An Assessment of Safety Attitudes in Saskatchewan Community Pharmacies

2023 Edition

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Introduction

Community pharmacy practice is continuing to evolve into a patient care-oriented work model encompassing more comprehensive healthcare services. As we see a rise in the prevalence of chronic diseases and an aging population, pharmacy professionals will continue to serve a crucial role in patient care and safety. Medication safety is a priority for the public, leading many provincial pharmacy regulatory authorities to incorporate mandatory medication incident reporting and quality improvement programs into their strategic plans.[1] Such initiatives are important to assist community pharmacies with recognizing and reporting medication errors and near misses, developing and implementing strategies to resolve and prevent incidents, and assessing system processes to optimize patient safety.[1]

The Safety Attitudes Questionnaire (SAQ) is a validated tool for measuring perceptions of safety culture in the workplace and is used in healthcare settings worldwide.[2,3,4] The SAQ consists of a series of questions that are divided into six domains: Teamwork, Safety Culture, Job Satisfaction, Stress Recognition, Perception of Management, and Working Conditions.[2,3,4]

This report summarizes the results of the third administration of the SAQ to Saskatchewan community pharmacies in 2023, and provides a comparison to the results from the first and second SAQ administrations in 2018 and 2021, respectively[5,6] (refer to Appendix A for SAQ administration dates).

Methods

The SAQ was distributed to a total of 1357 community pharmacy professionals (1218 practicing pharmacists and 139 practicing pharmacy technicians) in Saskatchewan. The 40-question SAQ was provided online through the SurveyMonkey® platform over a 5-week period spanning from March 3, 2023, to April 7, 2023. Respondents scored each question using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The responses from the six SAQ domains were further stratified into four subgroup analyses: total number of years of work experience in community pharmacy practice, type of pharmacy workplace, approximate number of prescriptions dispensed weekly, and respondents' position at their workplace. The weighted averages for each domain were calculated and compared to the results from 2018 and 2021 to analyze changes over the years. Respondents were also given the opportunity to express additional views and opinions through free-form comments at the end of the questionnaire.

Results

A total of 378 responses (27.9% response rate) were collected from 337 pharmacists (27.7% response rate) and 41 pharmacy technicians (29.5% response rate). Appendix B outlines the demographic information of respondents. Appendix C shows a comparison of the weighted average scores between 2018 and 2023, while Appendix D shows a comparison of the weighted average scores between 2021 and 2023. Appendix E displays a graphical comparison of domain scores between the three administrations of the SAQ.

The results of the SAQ's six domains (Teamwork, Safety Culture, Job Satisfaction, Stress Recognition, Perception of Management, and Working Conditions) are presented with respect to total number of

years of work experience in community pharmacy practice (Appendix F), type of pharmacy workplace (Appendix G), approximate number of prescriptions dispensed weekly (Appendix H), and respondents' position at their workplace (Appendix I). Comparisons between the results from 2023 with 2018 and 2021, respectively, are shown in Appendix J and Appendix K.

Discussion

The SAQ was designed to assess the current state of safety attitudes within community pharmacy practice from the pharmacy team's perspective. The six domains of safety attitudes (Teamwork, Safety Culture, Job Satisfaction, Stress Recognition, Perception of Management, and Working Conditions) were stratified by the respondents': 1) years of work experience in community pharmacy practice, 2) pharmacy workplace type, 3) approximate number of prescriptions dispensed weekly and 4) respondents' position at their workplace. Results from the 2023 SAQ were compared to past results from 2018 and 2021 to observe changes in responses and attitudes towards safety culture over time.

Teamwork

The Teamwork domain assesses perceptions of collaboration, conflict resolution and team support within the workplace. Teamwork was overall the second highest scoring safety domain in the 2023 SAQ. There was an improvement from 2018 to 2023 (Appendix C), and minimal change between 2021 and 2023 (Appendix D). Teamwork scores have seen a notable increase since the onset of the COVID-19 pandemic in 2020 and have remained relatively consistent until the present time. Based on a subgroup analysis according to the type of pharmacy workplace, respondents employed at independently owned pharmacies scored higher in each question under the Teamwork domain in comparison to respondents working at banner and corporate locations (Appendix G); this was similar to the 2021 results. In another subgroup analysis, respondents from pharmacies that fill a large number of prescriptions weekly (i.e., 1501 to 3000 prescriptions per week and 3001 or more prescriptions per week) reported lower Teamwork scores (Appendix H).

