

Evaluation of burnout among pharmacy technicians in South Dakota

Shanna K. O'Connor, PharmD, BCACP¹; Austin Manuell, PharmD²; Kylie Anderson, PharmD³; Jillian Songstad, PharmD³; Emily Tisler, PharmD Candidate 2026¹; Tucker Wieneke, PharmD²; Hyunjun Cho, PharmD Candidate 2026¹; Jacob Ford, M.A.¹; Jeremy Daniel, PharmD, BCPS, BCPP^{1,4}

¹South Dakota State University College of Pharmacy and Allied Health Professions, Sioux Falls, SD

²Avera McKennan Hospital and University Health Center, Sioux Falls, SD

³Sanford USD Medical Center, Sioux Falls, SD

⁴Avera Behavioral Health Hospital, Sioux Falls, SD

Abstract

Background: Healthcare workers experience high rates of stress and burnout related to their working conditions. Several cross-sectional studies have been conducted that focus on pharmacist burnout, but the literature assessing burnout among pharmacy technicians is limited, especially in rural areas.

Objective: The objective of this study was to assess burnout among pharmacy technicians in community and health-system pharmacies in South Dakota.

Methods: This observational mixed methods, student-led study assessed the prevalence of pharmacy technician burnout in South Dakota. A 26-item survey including questions measuring burnout using a modified Oldenburg Burnout Inventory (OLBI) and modified Copenhagen Burnout Inventory (CBI) was sent to pharmacy technicians across South Dakota. Based on responses, a literature-based presentation was created and presented to a focus group that provided feedback on potential interventions.

Results: The survey received 270 responses (21.4%) and four pharmacy technicians participated in the focus group. Overall, pharmacy technicians in both community and health-system settings reported low-to-moderate burnout. Common stressors reported in both ranking and open response included inadequate staffing, workload, mistreatment from patients, work environment/collegiality, management support, and pay. Interventions suggested in open response included improved scheduling, management changes, breaks, non-pay benefits/use of PTO, and increased pay.

Conclusion: Pharmacy technicians in this sample are experiencing rates of burnout consistent with those seen in published studies. Data collected regarding stressors and suggested interventions provides insight into potential interventions to help improve working conditions and decrease burnout among pharmacy technicians.

Keywords: pharmacy technician, professional burnout, psychological well-being, health workforce, professional development

Background

According to the World Health Organization, burnout is a syndrome caused by chronic workplace stress that has not been appropriately controlled.¹ Burnout is characterized by feelings of fatigue or exhaustion, cynicism relating to one's job, and reduced professional efficacy.² Healthcare workers experience high rates of stress, burnout, depression, and anxiety related to their working conditions, and these rates are associated with reduced productivity, high job turnover, and reduced mental and physical well-being. This cumulative effect may result in more workplace errors and a poorer quality of patient care.^{2,3}

Several cross-sectional studies have focused on pharmacist burnout or overall well-being in the pharmacy department. One systematic review of international literature found that over 50% of pharmacists are experiencing burnout.⁴ Most studies utilized the Maslach Burnout Inventory (MBI) to assess burnout in healthcare professionals.⁵ Other assessment tools include the Oldenburg Burnout Inventory (OLBI), the Copenhagen Burnout Inventory (CBI), the Shirom-Melamed Burnout Measure (SMBM), the Professional Quality of Life Scale, the Well-Being Index, and the Brief Resilience Scale.^{6,7} Multiple studies have also evaluated the effectiveness of interventions implemented to address burnout in all healthcare professionals, and have shown that a combination of individual and organizational interventions is most effective in preventing burnout.⁸ Individual interventions may include mindfulness and stress-management techniques, aerobic exercise, strength training, yoga, or tai chi, while organizational interventions involve changes in workload, workflow, scheduling, and the overall workplace culture. Considering that increased workload is associated with burnout, the national shortage of pharmacy technicians is concerning. A 2022 workforce study found that 74% of facilities reported shortages of entry-level pharmacy

Corresponding Author:

