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Development, Implementation, and Delivery of a Remote Burnout Prevention Elective Course in an Accelerated Doctor of Pharmacy Program During COVID-19

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Abstract

Purpose: There is limited evidence describing burnout among graduate health professions students, including pharmacy students, and there is a need for educational institutions to mitigate burnout and promote future healthcare provider wellness. Methods: A burnout prevention elective course was developed within an accelerated Doctor of Pharmacy program. Course faculty transitioned from live to fully remote instruction in April 2020. The modified course format combined discussion-based lectures, burnout self-assessments, reflective writing assignments, and applications-based presentations. Results: Twenty-one second-year pharmacy students completed the elective, and 13 completed post-course evaluations (61.9% response rate). Evaluations indicated substantial student support, with 92.3% "strongly agree" and 7.7% "agree" responses for all questions. Students suggested incorporating this course into the core didactic curriculum rather than offering it as an elective. Conclusion: Pharmacy programs considering piloting similar courses may effectively implement them even under the modified learning conditions imposed by COVID-19.

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ABSTRACT

Purpose: There is limited evidence describing burnout among graduate health professions students, including pharmacy students, and there is a need for educational institutions to mitigate burnout and promote future healthcare provider wellness. **Methods:** A burnout prevention elective course was developed within an accelerated Doctor of Pharmacy program. Course faculty transitioned from live to fully remote instruction in April 2020. The modified course format combined discussion-based lectures, burnout self-assessments, reflective writing assignments, and applications-based presentations. **Results:** Twenty-one second-year pharmacy students completed the elective, and 13 completed post-course evaluations (61.9% response rate). Evaluations indicated substantial student support, with 92.3% “strongly agree” and 7.7% “agree” responses for all questions. Students suggested incorporating this course into the core didactic curriculum rather than offering it as an elective. **Conclusion:** Pharmacy programs considering piloting similar courses may effectively implement them even under the modified learning conditions imposed by COVID-19.

Keywords: professional burnout, pharmacy education, pharmacy, distance education, quality of life, COVID-19

BACKGROUND

Burnout syndrome, commonly referred to as "burnout," is a psychological syndrome that encompasses personal feelings of emotional exhaustion, depersonalization, and decreased personal accomplishment.[1] The validated Maslach Burnout Inventory (MBI) tool defines burnout severity by scores across these domains.[1,2] There are currently five versions of the MBI, each validated in a particular demographic of medical and non-medical personnel; particularly, the MBI General Survey for Students (MBI-GS(S)) is validated in students.[2]

Burnout in the health professions is concerning because these individuals are tasked with direct patient care, and any belief that their work is unappreciated or meaningless translates directly into detachment from their work and possible patient harm.[3-5] There is even less available information describing burnout in graduate health professions students. Specifically, among pharmacy students, burnout rates may be under-reported since demographic characteristics of pharmacy programs have not been thoroughly analyzed for their role in the development of burnout among students, although there may be a correlation with attendance at on-campus programs versus distance campuses.[6] However, negative coping skills among pharmacy students have been reported previously and may affect student burnout rates.[7-9] Burnout along the emotional exhaustion and decreased personal accomplishment domains has also been previously linked to negative self-perceptions of academic abilities among pharmacy students.[10] The vast majority of the nearly 150 Doctor of Pharmacy (Pharm.D.) degree programs in the United States are traditional programs completed in 4 years, with didactic coursework completed over 3 years and experiential training over 1 year.[11] Conversely, accelerated Pharm.D. programs are completed in 3 years, with didactic coursework completed over 2 years and experiential training over 1 year.[11] It is plausible that burnout rates may be higher among accelerated programs compared to traditional programs and that burnout rates will vary based on elements of curricular design/implementation, given the year-round format with minimal breaks between semesters and experiential rotations in accelerated programs.