Based on a subgroup analysis with stratification by years of work experience in community pharmacy practice, individuals who have worked for 0-5 years (i.e., new or recent graduates) generally scored higher in the Teamwork domain compared to respondents who have worked for 6-10 and 11-20 years in community pharmacy (Appendix F). These results are in contrast to past SAQ results in 2018 and 2021, which both concluded that new or recent graduates scored lowest in perceptions of teamwork. Interprofessional education is mandatory for accredited pharmacy programs in North America, as they provide pharmacy students with opportunities to collaborate, communicate, and learn from their peers and professionals from other healthcare fields.[7] A study concluded that pharmacist and pharmacy technician students partaking in an intraprofessional workshop reported improved understanding of conflict management, an appreciation for differing approaches to conflict management, and a better understanding of the importance of open communication in the workplace.[8] Participating in interprofessional and intraprofessional education equips new and recent graduates with the skills required to be an effective team member, such as communicating when there is an issue with patient care and asking questions for clarification; both of these items were scored higher by respondents who have worked 5 years or fewer in this year's SAQ compared to 2021 results. When stratified by

respondents' position at their workplace, pharmacy technicians reported lower average Teamwork scores compared to staff pharmacists and pharmacists who are managers or owners (Appendix I).

Safety Culture

The domain of Safety Culture assesses the management of medication errors within pharmacy teams, distinguishing between environments that adopt a "blame and shame" approach versus those that foster an open atmosphere, where team members are encouraged to discuss and facilitate system-based solutions. Safety Culture was the highest-scoring domain in the 2023 SAQ, with the score remaining unchanged since the 2021 administration (Appendix D). In general, perceptions regarding the appropriate handling of medication errors were rated positively by many respondents. Additionally, the majority of respondents agreed that they would feel safe being treated as a patient at their respective pharmacies, which implies that pharmacy staff are confident in the patient and medication safety-related standards and systems currently in place at their practice sites. Based on a subgroup analysis with stratification by the number of prescriptions dispensed weekly, as the number of prescriptions increased, the domain scores decreased (Appendix H), suggesting that heavy workloads and high prescription outputs (in proportion to dedicated human resources) may negatively affect medication safety.

Although all the questions in the Safety Culture domain were rated quite highly, one of the lower-scoring sub-sections indicated that respondents may find it difficult to discuss errors in their pharmacy. The item, "In this pharmacy, it is difficult to discuss errors" scored relatively low in 2021 among respondents with 5 or fewer years of work experience, with an average score of 3.75.[6] In the 2023 SAQ, respondents in this cohort saw an improvement in score (3.75 to 4.17) (Appendix F), while the scores for respondents with greater years of work experience (i.e., 6-10 years, 11-20 years, and 20+ years) decreased compared to the corresponding 2021 scores. Respondents with fewer years of work experience seem to feel more comfortable and safe engaging in discussion with their team members, which can lead to open and productive discussions regarding incidents that occur in the pharmacy.[9] It is crucial to continuously encourage pharmacies to foster team building, group collaboration, and a work environment where team members feel safe and encouraged to discuss potential improvements to the system.[9]

Job Satisfaction

The Job Satisfaction domain evaluates respondents' perceptions and overall satisfaction related to their work environment. For this domain, there was an increase in the 2023 SAQ score compared to 2018 (Appendix C), but a slight decrease from 2021 (Appendix D). When comparing results between 2021 and 2023, Job Satisfaction was the sole domain with a decrease in score greater than 1% (Appendix D). Despite the observed decrease, this domain remains the third highest-scoring in this year's SAQ, similar to its position in 2021 (Appendix D). According to a study, there are a variety of factors that may contribute to pharmacists' job satisfaction, including workload, advancement opportunities, autonomy, flexibility, fairness in workplace, job security and atmosphere.[10]

When results were stratified by type of pharmacy workplace to compare 2021 and 2023 scores, respondents from independently owned pharmacies reported slightly higher Job Satisfaction than those

working in banner and corporate locations ([Appendix K](#)). A respondent from an independently owned pharmacy reported that having adequate time to engage in discussion with patients enables them to deliver safer care.

When results were stratified by number of prescriptions filled on a weekly basis ([Appendix H](#)), respondents from pharmacies that filled more prescriptions (1501 to 3000 and 3001 or more prescriptions weekly) reported lower Job Satisfaction scores than respondents from pharmacies that filled fewer prescriptions (700 or less and 701-1500 prescriptions weekly). The prevalence of occupational stress and burnout is high amongst healthcare professionals, including pharmacists and pharmacy technicians. According to the 2022 Canadian Pharmacy Mental Health and Workforce Wellness Survey, a large majority of pharmacy professionals are suffering from burnout, disengagement, and exhaustion.[11] Factors such as increased workload, abuse/harassment/anger from patients, and long working hours with a lack of work-life balance were identified as negatively impacting the mental health of pharmacy professionals.[9] The strain on mental health and wellbeing during the COVID-19 pandemic led pharmacy professionals to consider leaving the profession.[11] These observations highlight the strong connection between mental health, wellbeing, and job satisfaction. The Job Satisfaction score of 4.17 is fairly high, which may suggest that Saskatchewan community pharmacies have systems in place to mitigate these negative impacts on their employees (e.g., workplace counselling, appropriate staffing levels).