Shanna K. O'Connor
South Dakota State University College of Pharmacy and Allied Health Professions
2400 S Minnesota, Sioux Falls, SD 57107
605-688-2101
shanna.oconnor@sdstate.edu

technicians.⁹ There has been only limited research, however, looking specifically at burnout among pharmacy technicians. One study assessing burnout among pharmacy staff in an Ohio health system found that pharmacy technicians on average reported low-to-moderate burnout.¹⁰ The greatest contributors to stress reported by all pharmacy staff in this study included workflow (e.g., meetings, staffing, email fatigue), control (e.g., change, technology, shortages, interruptions), and community (e.g., coworkers, poor communication, stress from home), while suggested mitigation strategies included staffing/workflow adjustments and creating a culture of wellbeing. Two other studies conducted in Utah and Singapore reported rates of burnout in pharmacy technicians of 30% and 52%, respectively.^{11,12} Although rates of burnout observed in pharmacy technicians are lower than rates seen in other professionals, including pharmacists, the data is limited and, to our knowledge, there are no studies exploring burnout in pharmacy technicians who work with rural populations.¹¹ Such data may help rural health-systems mitigate burnout.

To avoid negative influence on healthcare outcomes overall, healthcare organizations and employers must identify interventions to positively influence employee wellbeing and decrease burnout. The American Society of Health-System Pharmacists (ASHP) Practice Advancement Initiative for 2030 states that “health systems should support the well-being and resiliency of their staff.”^{13,14} Data related to pharmacy technicians practicing in rural areas may help health systems achieve this objective.

This study was designed to address gaps in the literature by increasing the data available related to burnout among pharmacy technicians, specifically in the largely rural state of South Dakota. The objectives of this study were to (1) identify the prevalence of burnout and contributing factors in South Dakota-based pharmacy technicians and (2) determine pharmacy technician perception of potential interventions to address burnout.

Methods

Stage 1: Statewide survey

To assess the prevalence of pharmacy technician burnout in South Dakota, this observational mixed methods study utilized a two-stage design consisting of a survey and a focus group. This project was determined to be exempt by South Dakota State University’s (SDSU) Office of Human Subjects.

The 26-item questionnaire consisted of Likert-type, ranking, multiple-choice, and free-text questions (see Appendix 1). Nine demographics questions collected information related to the participant and type of workplace (i.e., community or health system). Eleven 5-point Likert-type questions were derived from two validated instruments, the OLBI and CBI. The OLBI assesses the severity of work-related burnout, while the

CBI assesses the multidimensional nature of burnout (i.e., personal, work-related, and client-related).¹⁵⁻¹⁷ To decrease question burden for study participants, select items from each inventory were chosen (six from OLBI and five from CBI). Questions were evaluated for relevance to pharmacy technicians and the pharmacy profession and for any potential redundancy across the two questionnaires; the initial changes were proposed by two study authors and final revisions determined by consensus. A single, practice type-specific, ranking question related to workplace stressors was included; listed stressors were identified from three studies highlighting common stressors found within pharmacy professions.^{10,12,18} The two free-text questions asked participants to provide information about additional stressors and interventions that would be helpful in supporting their mental health and wellbeing at work.

The questionnaire was pilot-tested by 17 student pharmacists unaffiliated with the project; pilot testers were asked to report on the readability of questions, the flow of the survey, and any additional feedback. Results from the questionnaire pilot were incorporated prior to survey launch. The anonymous questionnaire was administered via an online survey platform; no mechanism was included to prevent multiple responses other than review of entries for gift card drawing (responses for duplicate entries were removed). Participants were recruited via email from a Board of Pharmacy-provided list of all South Dakota-registered pharmacy technicians with an identified primary place of work as hospital or community-based pharmacy located in South Dakota. Exclusion criteria included enrollment in a PharmD program of study and age less than 18 years. The initial recruitment email was sent in January 2024 and two reminder emails were sent over the course of the six-week response window. Participation was incentivized via gift card drawing.

Scoring of inventory-derived questions was completed using the same method used for the full inventory, with a scaled scoring system that adjusted for the decreased number of questions, consistent with processes used in previously published research.^{19,20} Scoring for each inventory subset used the same thresholds as the full inventories—for the OLBI questions, scores of <14, 14–21, and >21 were considered low to none, moderate, or high levels of burnout, respectively, and for the CBI, scores of <49, 50–74, 75–99, and 100 corresponded to low to none, moderate, high, or severe burnout, respectively. The workplace stressor ranking question was evaluated for frequency of responses using a weighted average approach to determine the overall ranking of stressors.

All data provided was included in analyses for respondents who answered questions beyond the demographics page. Quantitative data was analyzed using descriptive statistics. Qualitative data was evaluated by two researchers

independently coding into themes and then resolving differences via discussion. Preliminary data analysis of prevalence of burnout and most common contributors to burnout was used to inform Stage 2 of the study.

