

Original Article

Satisfaction with work-life balance among U.S. gynecologic oncologists, a cross-sectional study

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Abstract: Objectives: To evaluate the satisfaction with work-life balance (WLB) and career satisfaction of gynecologic oncologists. Methods: In August 2014, members of the Society of Gynecologic Oncology (SGO) were sent an anonymous, cross-sectional survey evaluating demographic variables, practice characteristics, career satisfaction, fatigue, and satisfaction with WLB. Fatigue was assessed using a visual-analog scale. Career satisfaction and WLB were assessed with a Likert scale. Inferential statistics were computed with type I error rates of 0.05. Results: Out of the 1002 gynecologic oncologists surveyed, 290 (28.9%) responded. Only 18.6% of respondents were satisfied with WLB and there were significant associations between gender ($P = 0.0157$), time spent in work related activities at home ($P = 0.0024$), on weekends ($P = 0.0017$), and in the hospital ($P = 0.0001$). More than 84% of physicians reported they would choose medicine as a career again and of those 90% would choose to be a gynecologic oncologist again. Fatigue was strongly associated with dissatisfaction with WLB in univariate and multivariate analysis ($P < 0.0001$). Conclusions: Although gynecologic oncologists indicated they are satisfied with their careers, most are not satisfied with their WLB. Given the forecast shortage of gynecologic oncologists and projected increased cancer rates, understanding the factors associated with career satisfaction may assist the SGO in meeting future gynecologic cancer care needs.

Keywords: Burnout, job satisfaction, questionnaires, career choice, personal satisfaction, physicians/psychology

Introduction

The United States population is aging, increasing the risk for developing gynecologic malignancies in most women [1]. Furthermore, obesity is a risk factor for endometrial cancer and with these two factors combined workforce projections anticipate a 20% increase in the case-load per surgeon [1].

Prior surveys of the membership of other national oncology organizations, the Society of Surgical Oncology (SSO) and the American Society of Clinical Oncology (ASCO), have cited physician burnout and a dissatisfaction with work-life balance (WLB) as reasons practitioners anticipate they will reduce their clinical volume within the next 12 months [2, 3]. Factors identified in other fields include: gender, hours worked, surgical case load, and patient care hours [2, 3]. Synthesis of these findings with workforce projections for gynecologic

oncologists could foreshadow a perfect storm on the horizon with respect to women's cancer care [1]. Physicians who are unhappy with their careers may be more likely to reduce hours and/or retire earlier, placing further load on the system, causing more dissatisfaction with WLB in a feed-forward loop.

In this cross-sectional study of US Gynecologic Oncologists we sought to evaluate characteristics of specialists in the field to determine what factors are associated with decreased WLB and identify those areas that may be conducive to interventions to improve that balance with the ultimate goal of increasing longevity in the workforce.

Methods

This study was approved by the institutional review board at the Roswell Park Cancer Institute (Buffalo, NY). We obtained a list of

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Table 1. Demographic characteristics of respondents according to time since fellowship completion