When stratified by number of years working in community pharmacy ([Appendix F](#)), overall values for this domain were scored lowest for respondents with 5 or fewer years of experience. A Canadian study found that 85% of pharmacy professionals reported their mental health had suffered since the COVID-19 pandemic, with younger professionals reporting worsening mental health and increased turnover intention.[12] Factors associated with mental health included compassion fatigue and secondary traumatic stress, which were found to be significantly associated with increased workplace risk-taking behaviors (e.g., shortcuts).[10] A contributing factor for the lower Job Satisfaction score reported by new or recent graduates may be associated with difficulties in transitioning from the idealistic approach generated within an academically focused patient care framework to the real, practical world of community pharmacy.[13] Additional responses in the free-form sections of the SAQ reported concerns with heavy workload and high demands on pharmacy professionals in a short amount of time, contributing to burnout and subsequent risk to patient safety.

Stress Recognition

The Stress Recognition domain assesses how well respondents recognize the impact of external stressors on performance. It is one of two domains that increased in score compared to results from the 2021 SAQ ([Appendix D](#)). When stratified by number of years in community pharmacy practice, Stress Recognition for individuals who have worked 0-5 years and 6-10 years scored lower on average, in comparison to respondents who have worked for 11-20 years and 20+ years in community pharmacy ([Appendix F](#)). This suggests that length of work experience contributes to increased awareness of how one's performance could be influenced by external stressors. As discussed in the 2021 report, the lower scores among respondents who have worked 0-5 years and 6-10 years in community pharmacy may be due to a lack of experience and/or education in stress recognition and burnout.[6] As well, alike to past results, when stratified by type of pharmacy workplace, respondents working in independently owned

pharmacies reported lower scores for stress recognition compared to banner and corporation pharmacies (Appendix G). Furthermore, a subgroup analysis found that pharmacists who are pharmacy owners or managers report lower stress recognition scores (3.86) than staff pharmacists (4.27) (Appendix I).

Despite being one of two domains that slightly increased in score compared to 2021 (Appendix D), Stress Recognition is the only domain that decreased in score compared to 2018 (Appendix C). The decrease in score from 2018 may be associated with the impact of the COVID-19 pandemic on community pharmacy practice. The pandemic exacerbated existing staffing issues in community pharmacies, which caused an increase in stress due to heavy workloads.[14] While adjusting to the increased turnover rate, pharmacy professionals were required to fulfill additional duties, work longer shifts, and have minimal breaks, any of which may have contributed to a reduced ability to effectively recognize, identify, and respond to environmental stressors in practice.[14] Although the Stress Recognition score increased from 2021 results (Appendix D), it was by a slight amount; this suggests that over the past few years, efforts to understand the impact of external stressors on pharmacy professionals have not been very successful. Regularly evaluating and addressing inadequate staffing levels, heavy workloads, and high turnover rates is essential to mitigating burnout among community pharmacy professionals.

Perception of Management

The Perception of Management domain evaluates how team members perceive support provided by pharmacy management and their commitment to patient safety. Regardless of the number of years of work experience, respondents generally agreed that pharmacy management does not knowingly compromise patient safety (Appendix F). Compared to 2021 results, there was a slight decrease in the weighted average score for this domain (Appendix D). Notably, two of the lower scoring items in this domain revolve around receiving timely and adequate information from pharmacy management, and insufficient staffing levels. These two items scored the lowest in the 2021 SAQ[6] and continued to slightly decline in the 2023 SAQ. Common themes from free-form responses included heavy workloads and lack of appropriate staffing. Respondents reported concerns of being understaffed and overworked without breaks, negatively impacting patient care.

When stratified by type of workplace, independently owned pharmacies scored this domain highest, with corporate pharmacies scoring lowest (Appendix G). A Canadian study found that respondents from independent pharmacies were more likely to feel they were sufficiently supported and that their pharmacy had adequate staffing levels in comparison to chain pharmacies.[15] With the growing proportion of corporate-operated pharmacies, issues with staffing levels and insufficient time for work and breaks will continue to persist if not addressed.

Furthermore, pharmacy owners and managers reported higher scores for this domain (4.47) compared to staff pharmacists (3.94) and pharmacy technicians (3.78) (Appendix I), suggesting that management perceives their performance to be positive despite potentially differing views from their employees. Moreover, respondents working at pharmacies that fill 3001 or more prescriptions per week reported low scores (2.71) for the item "the staffing levels in this pharmacy are sufficient to handle the number of patients" (Appendix H). The results indicate that additional personnel and training are required to manage heavy workloads and high prescription outputs in these pharmacies. Analyses by management

are needed to determine how to balance professional obligations with economic considerations, all while maintaining a reasonable workload and adequate staffing levels in community pharmacies.

Working Conditions

The Working Conditions domain measures perspectives on the integration of new personnel and the availability of resources to assist in making clinical decisions. Similar to the SAQ results in 2018 and 2021, this domain was a lower-scoring section (Appendix C and Appendix D). However, along with Stress Recognition, it is one of two domains that slightly increased in score compared to 2021 (Appendix D). The 2023 SAQ results suggest there has been an increase in the quality of working conditions compared to 2018 (Appendix C) that has been steadily maintained since 2021.