Stage 2: Facilitated focus group

After the data were analyzed and the common stressors identified, health science librarian experts were consulted to complete a comprehensive literature search to identify evidence-based solutions for mitigating pharmacy technician burnout. Studies were examined for applicability to the study population in South Dakota and to the purpose of the study. Findings were collated and compared to identified stressors in South Dakota. Tailored findings were presented to a group of pharmacy technicians at a statewide health-systems pharmacy conference.

After this presentation, a facilitated discussion was led by two study investigators for a focus group composed of the pharmacy technicians in attendance at the findings presentation. This convenience sample did not have exclusion criteria. Questions for the focus group were designed by a researcher with experience in qualitative study design and consisted of three pairs of questions on specific themes: Positive culture (“What are ways that your place of employment promotes a positive culture in a meaningful way?” and “How does this manifest in your day to day?”), experience sharing/workflow redesign (“What are cumbersome steps in workflow?”, and “Is there a mechanism to share frustrations with someone with authority to help and what would that sharing look like?”), and leadership and organization strategies (“What does a leader who is looking out for pharmacy technicians look like in your workplace?” and “What are the actionable steps leaders take that give you confidence that wellness-related issues are being addressed?”). The questions were provided in writing and aloud, and participants were given time to consider responses to each question theme before discussing with the group. Non-presenting facilitators were present at the discussion to capture themes and statements.

Data from the three non-presenting facilitators were compared for consistency and then evaluated by two separate study investigators, who independently identified themes and then met to come to consensus. After the focus group, a nine-item paper-based questionnaire was administered to all pharmacy technician attendees; completion of the questionnaire was incentivized via gift card. The questionnaire (copy available upon request of the authors) consisted of eight five-point, Likert-style questions using a defined scale for categories (Not at all, Slightly, Somewhat, Very, Extremely) and one open-response question for comments. Two Likert-style prompts were asked for each of the four proposed solutions: for their area of work, how valuable would the solution be and how feasible would it be. Quantitative data

from the questionnaire was analyzed using descriptive statistics, and comments were evaluated according to investigator-identified themes.

Results

Stage 1: Statewide Survey

The invitation to participate in this study was sent to 1,343 pharmacy technicians; 38 emails were returned as undeliverable. From the 1,305 potential respondents, 279 full or partial responses were received (response rate 21.4%). Of these, 7 (2.5%) contained only the demographics information, 42 (15%) were excluded based on the exclusion criteria, 16 (5.7%) contained at least part of the survey (data included), and 214 (76.7%) contained complete surveys. Zero duplicate responses were found in the gift card survey responses.

The majority of respondents were female (n=189, 87.9%) and worked full time (n=181, 78.7%). The average years worked was 9.2 years, with a range of 1–32 years. The percentage of pharmacy technicians per workplace type for community, health system, and both was 57% (N=131), 34.3% (N=79), and 7.8% (N=18), respectively. The rurality of respondents was similar to that of the state, with 55.8% of respondents working in a metropolitan community (population >50,000) and 19.1% working in a rural community (population <10,000).²¹ Table 1 presents scoring results of the OLBI and CBI questions. The percentage of respondents experiencing moderate or high levels of burnout according to the modified OLBI was 63.2% and 11.4%, respectively. Comparatively, the percentage of respondents experiencing moderate, high, or severe rates of burnout according to the modified CBI was 30.5%, 9.7%, and 0.4%, respectively. Table 1 also presents results of the ranked stressors, and Table 2 and 3 presents results from analysis of open results.

Stage 2: Facilitated focus group

Literature review

Fifty-six articles were identified as having interventions relating to healthcare worker well-being. Of these, seven were determined to be relevant to this study and reviewed. The key interventions were organized into three separate domains: (1) support and experiences;^{19,20,22} (2) system-level changes;^{9,12,19,20,23,24} and (3) supplemental wellness interventions.^{9,19,20,22}

Focus Group Discussion and Survey

Four pharmacy technicians participated in the pharmacy technician-oriented continuing education session, facilitated discussion, and post-session survey. Facilitated questions were related to support that promotes a positive work culture and to system-level changes (i.e., workflow redesign, leadership and organization strategies). Themes related to support of a positive work culture include kind communication, with

pharmacy technicians noting that a positive practice could be to make intentional connections on a daily basis with team members. Themes related to system-level changes included transparency and connection with leadership. Pharmacy technicians specifically noted staffing issues that compound communication challenges. Responses to the post-focus-group discussion survey indicated that “Positive culture and experience” were valued by all respondents and thought to be feasible by three of four respondents; “workflow redesign” and “leadership and organization” results were mixed, with both areas scoring lower on both the value and feasibility scales.