Demographic	Time Since Completing Fellowship (years)			P-value
	Less than 10 n = 146	10-20 n = 67	More than 20 n = 76	
Basic Demographic Questions				
Age years (SD)	38.7 (3.8)	49.2 (3.5)	60.6 (7)	< 0.0001
Sex n (%)				
Male	50 (34.3)	40 (59.7)	59 (77.6)	
Female	96 (65.8)	27 (40.3)	17 (22.4)	< 0.0001
Children n (%)				
Yes	98 (67.1)	59 (90.8)	72 (94.7)	
No	48 (32.9)	6 (9.2)	4 (5.3)	< 0.0001
Age of Youngest Child				
< 5	35 (53.9)	3 (8.1)	0 (0)	
5-12	27 (41.5)	15 (40.5)	1 (2.5)	
13-18	3 (4.6)	15 (40.5)	6 (15)	
19-22	0 (0)	2 (5.4)	10 (25)	
> 22	0 (0)	2 (5.4)	23 (75.5)	< 0.0001
Any children born during fellowship? N (%)				
Yes	63 (65.6)	36 (61)	40 (55.6)	
No	33 (34.4)	23 (39)	32 (44.4)	0.4150
Relationship Status n (%)				
Single	17 (11.6)	3 (4.6)	3 (4)	
Married	126 (86.3)	56 (84.9)	72 (94.7)	
Partnered	< 10 [†]	7 (10.6)	< 10 [†]	
Widowed	< 10 [†]	0 (0)	0 (0)	0.0041
Ever Divorced n (%)				
Yes	19 (13)	22 (32.8)	16 (21.6)	
No	127 (87)	34 (67.2)	58 (78.4)	0.0031
Current Student Loans n (%)				
None	50 (34.3)	58 (87.9)	73 (96.1)	
≤ \$125,000	46 (31.5)	6 (9.1)	2 (2.6)	
> \$125,000	50 (34.3)	2 (3)	1 (1.3)	< 0.0001
Practice Characteristics				
Practice Setting n (%)				
Academic	81 (60.9)	35 (55.6)	35 (49.3)	
Private Practice	45 (33.8)	25 (39.7)	33 (46.5)	
Government	5 (3.8)	2 (3.2)	0 (0)	
Other	1 (0.8)	0 (0)	0 (0)	
Retired	< 10 [†]	< 10 [†]	3 (4.2)	0.2883
Academic Career Focus n (%)				
Clinical	58 (44.6)	20 (41.7)	26 (49.1)	
Basic Science	6 (4.6)	1 (2.1)	2 (3.8)	
Education	51 (39.2)	21 (43.8)	20 (37.7)	
No single focus	8 (6.2)	4 (8.3)	5 (9.4)	
Unsure	7 (5.4)	2 (4.2)	0 (0)	
Chemotherapy administration n (%)				
Yes	109 (82)	48 (77.4)	52 (74.3)	
No	15 (11.3)	10 (16.1)	16 (22.9)	

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Co-manage	9 (6.8)	4 (6.5)	2 (2.9)	0.2237
Supervise Trainees n (%)				
0 days	20 (15)	15 (23.8)	18 (25.4)	
1-2 days	18 (13.5)	13 (20.6)	12 (16.9)	
3+ days	95 (71.4)	35 (55.6)	41 (57.8)	0.1474
Percent of Time in Direct Patient Care n (%)				
0-25	3 (2.3)	3 (4.8)	7 (9.9)	
26-50	10 (7.6)	9 (14.3)	6 (8.5)	
51-75	34 (25.8)	16 (25.4)	21 (29.6)	
76-100	85 (64.4)	35 (55.6)	37 (52.1)	0.1612
Percent of Time in Operating n (%)				
0-25	19 (14.3)	13 (21)	24 (33.8)	
26-50	71 (53.4)	34 (54.8)	38 (53.3)	
51-75	40 (30.1)	14 (22.6)	8 (11.3)	
76-100	3 (2.3)	1 (1.6)	1 (1.4)	0.0158
Hours/week of patient care mean (SD)	59.6 (18.9)	61.8 (17.6)	70.4 (19.9)	0.7988
Hours/week at home working mean (SD)	6.9 (6.6)	8.3 (5.9)	7.5 (5.6)	0.3637
Rounds coverage n (%)				
Own patients	72 (31.2)	49 (38.3)	36 (36)	
Blocked schedule	63 (27.3)	24 (18.8)	25 (25)	
Share weekends	66 (28.6)	38 (29.7)	28 (28)	
Academic rounds	29 (12.6)	15 (11.7)	10 (10)	
No rounds	1 (0.4)	2 (1.6)	1 (1)	
Weekends per year mean (SD)	17.9 (10.4)	17.8 (10.6)	18.6 (11.3)	0.8902
Compensation n (%)				
Salary only	53 (40.2)	21 (33.9)	16 (23.2)	
Salary + Bonus	72 (54.6)	33 (53.2)	43 (62.3)	
Productivity only	7 (5.3)	8 (12.9)	10 (14.5)	0.0509
Days of Business travel per month n (%)				
0	45 (34.1)	16 (25.8)	15 (21.7)	
1-2	66 (50)	31 (50)	38 (55.1)	
3+	21 (15.9)	15 (24.2)	16 (23.2)	0.2943
Reduce Hours? N (%)				
Yes	11 (8.9)	12 (21.8)	20 (30.8)	
No	112 (91.1)	43 (78.2)	45 (69.2)	0.0006
Leave Current Practice? N (%)				
Yes	19 (17)	7 (13.7)	14 (23)	
No	93 (83)	44 (86.3)	47 (77)	0.4203
Career Satisfaction				
Fatigue mean (SD)	6.6 (2.1)	6.6 (2.3)	5.4 (3.1)	0.0027
Satisfied with WLB n (%)				
Strongly Agree	6 (4.6)	2 (3.5)	2 (3)	
Agree	19 (14.4)	12 (20.7)	13 (19.7)	
Neutral	27 (20.5)	11 (19)	15 (22.7)	
Disagree	65 (49.2)	23 (39.7)	23 (34.9)	
Strongly Disagree	15 (11.4)	10 (17.2)	13 (19.7)	0.5957
Vacation weeks per year n (%)				
< 1	0 (0)	1 (1.6)	3 (4.4)	
1-2	35 (26.5)	18 (29.5)	14 (20.3)	

