



Pharmacy-faculty work-life balance and career satisfaction: Comparison of national survey results from 2012 and 2018[☆]



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ABSTRACT

Background: Changes in demographics and composition of pharmacy faculty, along with faculty perceived stress, work-life balance and career satisfaction have yet to be fully documented.

Objective: To compare recent results from a national survey of work-life balance and career satisfaction of United States (U.S.) pharmacy faculty with results obtained from a similar survey from 2012.

Methods: A 46-item anonymous survey administered via Qualtrics (Provo, UT) was sent to members of the American Association of Colleges of Pharmacy (AACCP) in 2018. Information regarding demographics, stress, work-life balance, career satisfaction and intent to leave academia was collected. Although not part of the previous survey, participant information related to bullying and abuse in the pharmacy academic work was also gathered. While actual *p*-values are reported for all comparisons, a more conservative *p*-value of 0.01 was chosen a priori to indicate significance as multiple comparisons were made.

Results: A total of 1090 pharmacy faculty completed the survey, comparable to the number obtained in 2012 (*n* = 811). Overall response rates were similar for both years. The majority of pharmacy faculty in 2018 were female, white, married or with partner, worked in a pharmacy practice department and for a public institution. Notable differences between surveys included an increase in females, more associate professors and an increase in non-white faculty in 2018, relative to 2012. Stress, as measured by mean Perceived Stress Scale (PSS) scores was also significantly higher in 2018 (16.0 ± 6.6 vs. 13.5 ± 6.7 , $p < 0.01$) relative to 2012. Faculty from 2018 were significantly less likely to report an intention to remain in academia (61.8% vs 86.3%, $p < 0.01$), relative to 2012. A sizable number of pharmacy faculty surveyed in 2018 also reported observing or experiencing hostility in the workplace, which included either bullying or verbal or physical abuse.

Conclusions: The makeup of pharmacy educators has evolved quickly over the last several years to comprise more female and associate professors who work within a pharmacy practice department. Also noteworthy is the significant increase in self-reported stress over the six-year timeframe. The direct implications of these findings are unknown but suggest that pharmacy academia is maturing in rank and changing to reflect the current pharmacy workforce (i.e., more females and additional clinical practice roles). Increases in responsibility likely accompany these maturing roles and may, along with other factors, contribute to the observed changes in the reported stress levels among faculty. Further research is called for regarding the reported hostility in pharmacy academic workplace and dovetails with concurrent work being done on citizenship and organizational citizenship behavior among pharmacy faculty. Findings of the study may aid pharmacy school administrators and stakeholders with plans to recruit, develop and retain faculty.

1. Introduction

There is little data available comparing changes in reported stress and career satisfaction among pharmacy faculty over time.^{1–5} The 15-year period between 2000 and 2015 saw a large increase in the number of

accredited pharmacy schools, the expansion of existing programs and a seemingly endless supply of students, resulting in many job opportunities for pharmacy faculty.⁶ However, the number of new pharmacy schools and expansions has recently stagnated. Existing pharmacy schools and faculty are now dealing with a downward trend in the number of applications

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coupled with a decrease in the overall number of qualified pharmacy applicants.⁷ With these changes, pharmacy faculty have added responsibilities with less resources available to help with increase in workload.⁶ These increasing demands have been accompanied with greater levels of stress, reduced work-life balance and lower levels of career satisfaction among pharmacy faculty relative to just a few short years ago.⁸ It is however, unknown, if these demands have resulted in any significant changes in the intention of pharmacy faculty to leave academia.

The objective of this study is to analyze more recent patterns of perceived stress, work-life balance, job satisfaction and intent to leave academia among a national sample of pharmacy faculty members in the United States (U.S.). Specifically, this study provides a comparison point with the original study conducted in 2012.³ In addition, the newer survey poses questions related to the outlook of pharmacy academia and hostility in the pharmacy academia workplace, two topics which have received considerable attention since the development of the original survey.^{9–11} The study explores the relationship between hostility in the pharmacy academic workplace and intent to leave the current institution and ties these findings to work being done on citizenship and organizational citizenship behavior.^{12–14}

2. Methods

The list of e-mail addresses for pharmacy faculty was obtained from AACP.¹⁵ Faculty members from healthcare professional pharmacy schools working in the U.S. with Internet access were eligible for study inclusion. Pharmacy faculty members without an active AACP membership, those who viewed the survey and declined to participate, those who failed to complete the basic demographic questions (age, gender and ethnicity) or who completed the survey but did not submit their answers were not included in the study analyses. The 46-item questionnaire took approximately 15 min to complete and participants who completed the survey were offered a chance to enter a random drawing for one of three \$50 gift-cards. The previous study conducted in 2012 utilized a similar methodology and format.