Similar to 2021 results, respondents indicated areas of concern regarding training of new personnel and constructive conflict resolution with problem personnel.[6] A concern was shared regarding the lack of management intervention with staff members who pose a risk to patient safety. Given circumstances like these, implementing standardized training programs for pharmacy assistants and clerks may be helpful, as they are in an optimal position to help the team identify, resolve, and avoid medication incidents. Additionally, encouraging management to participate in conflict resolution courses may be beneficial when addressing complex staffing situations. When stratified by workplace type (Appendix G), respondents from independently owned pharmacies scored this domain higher than their counterparts in both 2021 and 2023, with corporations ranking lowest.[6] A respondent shared that their corporate pharmacy lacked appropriate staffing measures to provide services and care in a safe manner. Respondents from chain community pharmacies in a 2020 Canadian study reported poor working conditions associated with being understaffed, having less time to do their jobs, having to meet certain quotas, having high prescription volumes and longer wait times.[15] Respondents from both banner and corporation pharmacies scored this domain lower than in 2021, which may suggest that changes have not been undertaken in the past 2 years, or have been ineffective at improving and maintaining working conditions in these workplace settings (Appendix K).

Furthermore, the Working Conditions domain was scored highly by pharmacists in the position of owners and managers (4.53), followed by staff pharmacists (3.74) and pharmacy technicians scoring the lowest (3.64) (Appendix I). These results may be a reflection of the different duties and responsibilities of each position. Pharmacy owners and managers may perceive their pharmacy to have well-trained and supervised staff based on feedback from their team and personal experiences, however, staff pharmacists and pharmacy technicians are often the individuals who work alongside new personnel on a regular basis, which may explain the variation in scores for these sections.

Limitations

The SAQ was designed to assess safety attitudes in team-based settings, suggesting that community pharmacies with a sole pharmacist may not be well-represented by the questionnaire. Furthermore, individuals with preconceived concerns about safety culture may be more likely to respond to the questionnaire, leading to potential bias. As such, the themes identified through this survey may not resonate with the entire cohort of community pharmacy professionals in Saskatchewan. Additionally, aggregate scores are skewed towards perceptions of pharmacists, as pharmacy technicians represent 10.8% of all responses (29.5% response rate) and pharmacists represent 89.2% of all responses (27.7% response rate). Lastly, comparisons between 2018, 2021 and 2023 are based on 3 separate sets of data, and it is highly likely that there were different respondents for each SAQ. For example, only 27 respondents (7.1%) of the 2023 questionnaire indicated they have completed the SAQ in the past. Overall, future SAQ data collection efforts are required to assess definitive longitudinal trends of safety culture perspectives in Saskatchewan community pharmacies.

Conclusion

Continuing with the trends observed from the 2018 and 2021 questionnaires, the 2023 administration of the SAQ in Saskatchewan community pharmacies continues to highlight positive views on safety cultures from registered pharmacy professionals. Compared to the results from 2021, the domains for Stress Recognition and Working Conditions increased slightly, with the other domains either remaining unchanged or slightly decreasing in score (Appendix C and Appendix D). In contrast to 2021 results, new and recent pharmacy graduates reported improved Teamwork scores, perceiving that they can better communicate and discuss safety concerns at their workplace. Job Satisfaction, however, was the only domain with a decrease in score above 1%, compared with the 2021 SAQ. A lack of congruency between idealistic perspectives of the workplace generated in academic settings versus day-to-day community practice, along with the COVID-19 pandemic resulting in inadequate staffing levels and higher workloads, are factors that could have contributed to a decrease in Job Satisfaction. Furthermore, the main challenges identified in this year's SAQ according to the lowest weighted item scores are similar to past questionnaires, which include inadequate staffing levels, issues with constructive conflict resolution, training of new personnel, and difficulties with pharmacy morale. However, pharmacy professionals generally agree that medication errors are appropriately handled, and respondents would feel safe and comfortable receiving services from their own pharmacies.

Continuous quality improvement is the cornerstone of safety culture. As our population's life expectancy and prevalence of chronic diseases continue to increase, it is essential to prioritize and optimize patient and medication safety. Additionally, as the scope of pharmacy practice continues to evolve with a focus on clinical services, tools such as the SAQ will enable us to assess potential changes in safety culture. Developing and sustaining a robust safety culture establishes a strong precedent for current and future pharmacy professionals by emphasizing the importance of patient safety, staff wellbeing, and continuous quality improvement initiatives.

Appendices

Appendix A

Administration Dates of the Safety Attitudes Questionnaire (SAQ) to Saskatchewan Community Pharmacies

First Administration (2018)	November 5, 2018 to December 3, 2018
Second Administration (2021)	February 26, 2021 to March 26, 2021
Third Administration (2023)	March 3, 2023 to April 7, 2023

Appendix B

Demographic Information of Respondents

Characteristics	Number of Respondents n (%), where N = 378[+]
Position	
Pharmacist (manager/owner)	156 (41.27%)
Pharmacist (staff)	181 (47.88%)
Pharmacy technician	41 (10.85%)
Total Number of Years Working in Community Pharmacy	
0-5 years	66 (17.46%)
6-10 years	69 (18.25%)
11-20 years	89 (23.55%)
20+ years	154 (40.74%)
Type of Pharmacy*	
Corporate	166 (43.92%)
Banner	102 (26.98%)
Independently owned	110 (29.10%)
Approximate Number of Prescriptions Dispensed Weekly	
700 or fewer (per week)	99 (26.19%)
701 to 1500 (per week)	142 (37.57%)
1501 to 3000 (per week)	105 (27.78%)
3001 or more (per week)	32 (8.46%)

[+] n is the number of respondents and % is the percentage relative to N, which represents the total number of respondents.