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3+	97 (73.5)	42 (68.9)	52 (75.4)	0.1366
Expected retirement age (years) mean (SD)	64.2 (6)	64.6 (5.5)	67.3 (4.5)	0.0015
MD Again? N (%)				
Definitely Yes	58 (43.9)	30 (49.2)	37 (53.6)	
Probably Yes	46 (34.9)	22 (36.1)	20 (29)	
Unsure	17 (12.9)	4 (6.6)	8 (11.6)	
Probably No	9 (6.8)	5 (8.2)	3 (4.4)	
Definitely No	2 (1.5)	0 (0)	1 (1.5)	0.7828
GynOnc Again? N (%)				
Definitely Yes	57 (43.2)	31 (51.7)	42 (60.9)	
Probably Yes	55 (41.7)	18 (30)	18 (26.1)	
Unsure	13 (9.9)	4 (6.7)	8 (11.6)	
Probably No	7 (5.3)	7 (11.7)	1 (1.5)	
Definitely No	0 (0)	0 (0)	0 (0)	0.0380

Comparison of demographic, practice, and wellness related measures stratified by time since completing fellowship (in years). Comparisons of categorical variables were made using chi-square and Fisher's exact tests as appropriate. Continuous variables were compared using independent samples t-test or Mann-Whitney U test based on normality of the distribution. *totals censored for privacy.

active gynecologic oncologists through the Society of Gynecologic Oncology membership directory (accessed July 23, 2014). Members were identified by searching for all individuals listing their profession as "Gynecologic Oncologist". Members were excluded if their listed address was outside of the United States of America (US) or if they did not have a valid email address listed in the directory. Responses were collected over a three week period during August and September 2014. For this cross-sectional study all possible subjects were included in the study to maximize generalizability of the data.

A web-based survey was created and included three question categories: 1) Personal characteristic questions including age, gender, age of youngest child, timing of childbirth compared with residency/fellowship training, relationship status, student loan debt, and number of years since completing training; 2) Practice characteristics questions including practice setting (academic, private practice, government, or other), chemotherapy practices, supervision of trainees, hours spent per week on various work-related activities, rounds and weekend coverage, and method of compensation; and 3) participants were asked about career satisfaction, fatigue, WLB, and career plans. Questions were modeled after prior surveys of various physician specialties in order to facilitate external comparisons [2-10]. WLB was assessed

using a Likert scale and agreement with the question previously studied by Shanafelt et al. in multiple physician populations [3, 8, 10], "My work schedule leaves me enough time for my personal/family life". Subjects were asked about satisfaction with career and specialty selection, based on a Likert scale. Fatigue was assessed on a 10-point visual-analog scale. To reduce any effect of social desirability bias all responses were kept anonymous.

Statistical analysis was performed using SAS version 9.4 (SAS Institute; Cary, NC). Continuous variables were compared using Student's t test, except where non-normal results existed, when a Mann-Whitney U test was performed. χ^2 and Fisher's exact tests were used as appropriate. Linear regression was performed to evaluate the relationship between reported fatigue satisfaction with WLB, the multivariate model included adjustment for various factors including gender, presence of children, age of youngest child, years since training, time to expected retirement (the difference between retirement age and current age), supervision of trainees, satisfaction with career and specialty, and weeks of vacation per year; a backward selection as performed with $P < 0.15$ used as the threshold for retaining a parameter within the model. For the categorical analysis, WLB was dichotomized to "balanced" for practitioners who answered the WLB question as "agree" or "strongly agree" and "un-balanced" for those