An initial invitation to participate in the survey was sent in June 2018, followed by three email reminders to non-responders until the survey closed in November 2018.¹⁶ The web-based survey was delivered via Qualtrics (Provo, UT) to members of the American Association of Colleges of Pharmacy (AACP). Survey items included demographics (e.g., gender, age, ethnicity, marital status and number of children), type of institution or college (public vs. private), department, years in academia and academic rank. In addition, the multiple item perceived stress score (PSS) measure was used to assess stress. The PSS measure is a validated and widely used instrument consisting of 10 multiple-choice questions.^{17,18} Each question in the PSS is scored 0 to 4 (4 items are reverse scored) and then summed, with scores ranging from 0 to 40. Intent to remain in academia for remainder of career, questions related to current work-life balance, intent to stay at current institution in the short-term (next 24 months) and opinions related to advice on college-age children regarding pursuing a career in pharmacy, academia or pharmacy academia were also asked. Finally, a series of questions related to hostility in the participant's current pharmacy academia workplace (bullying and abuse) were asked.

Informed consent was secured with the first survey question and was required to move forward with the survey. Contact information for the investigators and assurances of anonymity of the data were also found within the first question. Data was encrypted prior to transfer onto a secure server that was located in a locked room on campus. The study was reviewed and was considered to be exempt by the Touro University California institutional review board.

Descriptive statistics included frequency tables for nominal variables and medians or means and standard deviations for ordinal and continuous variables. Statistical comparisons between study years 2012 and 2018 were made using Student *t*-tests, Chi-square or Fischer's exact tests, as appropriate. While actual *p*-values are reported for all comparisons, a more conservative *p*-value 0.01 was chosen to indicate significance as multiple

comparisons were being made.¹⁹ Lastly, a series of multivariate logistic regression models were conducted to analyze the effect of hostility in the pharmacy academia workplace (bullying and abuse) on intent to leave academia while controlling for demographics and other measures (e.g., department and rank). All analyses were conducted using SAS V9.2 (Cary, NC).

3. Results

Of the 5773 AACP members sent a survey invitation, 1205 faculty clicked on the survey invitation, gave informed consent and began the survey. A total of 1140 completed surveys were received. Fifty surveys were subsequently excluded due to missing or incomplete demographic information. These exclusions left 1090 surveys included in the final analytical cohort for 2018. The overall response rate for 2018 was 18.9% and similar to the 2012 response rate (16.9%).³

3.1. Demographics

Table 1 details the demographic data of the survey respondents in 2012 and 2018. A majority of survey respondents in 2018 reported being female (63.7%), white (79.2%), married or with partner (78.2%), having 1 to 3 children (50.5%), working in a public institution or college (51.3%) and working in a pharmacy practice or clinical pharmacy department (71.4%). Significant differences ($p < 0.01$) observed between 2012 and 2018 included gender (57.1% vs. 63.7% female, respectively), age categories 50–59, 60–69 and 70 and older (11.2% vs. 16.2%, 16.2% vs. 10.4% and 4.6% vs. 1.3%, respectively), having 1 to 3 children (61.2% vs. 50.5%, respectively), working in a private institution (42.3% vs. 48.7%, respectively), white and Asian ethnicity (84.7% vs. 79.2% and 6.7% vs. 10.4%, respectively), and reporting a rank of associate professor (27.5% vs. 34.2%, respectively).

3.2. PSS scores

PSS itemized responses and total composite scores are shown in Table 2. Mean and median total PSS scores were significantly higher in 2018 relative to 2012, 16 ± 6.6 , 16 vs. 13.5 ± 6.7 , 13 ($p < 0.001$) respectively. A majority of individual PSS item category responses, 28 out of 50, showed significant differences ($p < 0.01$). The more recent (2018 survey) PSS mean now lies on the reported upper bounds of means reported for the general adult population of 15–16.¹⁸

3.3. Intent to remain in academia and work/life balance satisfaction

A significantly smaller percentage of faculty reported an intention to remain in academia for the remainder of their career in 2018 relative to 2012, 61.8% vs. 86.3% ($p < 0.001$), respectively (Table 3). Respondents were also asked to rate their satisfaction with their current position in academia. While a majority of faculty in both 2012 and 2018 reported being “very satisfied”, a significantly smaller percentage reported being extremely satisfied in 2018 relative to 2012, 11.3% vs. 16.0% ($p = 0.002$), respectively. When responding to satisfaction with balance between work, family and social life, a significantly higher percentage of faculty reported being “not at all satisfied” in 2018 compared to 2012, 12.8% vs. 8.8%, ($p = 0.006$), respectively.