* Corporate pharmacies are typically directed by a corporate office, with respect to its professional programs, marketing, ordering, etc. Banner pharmacies are independently owned pharmacies that are affiliated with a central office. They pay fees for the banner's benefit in centralized buying, marketing, and professional programs. Independent pharmacies are not affiliated with any corporately run chains or banners. The owner of an independent pharmacy has complete control over the business in terms of ordering, marketing strategies, etc.

Appendix C

Comparison of SAQ Weighted Average Scores between 2018 and 2023

Safety Attitudes Domains	2018	2023	% Change
Teamwork	4.26	4.46	+4.69%
Safety Culture	4.32	4.47	+3.47%
Job Satisfaction	3.98	4.17	+4.77%
Stress Recognition	4.20	4.08	-2.86%
Perception of Management	3.97	4.13	+4.03%
Working Conditions	3.75	4.06	+8.27%

Appendix D

Comparison of SAQ Weighted Average Scores between 2021 and 2023

Safety Attitudes Domains	2021	2023	% Change
Teamwork	4.47	4.46	-0.22%
Safety Culture	4.47	4.47	0.00%
Job Satisfaction	4.25	4.17	-1.88%
Stress Recognition	4.05	4.08	+0.74%
Perception of Management	4.17	4.13	-0.96%
Working Conditions	4.05	4.06	+0.25%

Appendix E
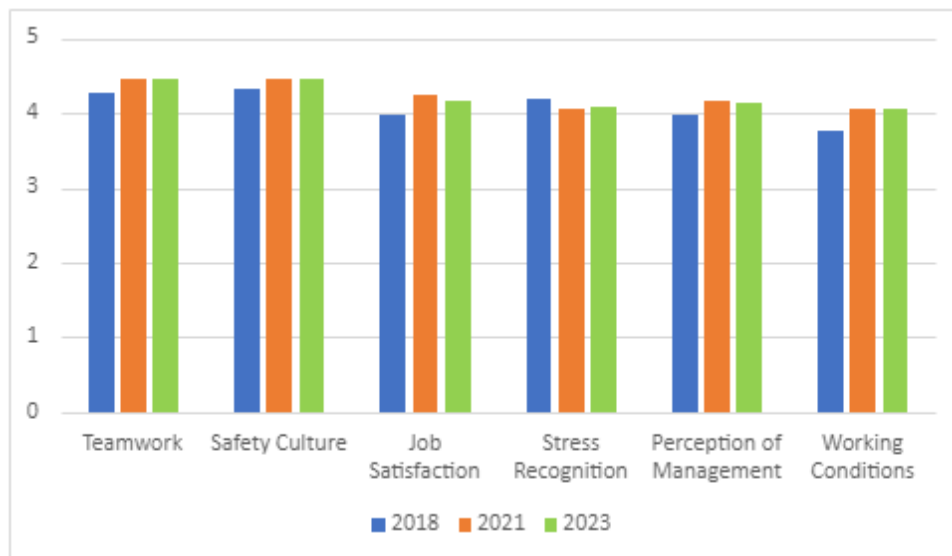
Comparison of SAQ Weighted Average Scores between 2018, 2021 and 2023

Appendix F

Safety Attitudes Domains' Mean Scores with Respect to Respondent's Total Number of Years of Work Experience in Community Pharmacy Practice

Safety Attitudes Domains	0-5 years	6-10 years	11-20 years	20+ years	Weighted Average
Teamwork	**4.57**	**4.38**	**4.38**	**4.49**	**4.46**
My input is well received in this pharmacy.	4.57	4.61	4.44	4.50	4.52
In this pharmacy, it is difficult to speak up if I perceive a problem with patient care.†	4.35	4.02	4.12	4.38	4.24
Disagreements in this pharmacy are resolved appropriately (i.e., not who is right but what is best for the patient.	4.66	4.31	4.38	4.47	4.45
I have the support I need from others in this pharmacy to care for patients.	4.55	4.46	4.30	4.58	4.49
It is easy for personnel here to ask questions when there is something that they do not understand.	4.72	4.41	4.63	4.65	4.61
The people in this pharmacy work together as a well-coordinated team.	4.58	4.46	4.43	4.38	4.44
Safety Culture	**4.50**	**4.45**	**4.42**	**4.48**	**4.47**
I would feel safe being treated here as a patient.	4.75	4.72	4.74	4.80	4.76
Medication errors are handled appropriately in this pharmacy.	4.69	4.64	4.51	4.68	4.63
I know the proper channels to direct questions regarding patient safety in this pharmacy.	4.76	4.66	4.68	4.79	4.73
I receive appropriate feedback about my performance.	4.05	4.15	4.04	4.01	4.05
In this pharmacy, it is difficult to discuss errors.†	4.17	4.15	4.11	4.22	4.17
I am encouraged by others in this pharmacy, to report any patient safety concerns I may have.	4.58	4.45	4.47	4.46	4.48