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Table 2. Comparison of respondent demographics according to satisfaction with work-life balance

Demographic	Satisfaction with Work-Life Balance		P-value
	Satisfied n = 54	Dissatisfied n = 149	
Basic Demographics			
Age years (SD)	46.8 (10.2)	45.8 (9.1)	0.7050
Sex n (%)			
Male	35 (64.8)	86 (45.6)	
Female	19 (35.2)	81 (54.4)	0.0157
Children n (%)			
Yes	44 (81.5)	125 (83.9)	
No	10 (18.5)	24 (16.1)	0.6844
Age of Youngest Child			
< 5	8 (29.6)	24 (31.6)	
5-12	7 (25.9)	27 (35.5)	
13-18	5 (18.5)	9 (11.8)	
19-22	4 (14.8)	4 (5.3)	
> 22	3 (11.1)	12 (15.8)	0.4234
Any children born during fellowship? N (%)			
Yes	26 (60.5)	76 (60.8)	
No	17 (39.5)	49 (39.2)	0.9691
Relationship Status n (%)			
Single	3 (5.6)	9 (6.1)	
Married	51 (94.4)	131 (88.5)	
Partnered	0 (0)	< 10 [†]	
Widowed	0 (0)	< 10 [†]	0.3777
Ever Divorced n (%)			
Yes	8 (14.8)	32 (21.8)	
No	46 (85.2)	115 (78.2)	0.2737
Years Since Training			
< 10	15 (27.8)	36 (24.2)	
10-19	14 (25.9)	33 (22.2)	
20+	25 (46.3)	80 (53.7)	0.6473
Current Student Loans n (%)			
None	35 (64.8)	89 (59.7)	
≤ \$125,000	9 (16.7)	28 (18.8)	
> \$125,000	10 (18.5)	32 (21.5)	0.8051
Practice Characteristics			
Practice Setting n (%)			
Academic	28 (51.9)	91 (61.1)	
Private Practice	20 (37)	55 (36.9)	
Government	4 (7.4)	2 (1.3)	
Other	0 (0)	1 (0.7)	
Retired	2 (3.7)	0 (0)	0.0225
Academic Career Focus n (%)			
Clinical	21 (45.7)	62 (46.6)	
Basic Science	1 (2.2)	5 (3.8)	
Education	18 (39.1)	54 (40.6)	
No single focus	2 (4.3)	9 (6.8)	
Unsure	4 (8.7)	3 (2.3)	

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Chemotherapy administration n (%)			
Yes	40 (74.1)	123 (83.1)	
No	11 (20.4)	17 (11.5)	
Co-manage	3 (5.6)	8 (5.4)	0.2652
Supervise Trainees n (%)			
0 days	14 (25.9)	24 (16.1)	
1-2 days	8 (14.8)	24 (16.1)	
3+ days	32 (59.3)	101 (67.8)	0.2832
Percent of Time in Direct Patient Care n (%)			
0-25	5 (9.4)	3 (2)	
26-50	7 (13.2)	13 (8.7)	
51-75	14 (26.4)	38 (25.5)	
76-100	27 (50.9)	95 (63.8)	0.0628
Percent of Time in Operating n (%)			
0-25	16 (29.6)	27 (18.1)	
26-50	28 (51.9)	83 (55.7)	
51-75	9 (16.7)	37 (24.8)	
76-100	1 (1.9)	2 (1.3)	0.2813
Rounds coverage n (%)			
Own patients	30 (34.9)	88 (33.3)	
Blocked schedule	22 (25.6)	63 (23.9)	
Share weekends	21 (24.4)	80 (30.3)	
Academic rounds	11 (12.8)	32 (12.1)	
No rounds	2 (2.3)	1 (0.4)	
Hours/week of patient care mean (SD)	54.8 (20.3)	64.5 (17.8)	0.0001
Hours/week at home working mean (SD)	5.7 (4.9)	8 (5.4)	0.0024
Weekends per year mean (SD)	14.5 (10.4)	19.3 (10.4)	0.0017
Compensation n (%)			
Salary only	21 (39.6)	50 (33.8)	
Salary + Bonus	30 (56.6)	84 (56.8)	
Productivity/Bonus only	14 (9.5)	14 (9.5)	0.3750
Days of Business travel per month n (%)			
0	15 (27.8)	43 (29.1)	
1-2	30 (55.6)	73 (49.3)	
3+	9 (16.7)	32 (21.6)	0.6696
Reduce Hours? N (%)			
Yes	4 (7.8)	25 (18.1)	
No	47 (92.2)	113 (81.9)	0.0820
Leave Current Practice? N (%)			
Yes	6 (12)	23 (19)	
No	44 (88)	98 (81)	0.2666
Career Satisfaction			
Fatigue mean (SD)	4.1 (2.6)	7.2 (2)	< 0.0001
Vacation weeks per year n (%)			
< 1	0 (0)	4 (2.7)	
1-2	12 (22.2)	41 (27.5)	
3+	42 (77.8)	104 (69.8)	0.3286
Expected retirement age (years) mean (SD)	65.3 (5)	65.0 (5.4)	0.05745
MD Again? N (%)			