Purpose

An applications-based elective course focused on burnout identification and prevention was designed at an accelerated Pharm.D. program. The objectives of this educational report are to describe the development, implementation, and delivery of the "Prescriptions for Burnout Prevention" elective course, given the transition from a live instructional format to a fully remote format as a result of the COVID-19 pandemic, and to describe the educational outcomes of the course. This educational report was exempted by the local Institutional Review Board and is presented in accordance with the guideline for reporting evidence-based practice educational interventions and teaching (GREET) criteria.[12]

METHODS

Overview of the Accelerated Pharm.D. Program Structure

At this Pharm.D. program, the curriculum is administered in an accelerated 3-year format, with 2 didactic years of 2-week-long block courses and one experiential year of 6-week-long Advanced Pharmacy Practice Experiences (APPEs). During didactic block courses, students attend classes for 6 hours per day for 6 consecutive calendar days and then take an end-of-course summative assessment on the seventh day. The didactic pharmacotherapeutic courses are integrated, each focusing on a single organ system and including relevant medicinal chemistry, pharmacology, pathophysiology, and pharmacotherapeutic concepts for the major disease states that fall under that organ system. Students complete 2 elective courses during the spring semester of their second professional (P2) year, which comes at the end of the Pharm.D. didactic curriculum, immediately prior to the final experiential year.

This elective course was designed to provide 2.25 credit hours and 36 contact hours. Enrollment was capped at 24 P2 students who had successfully completed all prior didactic courses. The College's Office of Academic Affairs provided a list of all available elective courses, with each elective's catalog description and course coordinators, and students were asked to rank their preferences. Students were assigned to electives based on both their rank order and individual course enrollment limits.

Original Elective Course Structure

The "Prescriptions for Burnout Prevention" interactive, applications-based elective course was designed to introduce students to the principles of burnout syndrome as related to practicing pharmacists. Daily lectures were developed to center on a burnout management strategy/theme, including financial literacy, fitness literacy/wellness, dietary literacy, spiritual/emotional literacy, and lifelong learning and coping skills. The course faculty team consisted of pharmacy practice faculty and the College's Director of Student Services, in an attempt to combine didactic instruction with general student wellness and professional development.

Course faculty planned to recruit regional experts and consultants for on-site lectures in various content areas to provide active-learning-themed instruction on potential burnout prevention and management strategies available in the local community. Confirmed external consultants who participated in the course would not receive financial incentives. For the final course day, faculty planned to engage the students in a "mandatory fun day" by participating in an off-campus escape room activity and in an

on-campus viewing of the film *Do No Harm* with its production team and subsequent discussion.[13] This film was selected because, although it is focused on physician burnout, the deleterious consequences of escalating burnout and poor coping strategies apply to all healthcare professionals.

Modified Elective Course Structure

Given the fluidity of the early COVID-19 pandemic, restrictions for large gatherings, and the University's shift to a new platform for remote course delivery in March 2020, the elective transitioned to a remote platform on Microsoft© Teams (Microsoft, Inc.; version 1.3.0, WA). A course shell was created in Microsoft© Teams, and access was granted only to course coordinators, faculty, and enrolled students. Faculty were largely unable to recruit local experts for most course days to provide the intended guest lectures because of quarantine conditions. As such, course faculty alternated as lead facilitators for daily content; however, guest experts were able to participate remotely for both the financial literacy and fitness literacy days.

Table 1 features the modified final daily schedule for this elective in response to the COVID-19 pandemic. Participation was required of all students, and daily attendance was taken. There was no end-of-course summative assessment, and final grading was on a pass/fail basis, equally encompassing attendance/participation, completion of all required formative assessments, and completion of both final presentations.

Table 1. Final schedule for burnout elective course

Course day	Time	Content area/focus
Course Day 1 (Tuesday)	8:00am-11:00am	• Issue pre-elective MBI-GS(S) • Introduction to burnout syndrome
	12:00pm-3:00pm	• Financial literacy and connection to burnout ○ Invited consultant
Course Day 2 (Wednesday)	8:00am-11:00am	• Applications and reflections
	12:00pm-3:00pm	• Exercise/fitness literacy and connection to burnout ○ Invited consultant
Course Day 3 (Thursday)	8:00am-11:00am	• Nutrition/dietary literacy and connection to burnout
	12:00pm-3:00pm	• Applications and reflections
Course Day 4 (Friday)	8:00am-11:00am	• Spiritual/emotional literacy and connection to burnout
	12:00pm-3:00pm	• Applications and reflections
Course Day 5 (Monday)	8:00am-11:00am	• Lifelong learning and coping skills
	12:00pm-3:00pm	• Applications and reflections
Course Day 6 (Tuesday)	8:00am-3:00pm	• Final burnout slideshow presentations
Course Day 7 (Friday)	8:00am-11:00am	• Final burnout art presentations
	12:00pm-3:00pm	• Course debrief (including *The Last Lecture* viewing) • Issue post-elective MBI-GS(S)