The culture in this pharmacy makes it easy to learn from the errors of others.	4.52	4.38	4.39	4.40	4.41
Job Satisfaction	**4.11**	**4.18**	**4.14**	**4.21**	**4.17**
I like my job.	4.07	4.15	4.06	4.17	4.12
Working here is like being part of a large family.	4.06	4.06	4.15	4.19	4.14
This pharmacy is a good place to work.	4.16	4.39	4.27	4.36	4.31
I am proud to work in this pharmacy.	4.29	4.42	4.44	4.48	4.43
Morale in this pharmacy is high.	3.95	3.85	3.78	3.87	3.86
Stress Recognition	**3.86**	**3.85**	**4.25**	**4.16**	**4.08**
When my workload becomes excessive, my performance is impaired.	3.80	3.67	4.12	3.99	3.93
I am less effective at work when fatigued.	3.93	3.90	4.34	4.31	4.18
I am more likely to make errors in tense or hostile situations.	3.87	4.03	4.24	4.25	4.15
Fatigue impairs my performance in trying situations.	3.84	3.79	4.30	4.09	4.04
Perception of Management	**4.07**	**4.11**	**4.06**	**4.21**	**4.13**
Management in this pharmacy supports my daily efforts.	4.25	4.34	4.14	4.30	4.26
Pharmacy management doesn't knowingly compromise patient safety.	4.51	4.55	4.59	4.67	4.60
I get adequate, timely information about events that might affect my work, from pharmacy management.	4.06	3.84	4.03	4.03	4.00
The staffing levels in this pharmacy are sufficient to handle the number of patients.	3.46	3.71	3.52	3.84	3.68
Working Conditions	**4.09**	**3.98**	**4.09**	**4.06**	**4.06**
This pharmacy does a good job of training new personnel.	3.76	3.80	3.89	3.84	3.83
All the necessary information for therapeutic decisions is routinely available to me.	4.55	4.34	4.49	4.55	4.50

Trainees in this pharmacy are adequately supervised.	4.13	4.07	4.20	4.15	4.14
Problem personnel are dealt with constructively by our pharmacy management.	3.89	3.73	3.79	3.67	3.74

†*All items described in the negative were reverse-scored (1 represented strongly agree whereas 5 represented strongly disagree) to enable higher scores to reflect more positive safety attitudes.*

Appendix G

Safety Attitudes Domains' Mean Scores with Respect to the Respondent's Type of Pharmacy Workplace

Safety Attitudes Domains	Banner	Corporate	Independently Owned	Weighted Average
Teamwork	**4.36**	**4.42**	**4.62**	**4.46**
My input is well received in this pharmacy.	4.45	4.45	4.69	4.52
In this pharmacy, it is difficult to speak up if I perceive a problem with patient care.†	4.11	4.21	4.42	4.24
Disagreements in this pharmacy are resolved appropriately (i.e., not who is right but what is best for the patient.	4.29	4.44	4.62	4.45
I have the support I need from others in this pharmacy to care for patients.	4.44	4.44	4.61	4.49
It is easy for personnel here to ask questions when there is something that they do not understand.	4.52	4.59	4.74	4.61
The people in this pharmacy work together as a well-coordinated team.	4.32	4.39	4.61	4.44
Safety Culture	**4.42**	**4.40**	**4.61**	**4.47**
I would feel safe being treated here as a patient.	4.69	4.71	4.90	4.76
Medication errors are handled appropriately in this pharmacy.	4.55	4.57	4.80	4.63
I know the proper channels to direct questions regarding patient safety in this pharmacy.	4.78	4.63	4.86	4.73

I receive appropriate feedback about my performance.	3.99	4.03	4.14	4.05
In this pharmacy, it is difficult to discuss errors.†	4.15	4.10	4.30	4.17
I am encouraged by others in this pharmacy, to report any patient safety concerns I may have.	4.44	4.40	4.65	4.48
The culture in this pharmacy makes it easy to learn from the errors of others.	4.31	4.38	4.57	4.41
Job Satisfaction	**4.08**	**3.98**	**4.54**	**4.17**
I like my job.	4.02	3.95	4.49	4.12
Working here is like being part of a large family.	4.06	3.99	4.43	4.14
This pharmacy is a good place to work.	4.18	4.15	4.67	4.31
I am proud to work in this pharmacy.	4.35	4.26	4.76	4.43
Morale in this pharmacy is high.	3.80	3.55	4.36	3.86
Stress Recognition	**4.16**	**4.10**	**3.96**	**4.08**
When my workload becomes excessive, my performance is impaired.	4.07	3.96	3.75	3.93
I am less effective at work when fatigued.	4.32	4.20	4.02	4.18
I am more likely to make errors in tense or hostile situations.	4.22	4.12	4.13	4.15
Fatigue impairs my performance in trying situations.	4.04	4.11	3.93	4.04
Perception of Management	**4.06**	**3.92**	**4.54**	**4.13**
Management in this pharmacy supports my daily efforts.	4.21	4.09	4.58	4.26
Pharmacy management doesn't knowingly compromise patient safety.	4.59	4.50	4.79	4.60
I get adequate, timely information about events that might affect my work, from pharmacy management.	3.94	3.83	4.32	4.00
The staffing levels in this pharmacy are sufficient to handle the number of patients.	3.50	3.28	4.45	3.68