3.4. Career advice regarding pharmacy, academia and pharmacy academia, hostility in pharmacy academic workplace, and intent to remain at current academic institution in the near future

Questions added in the 2018 survey, which were not part of the 2012 survey, included items related to career advice that a faculty member would give to one of their own college-aged children, items related to observed hostility in the pharmacy academic workplace and intention to remain at their current institution in the near-term (next 24 months). While

Table 1
Characteristics of United States pharmacy faculty.

Characteristic	2012	2018	p Value
Gender, n (%)	(n = 811)	(n = 1090)	
Female	463 (57.1)	694 (63.7)	0.0038
Age, year range, n (%)	(n = 802)	(n = 1090)	
20–29	96 (12.0)	99 (9.1)	0.0412
30–39	265 (33.0)	397 (36.4)	0.1277
40–49	184 (22.9)	290 (26.6)	0.0692
50–59	90 (11.2)	177 (16.2)	0.0020
60–69	130 (16.2)	113 (10.4)	0.0002
70 and older	37 (4.6)	14 (1.3)	0.0001
Ethnicity, n (%)	(n = 806)	(n = 1090)	
White	683 (84.7)	860 (78.9)	0.0012
Asian	54 (6.7)	113 (10.4)	0.0053
Black, Hispanic, or other	69 (8.6)	117 (10.7)	0.1158
Marital Status, n (%)	(n = 802)	(n = 1087)	
Married, with Partner	632 (78.8)	852 (78.2)	0.4056
Divorced, Separated, Widowed, or other	53 (6.6)	49 (4.5)	0.2305
Single	117 (14.6)	186 (17.1)	0.1468
Number of children, n (%)	(n = 802)	(n = 1086)	
None	278 (34.7)	513 (47.2)	0.0001
1–3	491 (61.2)	548 (50.5)	0.0001
4 or more	33 (4.1)	25 (2.3)	0.0791
Institution Type, n (%)	(n = 802)	(n = 1088)	
Private	339 (42.3)	530 (48.7)	0.0001
Public	463 (57.7)	558 (51.3)	0.0001
Department, n (%)	(n = 808)	(n = 1089)	
Medicinal Chemistry, Pharmaceutical Chemistry, Pharmacognosy	41 (5.1)	45 (4.1)	0.3273
Pharmaceuticals, Pharmacy	46 (5.7)	81 (7.4)	0.1340
Pharmacology, Biological Science	84 (10.4)	89 (8.2)	0.0950
Social and Administrative Science	91 (11.3)	89 (8.2)	0.0228
Pharmacy Practice	535 (66.2)	778 (71.4)	0.0160
Continual Professional Education, Library, Education Resources	11 (1.4)	7 (0.6)	0.0630
Length in Academia, n (%)	(n = 807)	(n = 1089)	
Less than 5 years	243 (30.1)	294 (27.0)	0.1335
5–9 years	179 (22.2)	273 (25.1)	0.1476
10–14 years	127 (15.7)	192 (17.6)	0.2797
15–19 years	88 (10.9)	129 (11.9)	0.1251
20 or more years	170 (21.1)	201 (18.5)	0.1541
Academic Rank, n (%)	(n = 811)	(n = 1090)	
Assistant Professor	373 (46.0)	444 (40.7)	0.0221
Associate Professor	223 (27.5)	373 (34.2)	0.0022
Full Professor	170 (21.0)	241 (22.1)	0.5483
Adjunct, Lecturer, Instructor, other	45 (5.6)	32 (2.9)	0.0444
Chair Position, n (%)	(n = 811)	(n = 1089)	
Department Chair	44 (5.4)	57 (5.2)	0.8505
Committee Chair	294 (36.3)	429 (39.4)	0.1677

