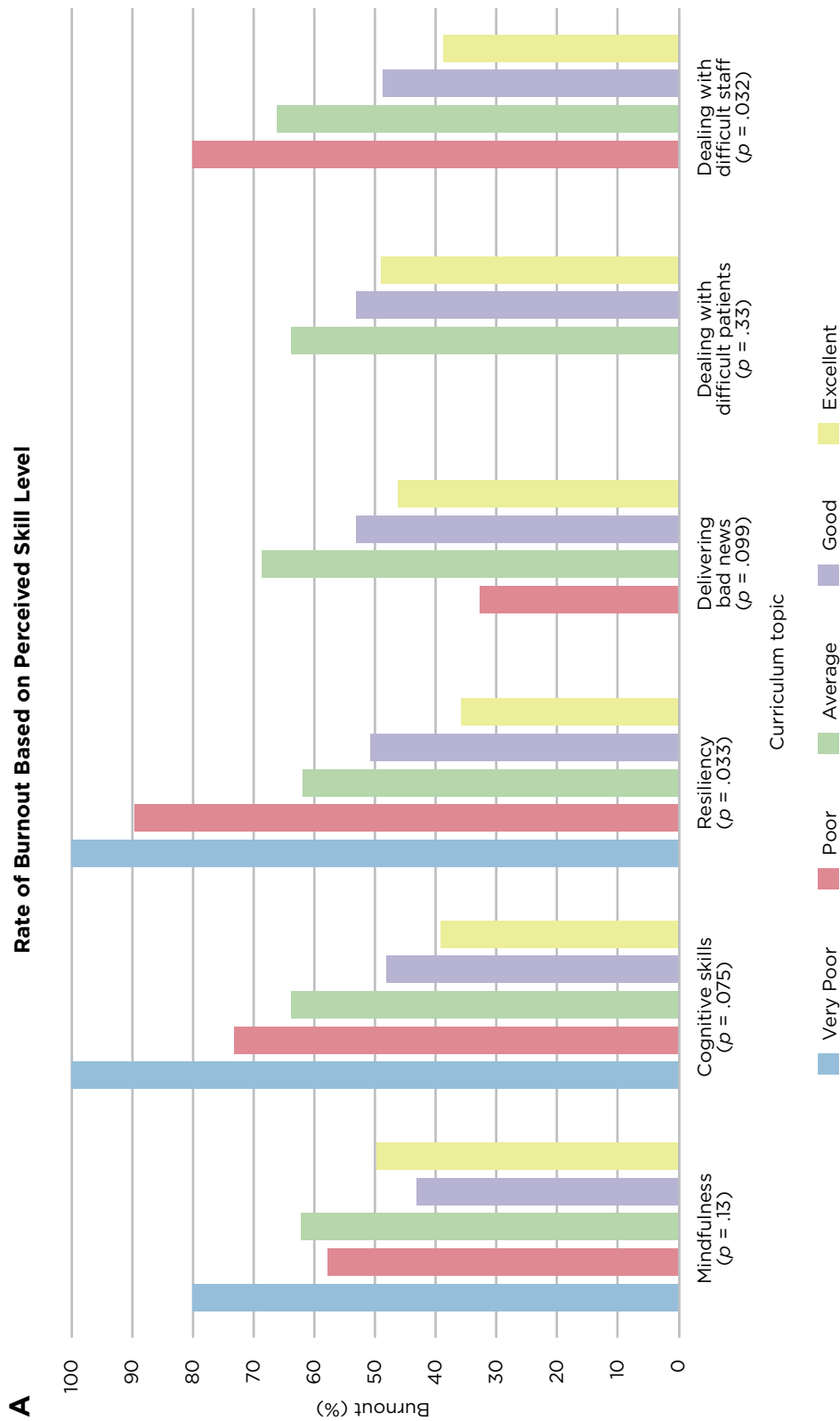


Figure 2. (A) Rate of burnout based on perceived skill level.