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Definitely Yes	37 (68.5)	57 (38.3)	
Probably Yes	12 (22.2)	55 (36.9)	
Unsure	4 (7.4)	20 (13.4)	
Probably No	1 (1.9)	15 (9.4)	
Definitely No	0 (0)	3 (2)	0.0033
GynOnc Again? N (%)			
Definitely Yes	33 (61.1)	62 (41.9)	
Probably Yes	13 (24.1)	58 (39.2)	
Unsure	4 (7.4)	19 (18.8)	
Probably No	4 (7.4)	9 (6.1)	
Definitely No	0 (0)	0 (0)	0.0781

Comparison of demographic, practice, and wellness related measures stratified by satisfaction with work-life balance (WLB). WLB was stratified by those agreeing, or strongly agreeing with the statement, "My work schedule leaves me enough time for my personal/family life" [3, 8, 10]. Those disagreeing or strongly disagreeing were categorized separately. The 53 physicians with a neutral response were excluded from the analysis. Comparisons of categorical variables were made using chi-square and Fisher's exact tests as appropriate. Continuous variables were compared using independent samples t-test or Mann-Whitney U test based on normality of the distribution. *totals censored for privacy.

who answered "disagree" or "strongly disagree". A similar grouping of responses was performed for the career satisfaction and career plans questions.

Results

Study participants

We identified 1227 physicians in the SGO member directory meeting the inclusion criteria, however 181 were removed for non-US mailing addresses and 27 were excluded due to lack of listed email address. Once the survey was delivered an additional 17 were found to have previously opted out from email surveys or had non-functional email addresses. Thus the final number of physicians receiving the survey was 1002. Two hundred ninety physicians responded to the survey yielding a response rate of 28.9%. Of the responses 89.3% were complete with respect to the primary study questions (satisfaction with WLB, fatigue, and career satisfaction) and thus were included in all analyses. Those with incomplete data with respect to the primary study variables were excluded from analysis. Of note, the gender, age, and practice setting did not vary between complete and incomplete surveys.

Table 1 reports general demographics based on time since completing fellowship. There were differences in the distribution of gender, presence of children, age of the youngest child, relationship status, history of divorce, and stu-

dent loan burden. Practice characteristics were stable across the different experience categories, except for amount of time spent in the operating room, where increasing time since fellowship was associated with decreasing proportion of time spent operating. Those who graduated more than 20 years ago were most likely ($P = 0.0006$) to reduce hours in the next two years, report lower fatigue scores (5.4 vs. 6.6, $P = 0.0027$). Furthermore, those who graduated more than 20 years ago reported a later expected retirement age (67 vs. 64 years, $P = 0.0015$). Characteristics of male and female practitioners are summarized in [Supplementary Table 1](#). Compared with their male colleagues, female gynecologic oncologists were younger ($P < 0.0001$), had younger children ($P = 0.0008$), had less time since graduating fellowship ($P < 0.0001$), were more likely to be in academic medicine ($P = 0.0453$), and reported more fatigue ($P = 0.0003$).