38.5% and 41.4% of pharmacy faculty surveyed reported they would encourage their own college-age child to pursue a career in the profession of pharmacy or academia, a smaller percentage (30.1%) reported they would encourage their child to pursue a career specific to pharmacy academia. Percentages responding “no” or “uncertain” are shown to the previously mentioned questions are shown in Table 3. Concerning hostility in the pharmacy academic workplace, 36.2% reported observing bullying and 18.9% reported observing verbal or physical abuse. A surprisingly high percentages of pharmacy faculty surveyed, 18.7% and 10.2%, also reported being the recipient of bullying or verbal or physical abuse in the pharmacy academic workplace, respectively. The vast majority of faculty completing the survey (85.1%) reported an intention to remain at their current academic institution in the near future.

Comparisons regarding intent to remain at current institution and having witnessed or experienced bullying or abuse are shown in Table 4. Observing hostility in the pharmacy academic workplace was associated with significantly higher reported rates of intent to leave their current institution within the near-term. More specifically, observing bullying in the pharmacy academic workplace was associated with a 55% increase in reported intention to leave, from 33.2% to 51.6%, $p < 0.001$, while observing abuse was associated with a more than twofold increase in stated intent to leave (15.5% to 38.9%, $p < 0.001$). Experiencing abuse was associated with a more marked increase in stated intention to leave, from 15.0% to 37.7%, $p < 0.001$, for bullying and from 6.7% to 28.9%, $p < 0.001$, for abuse.

Further, the impact of experiencing bullying or abuse remained after controlling for gender, age, ethnicity, marital status, academic rank, PSS, type of institution and department. In fact, experiencing bullying was associated with a more than twofold increase in intent to leave (OR = 2.67, 95% CI = 1.76–4.04, $p < 0.001$) while experiencing abuse (verbal or physical) was associated with a more than fourfold increase in intent to leave (OR = 4.70, 95% CI = 2.94–7.51, $p < 0.001$) in the respective multivariate models. Both multivariate logistic regression models were found to have relatively good discrimination, as measure by the C statistic.

4. Discussion

The last several years have witnessed a maturing of pharmacy faculty in the U.S.; measured by age and rank of at least associate professor and gathered from similar surveys conducted in 2012 and 2018. In addition, the more recent survey found increases in the percentage of female faculty, Asian faculty and a greater percentage of faculty working in private schools, relative to the earlier survey. Coupled to these results, the more recent survey saw a reduction in the percentage of White faculty and a reduction in faculty with children. Faculty were also significantly more stressed in the recent survey relative to the earlier survey. In fact, significant differences were observed for each of the individual 10 components used to gauge stress, suggesting multiple drivers of the observed differences in stress. Faculty also appear to have become significantly less satisfied with certain

Table 2
Perceived Stress Score (PSS) by year.