Elective Course Delivery

Course content was bookended by student self-assessment of individual burnout scores at baseline and on the final day of the course, using the validated MBI-GS(S) tool. Students were instructed on how to calculate their scores for each MBI domain. Scores were not collected, nor were students required to divulge their individual scores to anyone in the course; however, an interactive discussion followed calculation of both survey scores, especially to encourage students to reflect on how their scores changed from baseline after receiving all course content.

During live lectures, faculty led discussions on the day's burnout-related theme with an interactive format tailored to the current COVID-19 pandemic climate. Students developed their own spiritual maps highlighting significant events in their lives and the personal growth seen from those events. To learn and apply various skills related to financial literacy, students participated in a webinar hosted by local financial experts that was organized by the College's Office of Student Affairs and Admissions for the

benefit of all students and which coincided with the timeframe of this elective. To practice physical wellness, students participated in a virtual group exercise session with an invited certified personal trainer lasting 60 minutes; the session was recorded on the Microsoft© Teams virtual course shell and shared with all course participants for continued use thereafter. The daily lectures lasted about 3 hours on average. The remainder of each course day was dedicated to students' independent work on daily formative assessments and longitudinal projects.

Formative assessments consisted of daily reflective writing assignments. The word count was unlimited, and the open-ended submissions were meant for students to introspect and describe how that day's lecture content and class discussions affected their perceptions of burnout. Each course day also featured a digital piece of artwork on interpretations of healthcare-related burnout, representing the perspectives of both providers and patients. Artwork was provided to course faculty from the National Academy of Medicine (NAM) Expressions of Clinician Well-Being digital art gallery for the duration of this elective.[14] Originally, the physical art pieces were to be reserved and shipped to the College for use during the elective; after COVID-19, an adjustment was made to instead reserve digital versions of the selected art pieces. NAM representatives provided faculty with a list of all digital files and allowed faculty to select as many pieces as they desired; ultimately, 6 pieces were selected, with one piece presented per course day. Students were required to incorporate their impressions of that day's selected art piece into their daily reflective writing assignments. At course conclusion, students were provided the artists' interpretation of the art pieces as provided by NAM to compare against each student's individual interpretations.

Final presentations were designed to showcase each student's longitudinal applications of burnout identification and management to their individual lives and careers in 2 variations. Each student prepared and delivered a short, personalized slideshow presentation indicating how they planned to apply burnout mitigation strategies into their current and future practice as pharmacists. Each student also created and presented an original work of art reflective of their self-perception of healthcare burnout created using any artistic medium.

On the final course day, given that course faculty could not reserve a physical screening of the *Do No Harm* film due to COVID-19, the decision was made to instead apply all of the burnout principles learned through a free, public viewing of *The Last Lecture* by Dr. Randy Pausch.[15] *The Last Lecture* focused on a professor's final life lessons to his graduate students prior to retiring from academia, and students were allowed the chance to introspect and not lose sight on their own personal and professional goals. This activity was especially poignant for Pharm.D. students, given the documented need for Pharm.D. programs to implement means for improving student well-being and resilience before entering a high-stress health professions career.[8,16]

RESULTS

A total of 21 P2 students enrolled in and successfully completed this first offering of the elective course over a 2-week period in April 2020. Outcomes from this elective course were primarily assessed through formal evaluations of both the course and its faculty. While post-course evaluations were not required for grading purposes in this course, as per the College's existing policies, students were highly encouraged to provide feedback on the benefits of this elective and potential improvements that can be made for future classes through the College's confidential, Internet-based survey platform (Qualtrics®, Provo, UT).

A total of 13 students completed the voluntary course evaluations (61.9% response rate). Table 2 shows the specific elements assessed for students in the course evaluations with associated statistics. The average overall evaluation score for the course was "excellent," and each individual question assessing the various elements of the course was also evaluated as statistically "excellent" on average. The forced Likert scale responses for all questions were either "strongly agree" or "agree."