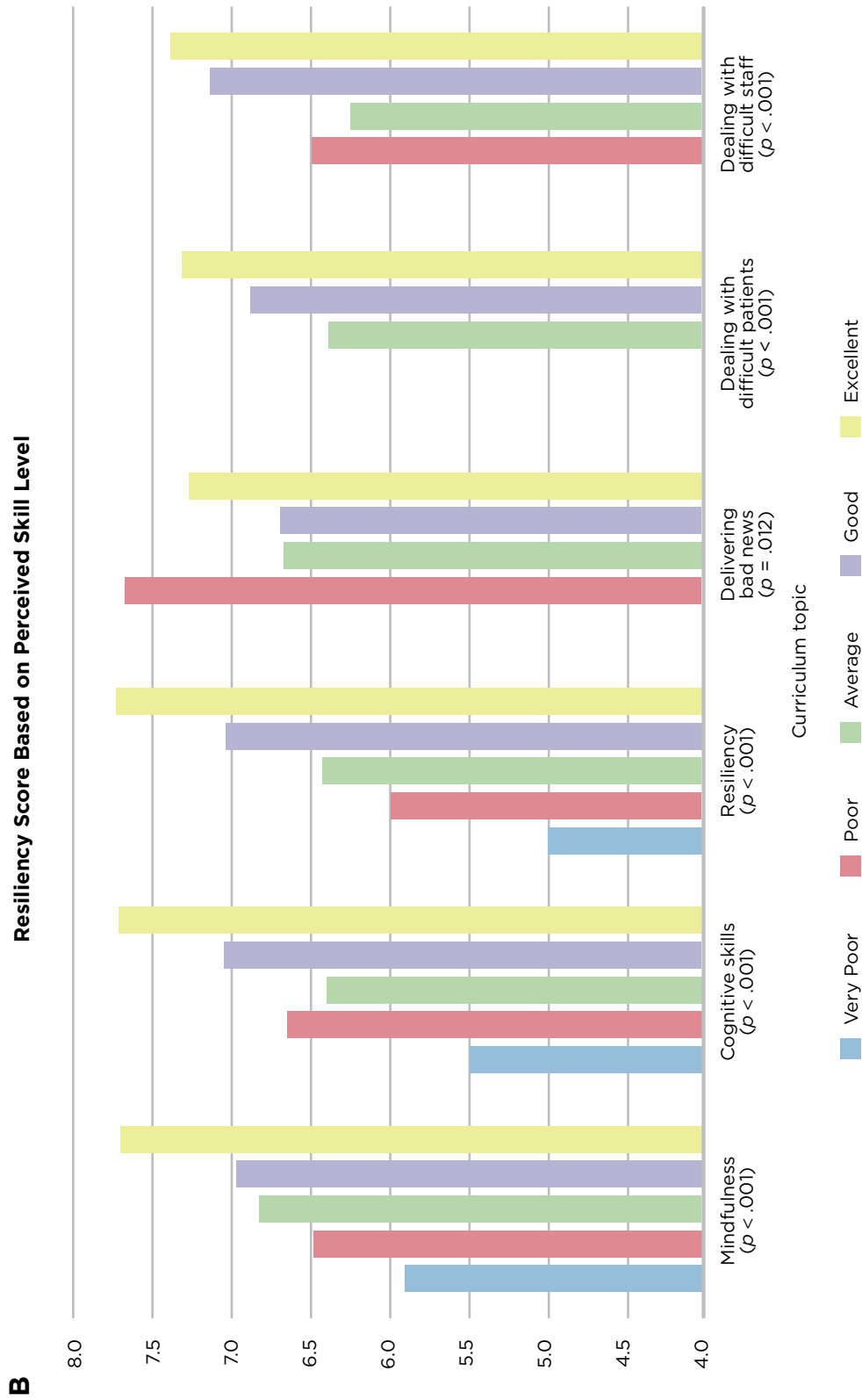


Figure 2. (B) Resiliency score based on perceived skill level.