Perceived Stress Score (PSS)	2012	2018	P-Value
	(n = 800)	(n = 1065)	
Median, Mean \pm standard deviation, (Range)	13, 13.5 \pm 6.7 (8–39)	16, 16.0 \pm 6.6 (6–37)	<0.0001
In the last month, how often have you been upset because of something that happened unexpectedly?	(n = 809) Number (% Frequency)	(n = 1088) Number (% Frequency)	
Never	92 (11.4)	66 (6.1%)	<0.0001
Almost never	317 (39.2)	351 (32.3%)	0.0018
Sometimes	319 (39.4)	497 (45.7%)	0.0066
Fairly often	65 (8.0)	145 (13.3%)	0.0003
Very often	16 (2.0)	29 (2.7%)	0.3304
In the last month, how often have you felt you were unable to control the important things in your life?	(n = 808)	(n = 1087)	
Never	165 (20.4)	90 (8.3%)	<0.0001
Almost never	278 (34.4)	360 (33.1%)	0.5576
Sometimes	250 (30.9)	423 (38.9%)	0.0003
Fairly often	70 (8.7)	159 (14.6%)	<0.0001
Very often	45 (5.6)	55 (5.1%)	0.6237
In the last month, how often have you felt nervous or “stressed”?	(n = 810)	(n = 1088)	
Never	28 (3.5)	20 (1.8%)	0.0263
Almost never	149 (18.4)	158 (14.5%)	0.0234
Sometimes	354 (43.7)	453 (41.6%)	0.3675
Fairly often	211 (26.1)	326 (30.0%)	0.0612
Very often	68 (8.4)	131 (12.0%)	0.0103
In the last month, how often have you felt confident about your ability to handle your personal problems?	(n = 809)	(n = 1087)	
Never	8 (1.0)	8 (0.8%)	0.5503
Almost never	10 (1.2)	38 (3.5%)	0.0020
Sometimes	109 (13.5)	239 (22.0%)	<0.0001
Fairly often	331 (40.9)	471 (43.3%)	0.3002
Very often	351 (43.4)	332 (30.5%)	<0.0001
In the last month, how often have you felt that things were going your way?	(n = 809)	(n = 1086)	
Never	2 (0.3)	11 (1.0%)	0.0458
Almost never	39 (4.8)	76 (7.0%)	0.0496
Sometimes	212 (26.2)	416 (38.3%)	<0.0001
Fairly often	383 (47.3)	464 (42.7%)	0.0456
Very often	173 (21.4)	119 (11.0%)	<0.0001
In the last month, how often have you found that you could not cope with all the things that you had to do?	(n = 809)	(n = 1085)	
Never	192 (23.7)	183 (16.8%)	0.0002
Almost never	304 (37.6)	376 (34.6%)	0.1799
Sometimes	229 (28.3)	354 (32.6%)	0.0468
Fairly often	62 (7.7)	129 (11.9%)	0.0026
Very often	22 (2.7)	45 (4.1%)	0.0975
In the last month, how often have you been able to control irritations in your life?	(n = 809)	(n = 1083)	
Never	5 (0.6)	8 (0.7)	0.7533
Almost never	35 (4.3)	62 (5.7)	0.1724
Sometimes	195 (24.1)	363 (33.5)	<0.0001
Fairly often	350 (43.3)	470 (43.4)	0.9534
Very often	224 (27.7)	180 (16.6)	<0.0001
In the last month, how often have you felt that you were on top of things?	(n = 810)	(1089)	
Never	13 (1.6)	29 (2.7)	0.1210
Almost never	86 (10.6)	182 (16.7)	0.0002
Sometimes	231 (28.5)	389 (35.7)	0.0009
Fairly often	328 (40.5)	377 (34.6)	0.0088
Very often	152 (18.8)	112 (10.3)	<0.0001
In the last month, how often have you been angered because of things that were outside your control?	(n = 810)	(n = 1089)	
Never	102 (12.6)	76 (7.0)	<0.0001
Almost never	305 (37.7)	342 (31.4)	0.0045
Sometimes	321 (39.6)	510 (46.8)	0.0018
Fairly often	69 (8.5)	127 (11.7)	<0.0001
Very often	13 (1.6)	34 (3.1)	0.0353
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	(n = 811)	(1090)	
Never	208 (25.7)	186 (17.1)	<0.0001
Almost never	319 (39.3)	381 (35.0)	0.0502
Sometimes	213 (26.3)	357 (32.8)	0.0023
Fairly often	56 (6.9)	127 (11.7)	0.0005
Very often	15 (1.9)	39 (3.6)	0.0248

Table 3
Attitudes and characteristics regarding current academic workplace.