Satisfaction with WLB

Only 18.6% of respondents reported they were satisfied with their WLB. Comparison of demographic and practice characteristics of those who reported good WLB versus those who did not (**Table 2**) revealed significant associations with: gender ($P = 0.0157$), where men were 73% more likely to be satisfied with their WLB than women; hours spent at work each week ($P = 0.0001$), those happy with WLB spent 9.7 hours less (54.8 vs. 64.5 hours) at work on a weekly basis; hours spent at home on work ($P =$

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0.0024), with satisfied physicians spending 2.3 hours less per week (5.7 vs. 8 hours); weekends worked ($P = 0.0017$), 4.8 fewer weekends worked by satisfied physicians (14.5 vs. 19.3 per year); and fatigue scores were 3.1 units lower (4.1 vs. 7.2; $P < 0.0001$) in physicians satisfied with WLB.

Overall, 81.3% of physicians reported they would choose medicine as a career again and 84.7% reported they would choose to be a gynecologic oncologist again. Those who were satisfied with WLB were more likely to support the statement that they would choose to be a physician again ($P = 0.0033$). The association between WLB and deciding to be an oncologist again bordered on significance ($P = 0.0781$) but because of very few respondents stating they would not choose to be gynecologic oncologists again the confidence intervals were too wide to maintain significance. Linear regression comparing fatigue with planned number of years until retirement revealed a weak linear association ($R^2 = 0.0294$, $P = 0.012$). While this strength of association was significant, addition of gender and age to the model strengthened the association ($R^2 = 0.6992$, $P < 0.0001$).

Fatigue was negatively associated with satisfaction with WLB in both univariate and multivariate analyses. After adjusting for time spent in the operating room, the age of the youngest child, how much time a person was spending at home, and whether or not the person would choose to be a physician again, the strength of association between fatigue and WLB increased slightly from $\beta = -0.22$ ($R^2 = 0.2632$, $P < 0.0001$) to $\beta = -0.23$ ($R^2 = 0.4867$, $P < 0.0001$). The strength of association was even stronger ($\beta = -0.26$, $R^2 = 0.6686$, $P = 0.0039$) when physicians without children are analyzed separately. In that situation, the backward elimination of non-significant variables identified practice setting, amount of time spent with caring for patients and supervising trainees, method of compensation, age, and whether or not the person would choose to be a physician again as significant factors, with fatigue, associated with WLB. Interestingly, gender and history of divorce had strong positive associations with WLB, $\beta = 0.5$ and $\beta = 0.81$, respectively; however, the confidence intervals were too wide to reach significance [95% CI for sex: (-0.09, 1.09); divorce: (-0.14, 1.75)].

Discussion

Overall, gynecologic oncologists in the United States are not pleased with their work life balance. Female gender, increased time spent at work each week, increased time spent at home working, and more weekends on call were associated with worse satisfaction with WLB. Fatigue was negatively associated with WLB and physicians further from retirement were more likely to report fatigue.

Using fatigue as the basis for additional models, increased time spent at work (or at home engaged in work-related activities) predicted decreased satisfaction with WLB. An exploratory analysis for confounding by various other factors including practice setting, time spent on vacation each year, number of weekends on call (which was independently associated with worse satisfaction with WLB), chemotherapy administration, a positive student loan balance, and relationship status, failed to identify significant associations.

Although low (28.9%), the response rate in this study is consistent with prior published studies of this population of sub-specialists [3, 5, 11, 12], we compared the gender-specific and practice-setting specific response rate with the documented population of males/females and various practice settings listed in the SGO membership directory and found no significant difference between respondents and the general population (data not shown). Based on the number of practicing oncologists listed in the directory and the approximate number of board certified subspecialists identified by the American Board of Obstetrics and Gynecology (ABOG) it is estimated that the SGO represents nearly 100% of potential gynecologic oncologist members (ABOG, personal communication).

While no difference between responders and non-responders with respect to gender and practice setting argues for external validity, it is still possible that non-response bias is linked to satisfaction with WLB in a non-differential manner. One could argue that physicians who perceive poor WLB would be less inclined to answer surveys instead of spending time in other pursuits (exercise, family, etc.). On the other hand, perhaps people who are unhappy would be more likely to respond to this type of

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survey in order to have their complaints heard. In an attempt to reduce these effects we distributed the survey in the morning to reach physicians while they were at work. We also limited the length of the survey; it was completed in less than 10 minutes by more than 80% of participants. Unfortunately given the constraints of the survey instrument and the nature of the study there is no way to evaluate for confounding based on non-response.