Table 3. Employee Assistance Programs and Burnout

	Total <i>N</i>	Burnout				<i>p</i> value
		No		Yes		
		<i>n</i>	%	<i>n</i>	%	
<i>EAP Access and Utilization</i>						
EAP offered by employer						.88
Yes	133	59	44.4	74	55.6	
No	9	5	55.6	4	44.4	
Not sure	29	13	44.8	16	55.2	
Likelihood of contacting EAP independently						.015
Yes	109	58	53.2	51	46.8	
No	54	17	31.5	37	68.5	
Prefer not to answer	8	2	25.0	6	75.0	
Likelihood of contacting an EAP based on recommendation of:						
Supervising/collaborating physician						.008
Yes	125	64	51.2	61	48.8	
No	30	9	30.0	21	70.0	
PA or NP colleague						.068
Yes	132	64	48.5	68	51.5	
No	30	9	30.0	21	70.0	
PA or NP supervisor						.095
Yes	132	64	48.5	68	51.5	
No	39	13	33.3	26	66.7	
Other colleague						.23
Yes	114	55	48.2	59	51.8	
No	57	22	38.6	35	61.4	
Participated in any EAP activities related to well-being or burnout at your place of work within the last 12 months						.58
Yes	146	67	45.9	79	54.1	
No	25	10	40.0	15	60.0	
Participated in any non-EAP activities related to well-being or burnout at your place of work within the last 12 months						.32
Yes	55	22	40.0	33	60.0	
No	115	54	47.0	61	53.0	
Prefer not to answer	1	1	100.0	-	-	
<i>Note.</i> EAP = employee assistance program.						

Table 3. Employee Assistance Programs and Burnout (cont.)

	Total <i>N</i>	Burnout				<i>p</i> value
		No		Yes		
		<i>n</i>	%	<i>n</i>	%	
<i>Barriers to EAP Participation</i>						
I don't have time during work to participate						< .001
Yes	99	33	33.3	66	66.7	
No	72	44	61.1	28	38.9	
I don't know how to contact the EAP at work						
Yes	19	10	52.6	9	47.4	.48
No	152	67	44.1	85	55.9	
I don't know what the EAP at work has to offer						.52
Yes	34	17	50.0	17	50.0	
No	137	60	43.8	77	56.2	
The EAP does not offer activities that I am interested in						.25
Yes	21	7	33.3	14	66.7	
No	150	70	46.7	80	53.3	
I worry about confidentiality or stigma associated with participating in an EAP						.004
Yes	45	12	26.7	33	73.3	
No	126	65	51.6	61	48.3	
No barriers to participation						< .001
Yes	43	31	72.1	12	27.9	
No	128	46	35.9	82	64.1	
<i>Note.</i> EAP = employee assistance program.						

Note. EAP = employee assistance program.

Addressing this workplace phenomenon is not only a moral obligation in preserving the provider-patient relationship but is also vital to meeting the increasing workforce demands in oncology (Hlubocky et al., 2021; Hlubocky et al., 2020a; Hlubocky et al., 2020b). Mitigating the risks of PA burnout will strengthen team-based care in oncology by increasing PA retention and work engagement while also reducing PAs' personal risks of anxiety, depression, and even suicide (Coplan et al., 2018; Halasy et al., 2021; Smith et al., 2023). To that end, the needs assessment of the current study found that oncology PAs frequently identified role-based skills such as dealing with difficult patients or staff, delivering bad news, and dealing with death and dying as important skills when developing a well-being curriculum. They also perceived high levels of personal competency in these same important skills. Topics that focused on personal growth and development such as mindfulness

training, having a professional coach, or cognitive skills training were less often reported to be of high importance, and respondents also felt that they possessed lower skill levels in those domains.

There are two findings from the current study that have significant implications for addressing oncology PA burnout. First, there are significant barriers to oncology PA participation in EAPs related to well-being and burnout, and some of the highest rates of burnout are reported by PAs encountering those barriers. The most common barriers to participation in EAPs were lack of time during work to participate (57.9%) and worry about the confidentiality or stigma associated with participation (26.3%). As expected for a group of overextended providers, PAs with lack of time to participate in EAPs had higher rates of burnout compared to PAs who did not identify the barrier (66.7% vs. 38.9%; $p < .001$), with similar findings noted when concern about stigma was

reported (73.3% vs. 48.3%; $p = .004$). Importantly, less than two-thirds of PAs indicated they would contact an EAP independently, but the likelihood increased to over 80% of PAs when a PA or NP colleague made the recommendation. These findings suggest that strategies to increase oncology PA engagement in well-being activities may be best focused on peer-recruitment strategies for participation in programs that take place outside of the workplace. This strategy would have the benefit of reducing workplace stigma and confidentiality concerns, engaging with peer networks, and enabling professional organizations to help meet an unmet need in improving the strength of the APP workforce. This strategy was explored in a virtual peer support group program developed by the American Society of Clinical Oncology (ASCO) well-being task force. Preliminary results from the program indicated the feasibility and acceptance of the program, with oncologists reporting high levels of satisfaction with the peer support group experience and resultant positive impacts on their well-being (Hlubocky et al., 2023). The findings from our study support the ongoing engagement of professional organizations to help mitigate the risks of burnout for oncology professionals by focusing on individual-level solutions through personal growth and development of providers while offering opportunities to develop a larger sense of community outside of the workplace. In turn, employers can provide greater focus on the organizational and system-level factors that are at the core of provider well-being and engagement.