Characteristic	2012	2018	p Value
Do you plan to remain in academia for the remainder of your career?	(n = 811)	(n = 1090)	
Yes, n (%)	700 (86.3)	674 (61.8)	0.0001
Satisfied with current position in academia, n (%)	(n = 811)	(n = 1083)	
Not at all	19 (2.3)	32 (3.0)	0.4287
Slightly satisfied	47 (5.8)	70 (6.5)	0.5739
Somewhat satisfied	228 (28.1)	365 (33.7)	0.0124
Very satisfied	387 (47.7)	494 (45.6)	0.2998
Extremely satisfied	130 (16.0)	122 (11.3)	0.0021
Satisfied with balance between work, family and social life, n (%)	(n = 811)	(n = 1089)	
Not at all	71 (8.8)	139 (12.8)	0.0060
Slightly satisfied	123 (15.2)	174 (16.0)	0.6360
Somewhat satisfied	318 (39.2)	411 (37.7)	0.5046
Very satisfied	243 (30.0)	307 (28.2)	0.3926
Extremely satisfied	56 (6.9)	58 (5.3)	0.1503
If you had a college-aged child, would you encourage them to pursue a career in the pharmacy profession? n (%)		(n = 1087)	
Yes	–	419 (38.5)	–
No	–	323 (29.7)	–
Uncertain	–	346 (31.8)	–
If you had a college-aged child, would you encourage them to pursue a career in academia? n (%)		(n = 1085)	
Yes	–	450 (41.4)	–
No	–	217 (20.0)	–
Uncertain	–	420 (38.7)	–
If you had a college-aged child, would you encourage them to pursue a career in pharmacy academia? n (%)			
Yes	–	327 (30.1)	–
No	–	322 (29.6)	–
Uncertain	–	4391 (40.4)	–
Have you witnessed bullying in the pharmacy academia workplace in the last 12 months? n (%)		(n = 1085)	
Yes	–	393 (36.2)	–
No	–	692 (63.8)	–
Have you witnessed verbal or physical abuse in the pharmacy academia workplace in the last 12 months? n (%)		(n = 1078)	
Yes	–	204 (18.9)	–
No	–	874 (81.1)	–
Have you yourself experienced bullying in the pharmacy academia workplace in the last 12 months? n (%)		(n = 1082)	
Yes	–	202 (18.7)	–
No	–	880 (81.3)	–
Have you yourself experienced verbal or physical abuse in the pharmacy academia workplace in the last 12 months? n (%)		(n = 1080)	
Yes	–	110 (10.2)	–
No	–	970 (89.8)	–
Plan to remain at current academic institution for at least 24 months? n (%)		(n = 1080)	
Yes	–	919 (85.1)	–
No	–	161 (14.9)	–

measures of work-life balance, and perhaps not surprisingly, were less likely to report an intention to remain in academia throughout the entirety of their career. Somewhat disturbingly, witnessing or being the recipient of abuse or bullying appears to occur frequently in the pharmacy academic workplace and appears to be related to a faculty member's stated intent to leave their current academic institution.

The demographic makeup of the 2018 survey participants and participants from a larger AACP survey from 2019 appear nearly identical concerning academic rank, gender and percentage of faculty working at a private vs. public institution.²⁰ This would suggest that the recent 2018 survey is representative of the universe of pharmacy faculty, as was the previous study conducted in 2012.³ Results for several survey measures would also appear to be similar to previous research. Notably, findings that the makeup of pharmacy faculty continues to evolve to include more females and associate professors working within a pharmacy practice department and the percentages of Whites and Asians, along other demographic variables, mirror recent previous findings.^{21–23}

While a majority of pharmacy faculty continue to report being overall satisfied with their career, there has been a marked increase in respondents who were “not at all” satisfied with their work-life balance and self-reported stress. There was also notable downward movement in those reporting being extremely satisfied with their current position in academia. These shifts in satisfaction with current position, work-life balance and stress are reflected in the increase in faculty reporting an intent to leave academia. It seems notable that a full 38% in the most recent pharmacy faculty survey reported their plan to leave academia within their career. Our findings are, however, similar to findings conducted among other health

professional academics. Although much older and conducted among pediatric medical school faculty, a related study found over 40% of medical faculty members intended to leave academia.²⁴ Similar results of nursing faculty intending to leave academia because of satisfaction have also been reported.²⁵ Previous work found that excessive workload was a major reason for pharmacy faculty members choosing to leave academia while difficulty achieving a work-life balance has been found as a major factor of medical school faculty members choosing to leave academia.^{1,26} Burnout among health professional faculty has also been implicated in the decision to leave academia, and a variety of factors to predict burnout have been identified. Among those predictors, which the 2018 and other studies identify as increasing among pharmacy faculty, are stress, poor work-life balance and female gender.⁸ It should also be noted that a negative work culture, lack of collegiality and moral injury have been identified as causing pharmacy faculty burnout and likely turnover. Other authors have noted that poor relationships between colleagues and administration likely play a role in faculty intention to leave. The same authors suggest that strategies to increase a sense of community or a sense of value among faculty are likely worthy endeavors for administrators to undertake.¹³ Others have noted the important role collegiality and citizenship play as mitigators of faculty burnout.¹⁴ While perhaps challenging in times of difficult budgets and declining enrollments, devoting adequate resources to better understand and study the cultural organization within one's academic workplace would appear to be worthwhile for most, if not all, college of pharmacy deans and department chairs.

While we do not wish to imply that pharmacy academia is an unsafe working environment, it seems worth repeating that a surprising and relatively high number of pharmacy faculty reported witnessing or being the

Table 4
Comparison for pharmacy faculty stating plan to remain at current academic institution for at least 24 months?