Table 2. Course evaluation outcomes

	Average scores*	Strongly agree**	Agree**	Disagree**	Strongly disagree**
Q1: The course was well organized.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)
Q2: The course syllabus clearly specifies the work required of me in this course.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)
Q3: The course content was related to the Student Learning Outcomes.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)
Q4: The educational technology and other resources used by the faculty facilitated my learning.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)
Q5: The course activities helped me better understand and apply the course material.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)

Q6: The assessments were related to the course content.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)
Q7: The assessments provided me with the opportunity to demonstrate what I have learned.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)
Q8: Textbooks, references and other learning resources were adequate to support my learning needs.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)
Q9: Overall, the course contributed to my knowledge.	1.92	12 (92.3)	1 (7.7)	0 (0)	0 (0)

Total respondents N=13.
*Average score interpretation: excellent (> 1.75), exceeds expectations (1.74 - 1.25), above expectations (1.24 - 0.50), satisfactory (0.49 - 0.00)
** Represented as n (%). Scoring scale for each question defined using a Likert-type scale, with: strongly agree (2.00), agree (1.00), disagree (-1.00), strongly disagree (-2.00).

Free-text comments provided on the course evaluations were overwhelmingly in support of offering this elective and its content for future student cohorts. Perceived benefits included freedom of speech, creation of a low-pressure safe space to share personal experiences, bonding with classmates and faculty in different ways, relevance of the topics and associated coping mechanisms to everyday life, positivity during a time of global stress, seamless utilization of the remote learning platform, avoidance of end-of-course summative assessments (e.g., a final exam), and the ability to truly learn from each other's successes and failures. Suggestions for course improvement centered on either incorporation of this course into the core didactic curriculum for all students (e.g., dedicating time in the social/administrative sciences course series to burnout syndrome, offering this course at several times during both the first professional (P1) and P2 years) or continuing to offer this as an elective course available only to a few students who select it. Additionally, students expressed satisfaction at participating in this course in a remote learning environment and even suggested possible hybrid delivery as a future option.

DISCUSSION

Among health professions in the Unites States, the abundance of published evidence on burnout rates has centered on physicians, especially those practicing in critical care settings.[5,17-19] However, more reports of increased burnout are assessing advanced practice providers (e.g., physician assistants, nurse practitioners) and allied healthcare professionals (e.g., pharmacists).[3,20-25] The public health impact of burnout is evident in the recent announcement by the World Health Organization of an evidence-based guideline for burnout syndrome in development.[26] Furthermore, burnout syndrome is recognized as an occupational phenomenon in the 11th revision of the International Classification of Diseases (ICD-11), defined as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed."[26]

Although this burnout elective course was originally designed as a fully live, on-campus experience, a successful implementation using remote delivery was possible during the COVID-19 pandemic. The objective and subjective feedback from students indicates that remote instruction remains a feasible course delivery option for future iterations of this course. Additionally, our successful use of a remote teaching and learning platform would also make a future hybrid course delivery option feasible. While these results apply to a single accelerated Pharm.D. program, it is plausible that these results and experiences are broadly applicable to traditional Pharm.D. programs as well. These findings are also likely not solely limited to Pharm.D. programs. Burnout syndrome affects all healthcare providers regardless of professional affiliations; as such, burnout prevention and management courses would merit inclusion within other graduate health professions programs. Course faculty presented several options to the College's curriculum committee representatives for burnout elective course content delivery during subsequent academic years should other faculty choose to provide such an elective. Considering the successful implementation of this pilot elective, the preferred method of course delivery will be the synchronous, remote method that was piloted, with live/in-person sessions for the course days featuring invited consultants. Course faculty are also pursuing formal measurement of student burnout in a broader sense using the MBI-GS(S) to gain better perspective on how specific characteristics of this accelerated curriculum and program may contribute to perceived burnout.