Working Conditions	3.96	3.89	4.4	4.06
This pharmacy does a good job of training new personnel.	3.71	3.63	4.25	3.83
All the necessary information for therapeutic decisions is routinely available to me.	4.48	4.43	4.61	4.50
Trainees in this pharmacy are adequately supervised.	4.05	3.92	4.57	4.14
Problem personnel are dealt with constructively by our pharmacy management.	3.60	3.58	4.14	3.74

† *All items described in the negative were reverse-scored (i.e., 1 represented strongly agree whereas 5 represented strongly disagree) to enable higher scores to reflect more positive safety attitudes.*

Appendix H

Safety Attitudes Domains' Mean Scores with Respect to the Approximate Number of Prescriptions Dispensed Weekly at Respondent's Workplace

Safety Attitudes Domains	700 or fewer (per week)	701 to 1500 (per week)	1501 to 3000 (per week)	3001 or more (per week)	Weighted Average
Teamwork	4.61	4.60	4.23	4.13	4.46
My input is well received in this pharmacy.	4.68	4.63	4.32	4.19	4.52
In this pharmacy, it is difficult to speak up if I perceive a problem with patient care.†	4.36	4.44	3.96	3.97	4.24
Disagreements in this pharmacy are resolved appropriately (i.e., not who is right but what is best for the patient.	4.60	4.61	4.21	4.09	4.45
I have the support I need from others in this pharmacy to care for patients.	4.63	4.59	4.33	4.16	4.49
It is easy for personnel here to ask questions when there is something that they do not understand.	4.78	4.67	4.44	4.44	4.61

The people in this pharmacy work together as a well-coordinated team.	4.61	4.66	4.14	3.91	4.44
Safety Culture	**4.65**	**4.59**	**4.27**	**4.02**	**4.47**
I would feel safe being treated here as a patient.	4.94	4.88	4.52	4.48	4.76
Medication errors are handled appropriately in this pharmacy.	4.87	4.72	4.44	4.16	4.63
I know the proper channels to direct questions regarding patient safety in this pharmacy.	4.86	4.81	4.61	4.45	4.73
I receive appropriate feedback about my performance.	4.10	4.24	3.81	3.87	4.05
In this pharmacy, it is difficult to discuss errors.†	4.36	4.39	3.98	3.29	4.17
I am encouraged by others in this pharmacy, to report any patient safety concerns I may have.	4.68	4.60	4.31	4.00	4.48
The culture in this pharmacy makes it easy to learn from the errors of others.	4.68	4.51	4.22	3.87	4.41
Job Satisfaction	**4.48**	**4.32**	**3.75**	**3.95**	**4.17**
I like my job.	4.46	4.21	3.74	4.00	4.12
Working here is like being part of a large family.	4.26	4.38	3.74	4.03	4.14
This pharmacy is a good place to work.	4.64	4.47	3.86	4.10	4.31
I am proud to work in this pharmacy.	4.73	4.51	4.07	4.35	4.43
Morale in this pharmacy is high.	4.41	4.01	3.33	3.26	3.86
Stress Recognition	**3.98**	**4.24**	**4.20**	**4.08**	**4.08**
When my workload becomes excessive, my performance is impaired.	3.57	3.98	4.09	4.26	3.93
I am less effective at work when fatigued.	3.93	4.17	4.30	4.55	4.18

I am more likely to make errors in tense or hostile situations.	3.90	4.20	4.19	4.52	4.15
Fatigue impairs my performance in trying situations.	3.81	4.06	4.14	4.32	4.04
Perception of Management	**4.24**	**4.59**	**3.97**	**3.51**	**4.13**
Management in this pharmacy supports my daily efforts.	4.54	4.73	4.23	4.54	4.26
Pharmacy management doesn't knowingly compromise patient safety.	4.28	4.73	4.12	3.81	4.60
I get adequate, timely information about events that might affect my work, from pharmacy management.	4.06	4.35	3.71	3.03	4.00
The staffing levels in this pharmacy are sufficient to handle the number of patients.	4.10	4.55	3.81	2.71	3.68
Working Conditions	**3.74**	**4.47**	**4.07**	**3.64**	**4.06**
This pharmacy does a good job of training new personnel.	4.37	4.68	4.74	4.28	3.83
All the necessary information for therapeutic decisions is routinely available to me.	4.10	4.47	4.37	3.94	4.50
Trainees in this pharmacy are adequately supervised.	3.24	4.45	3.57	3.27	4.14
Problem personnel are dealt with constructively by our pharmacy management.	3.13	4.26	3.57	3.03	3.74

† All items described in the negative were reverse-scored (i.e., 1 represented strongly agree whereas 5 represented strongly disagree) to enable higher scores to reflect more positive safety attitudes.