Plan to remain at current academic institution for at least 24 months? n (%)	No (n = 161)	Yes (n = 919)	p Value
Have you witnessed bullying in the pharmacy academia workplace in the last 12 months? n (%)	(n = 159)	(n = 916)	
Yes	82 (51.6)	304 (33.2)	0.0001
No	77 (48.4)	612 (66.6)	
Have you witnessed verbal or physical abuse in the pharmacy academia workplace in the last 12 months? n (%)	(n = 157)	(n = 911)	
Yes	61 (38.9)	141 (15.5)	0.0001
No	96 (61.1)	770 (84.5)	
Have you yourself experienced bullying in the pharmacy academia workplace in the last 12 months? n (%)	(n = 159)	(n = 917)	
Yes	60 (37.7)	138 (15.0)	0.0001
No	99 (62.3)	779 (85.0)	
Have you yourself experienced verbal or physical abuse in the pharmacy academia workplace in the last 12 months? n (%)	(n = 159)	(n = 911)	
Yes	46 (28.9)	61 (6.7)	0.0001
No	113 (71.1)	850 (93.3)	
Intend to leave current academic institution in following 24 months	Odds Ratio	95% CI	P Value (C statistic)
Odds Ratio for experiencing bullying in workplace in previous 12 months ^a	2.67	1.76–4.04	0.0001 (0.711)
Odds Ratio for experiencing verbal or physical abuse in workplace in previous 12 months ^a	4.70	2.94–7.51	0.0001 (0.728)

^a Controlling for gender, age, ethnicity, marital status, rank, total PSS score, institution type and department.

recipient of hostility in the pharmacy academic workplace. The impact of experiencing hostility in the pharmacy academic workplace on a faculty member's intention to leave their current institution cannot be ignored. This is highlighted by the findings of more than twofold and fourfold increases, respectively, in intent to leave for faculty experiencing bullying or abuse in models controlling for other demographic and institutional level factors. While neither our 2012 or more recent survey included a validated measure of organizational culture behavior (OCB), previous OCB studies conducted in pharmacy faculty identified items such as negative energy (gossiping, bullying), being disrespectful and political maneuvering. Our findings, thus, would appear to support the validity of using and applying OCB related constructs in a pharmacy academic setting.

Imbalance in work-life and stress may also have further unintended or hidden consequences in pharmacy education. These would include decreases in the quality of education received by students and pharmacy faculty discouraging students from pursuing a career in academia by displaying cynicism or a distant attitude. Previous work has noted the limited amount of empirical evidence related to stress and resilience in pharmacy faculty and highlighted that if faculty are unable to appropriately address their own wellbeing, their ability to support their students' wellbeing will be compromised.²⁷ Related to this, are the findings that only 30% of the 2018 pharmacy faculty would recommend a career in pharmacy academia to their college-aged child, less than the percentage that would recommend either a career in pharmacy or academia. These results warrant additional examination in future studies among pharmacy faculty.

This study is not without limitations. The response rate of 18.9% may make it difficult to generalize the findings to all faculty members. In addition, all survey studies are subject to recall and other bias. Next, the bullying and abuse questions were not validated but would be beneficial to incorporate in a future study, along with more detailed delineation of different specific types of hostility (e.g., verbal, microaggression, and passive-aggressive or ghosting behaviors). Lastly, the results may be somewhat prematurely dated. The survey was conducted pre-COVID-19 so the findings of this study are not reflective of issues during COVID-19. It is acknowledged that the recent pandemic has resulted in significant and rapid changes to many established teaching norms, time constraints, student expectations, leadership expectations and demands among pharmacy faculty.^{28,29}

5. Conclusion

As the number of new schools appears to have markedly slowed, and many pharmacy schools are dealing with decreasing numbers of applicants, pharmacy faculty may have fewer career and opportunity choices.⁶ This may be accompanied with increased demands placed on faculty and static

or even declining budgets. While this survey of pharmacy faculty continued to reveal high levels of job satisfaction, more faculty members did report being dissatisfied with their work-life balance and fewer intend to remain in academia relative to just six years prior. These insights could inform the development of pilot programs to foster work-life balance and stress-coping mechanisms. The goal of this research was to call attention to the perception of hostility in the pharmacy faculty workplace, prevent or manage burnout and improve faculty job satisfaction and retention.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.rcsop.2022.100112>.

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