In contrast to older studies of general physicians and in support of recent studies of the Society of Surgical Oncology [2] and American Society of Clinical Oncology [3], gynecologic oncologists overwhelmingly report they would pursue medicine and gynecologic oncology again, if given the choice. This was an unexpected finding given that a minority of gynecologic oncologists (18.6%) were satisfied with their WLB, compared to a 33.4% satisfaction for medical oncologists [3] and much less than reported satisfaction rate of other general medical/surgical specialties reported elsewhere [8]. In the report by Shanafelt et al. in 2012 general surgeons, surgical subspecialists, and obstetrician/gynecologists had the lowest proportion satisfied with WLB, all near 40% [8]. One might speculate that in spite of unsatisfactory working conditions, subspecialists in gynecologic oncology recognize the importance of care being delivered and believe the value of care provided is worth the sacrifice in WLB.

At the 46th Annual Meeting on Women's Cancer the SGO recognized physician health and wellness as important factors, with a dedicated special interest session. This study has identified fatigue, time spent at the hospital, and time spent on work away from the hospital as significant predictors of dissatisfaction with WLB. Although medicine is a calling and most physicians are satisfied with their career choice and specialty, time spent at work has been associated with career satisfaction (or dissatisfaction) in this and other studies [2, 3, 5, 13]. A prior study of female gynecologic oncologists [6] indicated a need for flexibility in scheduling. Similarly, one third respondents to our survey who indicated they plan to reduce hours in the coming two years would do so to spend more time with their families. Schedule flexibility and support of non-traditional work hours may facil-

itate keeping more physicians in the workforce for a longer period of time [14, 15].

Replacing physicians is a costly process, not only in terms of dollars included in contracts, but in added wait times and lost patient visits [16]. Numerous strategies have been identified to both assess [17] and reduce [13] burnout among physicians. In addition to the general principles of resilience training and professional mentorship [13, 16, 18], the findings of this study support prior recommendations for maintenance of adequate administrative support, increased physician autonomy/schedule flexibility, and addition of physician-extenders to reduce individual work hours [6, 13, 16, 18]. As caseloads increase in the coming years [1], it is important for gynecologic oncologists as a group to monitor our wellness so that we can continue to provide high quality care to our patients.

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Disclosure of conflict of interest

None.

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Supplementary Table 1. Differences in respondent characteristics according to gender

Demographic	Gender		P-value
	Female n = 141	Male n = 149	
Basic Demographic Questions			
Age years (SD)	41.9 (7.6)	50.8 (10.7)	< 0.0001
Children n (%)			
Yes	100 (71.4)	130 (87.8)	
No	40 (28.6)	18 (12.2)	0.0005
Age of Youngest Child			
< 5	20 (39.2)	18 (19.6)	
5-12	19 (37.3)	24 (26.1)	
13-18	9 (17.7)	15 (16.3)	
19-22	1 (2)	12 (13)	
> 22	2 (3.9)	23 (25)	0.0008
Any children born during fellowship? N (%)			
Yes	48 (49)	92 (70.8)	
No	50 (51)	38 (29.2)	0.0008
Relationship Status n (%)			
Single	17 (12.1)	6 (4.1)	
Married	119 (84.4)	136 (91.9)	
Partnered	< 10 [†]	< 10 [†]	
Widowed	< 10 [†]	< 10 [†]	0.0543
Ever Divorced n (%)			
Yes	24 (17.1)	34 (23)	
No	116 (82.9)	114 (77)	0.2175
Years Since Training			
< 10	96 (68.6)	50 (33.6)	
10-19	27 (19.3)	40 (26.9)	
20+	17 (12.1)	59 (39.6)	< 0.0001
Current Student Loans n (%)			
None	71 (50.4)	111 (75)	
≤ \$125,000	33 (23.4)	21 (14.2)	
> \$125,000	37 (26.2)	16 (10.8)	< 0.0001
Practice Characteristics			
Practice Setting n (%)			
Academic	77 (66.6)	74 (52.9)	
Private Practice	48 (37.8)	55 (39.3)	
Government	0 (0)	7 (5)	
Other	1 (0.8)	0 (0)	
Retired	1 (0.8)	4 (2.9)	0.0453
Academic Career Focus n (%)			
Clinical	52 (46)	52 (44.1)	
Basic Science	6 (5.3)	3 (2.5)	
Education	40 (35.4)	52 (44.1)	
No single focus	8 (7.1)	9 (7.6)	
Unsure	7 (6.2)	2 (1.7)	
Chemotherapy administration n (%)			
Yes	101 (79.5)	108 (78.3)	