Interpretation of the student surveys demonstrated the support for this course in the overall Pharm.D. curriculum from the students' perspectives. Responses also highlighted the importance of participating in this elective, which included raising self-awareness and building relationships between other students and their faculty. By removing an end-of-course examination, it allowed students to openly express their experiences and emotions through creative outlets that promoted lifelong stress-relieving strategies (e.g.,

drawing, writing, exercising) for their personal and professional lives. The students' overall impression was that the less intensive design of the course allowed them to more effectively make the personal connections to burnout syndrome for themselves and others because they could now put a name to what they and their colleagues had experienced during their time within the accelerated Pharm.D. program. Especially in the context of a pandemic that is challenging educational institutions to quickly adapt while still providing high-quality instruction under novel conditions, it is reasonable to expect that burnout rates among higher education faculty and learners alike would be higher than usual at this time.

Limitations

The results observed from implementing this burnout elective course have certain limitations. This was piloted in a single accelerated Pharm.D. program, and it is reasonable that different outcomes could be observed among other accelerated Pharm.D. programs in the United States with different demographic and curricular design variables, thus limiting external validity. As mentioned above, this course was offered during a global pandemic, during which stress levels for both students and faculty were likely higher than usual; issuing the elective under different conditions could also affect the overall outcomes of the course. Baseline burnout levels were not recorded by course faculty either for each enrolled student or for the entire cohort, but students were required to record their own baseline MBI-GS(S) scores and to contribute individually to the final discussion after completing the post-course burnout self-assessment, expressing their personal trajectories in their individual burnout awareness. There is also the potential for non-responsive bias given the observed 61.9% response rate, considering the expected standard of ≥80% response rate for survey results meant to represent all pharmacy programs.[27] Despite the lower response rate, there was considerable interest from students in the elective, evidenced by our enrollment to 88% of the available capacity. Finally, there may have been a degree of response bias in the course evaluation outcomes, given that this elective was comparatively less intense than other didactic electives, which may have prompted students to evaluate the course more favorably than how more intense electives or didactic courses would be evaluated. However, given that students provided a broad array of individual free-text comments commending the design, implementation, and delivery of this course while also critically analyzing its benefits and opportunities for improvement, it can be assumed that the effect of this bias was minimal. Additionally, the College did not allow for course evaluation completion to factor into final course grades in any capacity.

Conclusion

A burnout prevention and management elective course was successfully developed, implemented, and delivered in an accelerated Pharm.D. program during COVID-19, and the course was well-received by enrolled pharmacy students. Pharmacy programs considering incorporation of similar courses may effectively design and implement them even under the remote or hybrid learning conditions currently imposed by COVID-19.

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REFERENCES

1. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Beh*. 1981;2:99-113. doi: 10.1002/job.4030020205
2. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout Inventory. https://www.mindgarden.com/117-maslach-burnout-inventory. Accessed October 27, 2021.
3. Moss M, Good VS, Gozal D, Kleinpell R, Sessler CN. An official Critical Care Societies Collaborative statement: burnout syndrome in critical care healthcare professionals: a call for action. *Crit Care Med.* 2016;44:1414-21. doi: 10.1016/j.chest.2016.02.649.
4. Bridgeman PJ, Bridgeman MB, Barone J. Burnout syndrome among healthcare professionals. *Am J Health-Syst Pharm*. 2018;75:147-52. doi: 10.2146/ajhp170460.
5. Panagioti M, Geraghty K, Johnson J, et al. Association between physician burnout and patient safety, professionalism, and patient satisfaction: a systematic review and meta-analysis. *JAMA Intern Med*. 2018;178:1317-30. doi: 10.1001/jamainternmed.2018.3713.
6. Ried LD, Motycka C, Mobley C, Meldrum M. Comparing self-reported burnout of pharmacy students on the founding campus with those at distance campuses. *Am J Pharm Educ.* 2006;70:Article 114. doi: 10.5688/aj7005114.
7. Phillips J, Bekelian A, Billett M. What pharmacy students need to know about burnout, resilience, and well-being. *Am J Health-Syst Pharm.* 2020;77:928-9, doi: 10.1093/ajhp/zxaa075.]
8. Marshall LL, Allison A, Nykamp D, Lanke S. Perceived stress and quality of life among doctor of pharmacy students. *Am J Pharm Educ*. 2008;72:Article 137. doi: 10.5688/aj7206137.