The second finding that warrants further discussion is the relationship between the resiliency of the oncology PA, the association with PAs' ratings of the importance of particular skills to include in a well-being curriculum, and PAs' perceived level of those skills. In this study, higher resiliency scores were associated with higher perceived levels of skills for all of the well-being curriculum items. This would suggest that PAs in the current study had a good understanding of their perceived skill sets. Interestingly, when burnout was examined in relationship to perceived skill sets, only increasing skill in resiliency and dealing with difficult providers and staff were associated with lower rates of burnout. These findings have several potential implications. First, it would suggest that well-being

curricula need to be tailored to the individual oncology PA and their perceived skill sets and background. This could be accomplished by introductory screening questions prior to participation in programs so that participants can select programs to best suit their needs. Having flexible curricula will help maximize time spent on meaningful activities and reduce participation in courses or programs for which they already have adequate skills sets. This is of significant importance should employers consider mandating staff training without accounting for individual skill sets and prior training or experience. These findings also underscore the need for interdisciplinary education and training of teams to collaborate in the oncology space. Challenging interactions with providers and staff should be viewed through a collaborative lens. Although strategies that focus on improving individual skills sets of oncology PAs for this circumstance may be of benefit, it is likely that the greatest improvement in team well-being will be to focus efforts on the entire oncology team.

There are several notable strengths of the current study. First, the study utilized the MBI, considered as the gold standard for the assessment of burnout, as well as the validated and widely used Connor-Davidson Resilience Scale. In addition, the inclusion of PAs in oncology across varied practice settings, subspecialties, and practice types provides for generalizable results for the oncology PA.

There are also important limitations of the study. Notably, the response rate of the study was low, and the potential for response bias may exist. We believe this risk to be low, as the participant characteristics of the current study are similar to previous studies of PAs in oncology and the National Commission on Certification of Physician Assistants Statistical Profile of Board Certified PAs in Oncology (Bruinooge et al., 2018; National Commission on Certification of Physician Assistants, 2024; Tetzlaff et al., 2022a, 2023). In addition, it has previously been shown that burnout does not appear to influence participation in survey studies (Kellerman & Herold, 2001; Shanafelt et al., 2014; Shanafelt et al., 2019). The study is also limited by the cross-sectional design that does not allow for determinations of causality or assessment of effects over time.

The current study provides a strong founda-

tion to guide the development of a well-being curriculum; however, significant unmet needs remain to address oncology APP well-being. Most importantly, research on the effectiveness of curriculum-based interventions for oncology APPs is needed. Although randomized controlled trials of well-being interventions would be ideal, pre- and post-intervention studies in oncology have been completed and may be more feasible to conduct given the limited resources to conduct larger studies. Future research could also explore additional drivers of burnout among oncology APPs to further expand offerings to help improve provider well-being. In addition, as strategies and curricula are developed, it will be of significant interest to explore the optimal delivery methods for well-being education and support. For example, further examination of the setting in which well-being programs are delivered may have a significant impact on the benefits of the program and engagement of APPs. Future research could explore the differences in participation in virtual, in-person, or hybrid models and explore the impact of different interventions and topics related to well-being based on the learning environment.

In conclusion, burnout among oncology PAs remains a significant threat to meeting the demands for high-quality care for patients with cancer. While organizational changes to address burnout are clearly needed, the more established strategies in place often focus on individual-level solutions. Unfortunately, this study highlights the barriers to participation in currently available employer-based programs and the risks of burnout for those most in need. The results from this study highlight high-priority skills to be developed in a well-being curriculum that may be best established outside of the workplace to reduce barriers to participation. ●

Disclosure

The authors have no conflicts of interest to disclose.

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