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No	17 (13.4)	24 (17.4)	
Co-manage	9 (7.1)	6 (4.4)	0.4548
Supervise Trainees n (%)			
0 days	26 (20.5)	27 (19.3)	
1-2 days	20 (15.8)	23 (16.4)	
3+ days	81 (63.8)	90 (64.3)	0.9661
Percent of Time in Direct Patient Care n (%)			
0-25	6 (4.7)	7 (5)	
26-50	11 (8.9)	14 (10.1)	
51-75	33 (26)	38 (27.3)	
76-100	77 (60.6)	80 (57.6)	0.9590
Percent of Time in Operating n (%)			
0-25	28 (22.2)	28 (20)	
26-50	69 (54.8)	74 (52.9)	
51-75	29 (23)	33 (23.6)	
76-100	0 (0)	5 (3.6)	0.1944
Hours/week of patient care mean (SD)	60.8 (19.1)	59.9 (18.6)	0.7448
Hours/week at home working mean (SD)	7.8 (6.7)	7.1 (5.7)	0.2703
Rounds coverage n (%)			
Own patients	71 (32.4)	86 (35.8)	
Blocked schedule	54 (24.7)	58 (24.2)	
Share weekends	68 (31.1)	64 (26.7)	
Academic rounds	24 (30)	30 (12.5)	
No rounds	2 (0.9)	2 (0.8)	
Weekends per year mean (SD)	16.4 (8.3)	19.5 (12.3)	0.0959
Compensation n (%)			
Salary only	44 (35.2)	46 (33.3)	
Salary + Bonus	71 (56.8)	77 (55.8)	
Productivity only	10 (8)	15 (10.9)	0.7237
Days of Business travel per month n (%)			
0	45 (35.4)	31 (22.8)	
1-2	62 (48.8)	73 (53.7)	
3+	20 (15.8)	32 (23.5)	0.0512
Reduce Hours? N (%)			
Yes	19 (16.4)	24 (18.9)	
No	97 (83.6)	103 (81.1)	0.6074
Leave Current Practice? N (%)			
Yes	19 (17.8)	21 (19)	
No	88 (82.2)	96 (82.1)	0.9701
Career Satisfaction			
Satisfied with WLB n (%)			
Strongly Agree	4 (3.2)	6 (4.6)	
Agree	15 (12)	29 (22.1)	
Neutral	25 (20)	28 (21.4)	
Disagree	60 (48)	51 (38.9)	
Strongly Disagree	21 (16.8)	17 (13)	0.1963
Fatigue mean (SD)	6.9 (2.1)	5.7 (2.7)	0.0003
Vacation weeks per year n (%)			
< 1	1 (0.8)	3 (2.2)	

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1-2	32 (25.2)	35 (25.9)	
3+	94 (74)	97 (71.9)	0.6256
Expected retirement age (years) mean (SD)	63.3 (4.9)	66.9 (5.8)	< 0.0001
MD Again? N (%)			
Definitely Yes	58 (45.7)	67 (49.6)	
Probably Yes	44 (34.7)	44 (32.6)	
Unsure	18 (14.2)	11 (8.2)	
Probably No	5 (3.9)	12 (8.9)	
Definitely No	2 (1.6)	1 (0.7)	0.2566
GynOnc Again? N (%)			
Definitely Yes	54 (42.9)	76 (56.3)	
Probably Yes	50 (39.7)	41 (30.4)	
Unsure	15 (11.9)	10 (7.4)	
Probably No	7 (5.6)	8 (5.93)	
Definitely No	0 (0)	0 (0)	0.1463

Comparison of demographic, practice, and wellness related measures stratified by gender. Comparisons of categorical variables were made using chi-square and Fisher's exact tests as appropriate. Continuous variables were compared using independent samples t-test or Mann-Whitney U test based on normality of the distribution. *totals censored for privacy.