9. Hirsch JD, Nemlekar P, Phuong P, et al. Patterns of stress, coping and health-related quality of life in doctor of pharmacy students. *Am J Pharm Educ.* 2008;84:Article 7547. doi: 10.5688/ajpe7547.
10. Kaur M, Long JW, Sang Luk F, et al. Relationship of burnout and engagement to pharmacy students' perception of their academic ability. *Am J Pharm Educ.* 2020;84:Article 7571. doi: https://doi.org/10.5688/ajpe7571.
11. American Association of Colleges of Pharmacy (AACP). Programs by state. https://www.acpe-accredit.org/accredited-programs-by-state/. Accessed October 27, 2021.
12. Phillips AC, Lewis LK, McEvoy MP, et al. Development and validation of the guideline for reporting evidence-based practice educational interventions and teaching (GREET). *BMC Med Educ*. 2016;16:237. doi: 10.1186/s12909-016-0759-1.
13. Symon R. *Do no harm: exposing the Hippocratic hoax*. https://www.donharmfilm.com. Accessed December 8, 2020.
14. National Academy of Medicine (NAM). Action collaborative on clinician well-being and resilience. https://nam.edu/expressions-of-clinician-well-being-an-art-exhibition/. Accessed October 27, 2021.
15. Carnegie Mellon University. Randy Pausch's last lecture. https://www.cmu.edu/randyslecture/. Accessed October 27, 2021.
16. Kang K, Ortiz Lopez CF, Fear BS, Granko RP. Tactics to improve resilience and well-being among pharmacy students. *Am J Health-Syst Pharm*. 2019;76:1374-6. doi: 10.1093/ajhp/zxz143.
17. Dyrbye LN, Burke SE, Hardeman RR, et al. Association of clinical specialty with symptoms of burnout and career choice regret among US resident physicians. *J Am Med Assoc*. 2018;320:1114-30. doi: 10.1001/jama.2018.12615.
18. Rotenstein LS, Torre M, Ramos MA, et al. Prevalence of burnout among physicians: a systematic review. *J Am Med Assoc*. 2018;320:1131-50. doi: 10.1001/jama.2018.12777.
19. Hawryluck L, Brindley PG. Psychological burnout and critical care medicine: big threat, big opportunity. *Intensive Care Med*. 2018;44:2239-41. doi: 10.1007/s00134-018-5063-6.
20. Bhatt M, Lizano D, Carlese A, Kvetan V, Gershengorn HB. Severe burnout is common among critical care physician assistants. *Crit Care Med.* 2017;45:1900-6. doi: 10.1097/CCM.0000000000002689.
21. El-Ibiary SY, Yam L, Lee KC. Assessment of burnout and associated risk factors among pharmacy practice faculty in the United States. *Am J Pharm Educ.* 2017;81:Article 75. doi: 10.5688/ajpe81475.
22. Jones GM, Roe NA, Louden L, Tubbs CR. Factors associated with burnout among US hospital clinical pharmacy practitioners: results of a nationwide pilot survey. *Hosp Pharm.* 2017;52:742-51. doi: 10.1177/0018578717732339.
23. Durham ME, Bush PW, Ball AM. Evidence of burnout in health-system pharmacists. *Am J Health-Syst Pharm.* 2018;75(suppl 4):e801-8. doi: 10.2146/ajhp170818.
24. Zinurova E, DeHart R. Perceived stress, stressors, and coping mechanisms among PGY1 pharmacy residents. *Am J Pharm Educ.* 2018;82:Article 6574. doi: 10.5688/ajpe6574.
25. McQuade B, Reed BN, DiDomenico RJ, Baker WL, Shipper AG, Jarrett JB. Feeling the burn? A systematic review of burnout in pharmacists. *J Am Coll Clin Pharm.* 2020;3:663-75. https://doi.org/10.1002/jac5.1218.
26. World Health Organization (WHO). International Classification of Diseases, 11th Revision (ICD-11). https://icd.who.int/browse11/l-m/en. Accessed October 27, 2021.
27. Fincham JE. Response rates and responsiveness for surveys, standards, and the Journal. *Am J Pharm Educ.* 2008;72:Article 43. doi: 10.5688/aj720243.