Discussion

Pharmacy technicians in this small sample in a rural state are experiencing rates of burnout consistent with those seen in published studies. The higher frequency of responses indicating moderate burnout on the OLBI as compared to the CBI could be due to the adaptation of the tools. CBI measures a single dynamic of burnout (exhaustion), whereas OLBI measures two different elements (exhaustion and disengagement). The open response themes seem to align with the tool measurements, given that comments related to disengagement and workplace interactions were more common than those related to individual exhaustion. The lower than anticipated rate of measured burnout is encouraging, and exploration of this finding may help inform initiatives to prevent burnout in other regions.

The data, which aligns with national data indicating ongoing shortages in the pharmacy technician workforce, also provides insight into potential interventions to help improve working conditions for pharmacy technicians.⁹ Ranked stressors had commonalities across both community and health system practices (inadequate staffing, difficult coworker/poor teamwork, work overload), as did open-response stressors (management support, pay, workload expectations, work environment/collegiality). These stressors align with published literature related to factors associated with increased burnout of pharmacists and pharmacy staff.^{4,10, 18}

Of note, some elements (e.g., teamwork, management support, and collegiality of work environment) within both ranked and open stressors could be positively influenced without significant cost. Although many of these concerns may involve shifts in workplace culture, which can be challenging and require ongoing support, management teams might use this data to develop worksite interventions to specifically address the concerns of pharmacy technicians. Other identified elements such as increased pay and improved staffing models would require additional funding to affect change; management teams might consider how to improve transparency and communication related to workload in the short term while collaborating with pharmacy technician

leaders and administration to improve salaries and schedules where possible.

Some concerning findings from this data are open comments related to pharmacist mistreatment of pharmacy technicians, pharmacist management skills, and pharmacist wellness.

While these findings are not necessarily unique to South Dakota, the state is unique in that a single college of pharmacy trains the majority of pharmacists in South Dakota.^{4,12,18} This information has been shared with the PharmD Curriculum Committee at South Dakota State University, and a plan is in place for the next school year to revise elements of the management curriculum. This data will also be shared with individuals responsible for continuing education initiatives in the state, with a goal of improving training for managers currently in practice.

This study has limitations that influence the applicability of its findings. Due to the response rate and focus group size, it is unlikely that this data is highly generalizable. Given the limited data available related to rural pharmacy technicians, however, the data may still be beneficial to broad pharmacy practice audiences. Although the authors have a reasonable degree of confidence that the questions asked were appropriate to capture burnout, the adaptation of established tools is potentially problematic; however, the data from this study aligns with the literature. Coder interpretation of “management” or other terms may not be consistent, and individual bias may have been introduced in the evaluation of themes despite efforts to minimize. Because the focus group was comprised exclusively of pharmacy technicians attending a state conference, and therefore of individuals more engaged in professional activities, the feedback provided may be less generalizable to all pharmacy technicians.

Future studies should explore positive elements of pharmacy technician workplaces in South Dakota; this data may help inform workplaces as to what practices influence lower relative rates of burnout in the state and facilitate lower rates of burnout elsewhere. It would be helpful to explore the impact, if any, of training efforts to address negative perceptions of management support, pharmacist ability to manage, and negative treatment of pharmacy technicians.

Conclusion

Pharmacy technicians in South Dakota are likely experiencing burnout at rates similar to those seen elsewhere and share common concerns about their workplaces, including staffing, work overload, and interpersonal dynamics.

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Author Contributions:

SKO: Methodology, Formal Analysis, Validation, Investigation, Data Curation, Writing - Original Draft, Writing - Review and Editing, Supervision, Funding Acquisition;

AM: Conceptualization, Methodology, Investigation, Formal Analysis, Writing-Original Draft;

KA: Conceptualization, Methodology, Investigation, Formal Analysis, Writing-Original Draft;

JS: Methodology, Investigation, Formal Analysis, Writing-Original Draft;

ET: Conceptualization, Methodology, Investigation, Formal Analysis, Writing-Original Draft;

TW: Methodology, Investigation, Formal Analysis, Writing-Original Draft;

HC: Methodology, Writing-Original Draft;

JF: Formal Analysis, Writing - Original Draft, Writing - Review and Editing, Visualization;

JD: Conceptualization, Methodology, Writing - Review and Editing

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Table 1. Results from Statewide Survey

	Community	health-system	Community and health-system	Overall
OLBI	(N=131)	(N = 79)	(N = 18)	(N = 228)
Low to none	36 (27.5%)	19 (24.1%)	3 (16.7%)	58 (25.4%)
Moderate	79 (60.3%)	54 (68.4%)	11 (61.1%)	144 (63.2%)
High	16 (12.2%)	6 (7.6%)	4 (22.2%)	26 (11.4%)
CBI	(N=129)	(N = 79)	(N = 18)	(N = 226)
Low to none	78 (60.5%)	48 (60.8%)	9 (50.0%)	135 (59.7%)
Moderate	43 (33.3%)	21 (26.6%)	5 (27.8%)	69 (30.5%)
High	8 (6.2%)	9 (11.4%)	4 (22.2%)	22 (9.7%)
Severe	0	1 (1.3%)	0	1 (0.4%)
Ranked Stressors				
Top 5 stressors for community Pharmacy technicians		<ol style="list-style-type: none"> 1. Inadequate staffing 2. Mistreatment or rudeness from patients 3. Work overload 4. Pace of work environment 5. Difficult coworkers/poor teamwork Individuals working in both areas also ranked underappreciated contributions and emotional burden/moral stress highly		
Top 5 stressors for health-system pharmacy technicians		<ol style="list-style-type: none"> 1. Inadequate staffing 2. Difficult coworker/poor teamwork 3. Work overload 4. Unequal distribution of work 5. Under-appreciated contributions Individuals working in both areas also ranked emotional burden/moral stress and difficult coworkers/poor teamwork highly		

Table 2. Open response Statewide Survey results, Stressors

Community Stressor Category (n)	Community, Example Quote	Health-System Stressor Category (n)	Health-System, Example Quote
Management support (8)	"... no support from upper management"	Management support (8)	"Lack of caring of upper management, poor communication from higher ups"
Work environment/collegiality (6)	"Staff works too slow in a fast paced environment; staff always calling in sick. Picking up the slack of others"	Pay (8)	"Rate of pay does not compensate for additional expectations that have been added to the pharmacy technician role..."
Workload expectations/complexity (6)	"The ability to multitask without making mistakes"	Workload expectations/complexity (6)	"Constant growth/expansion of patients/ facilities we serve"
Insurance (6)	"Insurance plans not being accepted creates patient transfer out & company pushing for staff (us) to increase patient transfer"	Pharmacist mistreatment (5)	"Condescending and patronizing treatment from pharmacists, providers, and nurses"
Drug supply (6)	"Availability of medications"	Work environment/collegiality (4)	"staffing, co worker relations, distribution of work..."
Pay (5)	"Pay not keeping up with inflation"		
Pharmacist workload/wellness (5)	"Pharmacist burnout greatly impacts technician burnout."		
Communication with other Healthcare providers (5)	"Poor treatment and under-appreciation from other providers"		

Table 3. Open response Statewide Survey results, Interventions

Community Intervention Category (n)	Community, Example Quote	Health-System Intervention Category (n)	Health-System, Example Quote
Improved scheduling (9)	"...staffing that allows for time off and the ability to take a full 2 week vacation"	Management changes (improve pharmacist management, accountability, responsiveness, support for errant patients) (6)	"Train pharmacists on how to (manage) staff better, management training"
Non-pay benefits/being able to use PTO (8)	"More PTO. Mandatory PTO. People have it but can't use it because of short staffing."	Pay (6)	"...my mental health would be fine if I were making a living wage and didn't have to choose between eating and paying bills"
Breaks (8)	"More opportunities for actual breaks"	Improved scheduling (4)	"For the pharmacy to assign a pharmacist to handle staffing"
Accountability, coworkers (7)	"...more consequences for calling in or not following work procedures"	Increased number of staff (4)	"There is a huge understaffing problem"
Increased number of staff (6)	"More staff to help with the work/cover shifts without stress"	Breaks (non-lunch, being able to take, being able to sit)(4)	"The ability to take a break during the day is important to mental health"
Improved training, coworkers (6)	"More, adequately trained technicians. Certification training should also include the normal day to day duties of operation & better or at least a general understanding of drug therapeutics"		
Management changes (improve pharmacist management, accountability, responsiveness, support for errant patients) (5)	"A person in charge of training staff, both clerks and technicians... More management training for pharmacists. Pharmacists are not managers and avoid intervening with employees somewhat."		
Pay (4)	"Yearly raises. Shouldn't have to beg for a raise"		