Appendix I

Safety Attitudes Domains' Mean Scores with Respect to Respondents' Position at Workplace

Safety Attitudes Domains	Pharmacist (manager/owner)	Pharmacist (staff)	Pharmacy Technician	Weighted Average
Teamwork	**4.73**	**4.31**	**4.05**	**4.46**
My input is well received in this pharmacy.	4.83	4.36	3.97	4.52
In this pharmacy, it is difficult to speak up if I perceive a problem with patient care.†	4.57	4.10	3.61	4.24
Disagreements in this pharmacy are resolved appropriately (i.e., not who is right but what is best for the patient.	4.76	4.27	4.03	4.45
I have the support I need from others in this pharmacy to care for patients.	4.64	4.39	4.32	4.49
It is easy for personnel here to ask questions when there is something that they do not understand.	4.87	4.44	4.39	4.61
The people in this pharmacy work together as a well-coordinated team.	4.73	4.28	4.00	4.44
Safety Culture	**4.69**	**4.32**	**4.26**	**4.47**
I would feel safe being treated here as a patient.	4.91	4.68	4.55	4.76
Medication errors are handled appropriately in this pharmacy.	4.88	4.47	4.37	4.63
I know the proper channels to direct questions regarding patient safety in this pharmacy.	4.89	4.62	4.63	4.73
I receive appropriate feedback about my performance.	4.19	3.95	3.97	4.05
In this pharmacy, it is difficult to discuss errors.†	4.48	3.95	4.00	4.17
I am encouraged by others in this pharmacy, to report any patient safety concerns I may have.	4.69	4.38	4.16	4.48

The culture in this pharmacy makes it easy to learn from the errors of others.	4.75	4.19	4.11	4.41
Job Satisfaction	**4.47**	**3.96**	**3.96**	**4.17**
I like my job.	4.30	3.97	4.11	4.12
Working here is like being part of a large family.	4.48	3.90	3.89	4.14
This pharmacy is a good place to work.	4.62	4.12	3.95	4.31
I am proud to work in this pharmacy.	4.65	4.26	4.34	4.43
Morale in this pharmacy is high.	4.28	3.56	3.5	3.86
Stress Recognition	**3.86**	**4.27**	**4.04**	**4.08**
When my workload becomes excessive, my performance is impaired.	3.68	4.18	3.76	3.93
I am less effective at work when fatigued.	3.92	4.40	4.21	4.18
I am more likely to make errors in tense or hostile situations.	3.97	4.29	4.21	4.15
Fatigue impairs my performance in trying situations.	3.87	4.21	3.97	4.04
Perception of Management	**4.47**	**3.94**	**3.78**	**4.13**
Management in this pharmacy supports my daily efforts.	4.53	4.16	3.78	4.26
Pharmacy management doesn't knowingly compromise patient safety.	4.85	4.50	4.14	4.60
I get adequate, timely information about events that might affect my work, from pharmacy management.	4.36	3.75	3.81	4.00
The staffing levels in this pharmacy are sufficient to handle the number of patients.	4.16	3.34	3.38	3.68
Working Conditions	**4.53**	**3.74**	**3.64**	**4.06**
This pharmacy does a good job of training new personnel.	4.30	3.52	3.41	3.83
All the necessary information for therapeutic decisions is routinely available to me.	4.75	4.34	4.21	4.50

Trainees in this pharmacy are adequately supervised.	4.71	3.75	3.71	4.14
Problem personnel are dealt with constructively by our pharmacy management.	4.35	3.32	3.26	3.74

† All items described in the negative were reverse-scored (i.e., 1 represented strongly agree whereas 5 represented strongly disagree) to enable higher scores to reflect more positive safety attitudes.

Appendix J

Percent Changes in Average SAQ Scores between 2018 and 2023 based on Total Number of Years of Work Experience in Community Pharmacy Practice and Type of Pharmacy Workplace

Safety Attitudes Domains	Years of Work Experience in Community Pharmacy Practice				Type of Pharmacy Workplace		
	0-5 years	6-10 years	11-20 years	20+ years	Banner	Corporate	Independently Owned
Teamwork	+12.6%	+2.3%	+0.2%	+3.5%	+2.6%	+7.3%	+2.0%
Safety Culture	+7.9%	+3.5%	+0.5%	+1.6%	+4.2%	+4.0%	+2.9%
Job Satisfaction	+3.5%	+6.6%	+1.5%	+6.6%	+3.6%	+8.2%	+0.9%
Stress Recognition	-7.7%	-6.6%	+0.5%	-1.9%	-1.7%	-5.7%	+3.1%
Perception of Management	+2.8%	+6.2%	0.0%	+6.6%	+4.6%	+4.5%	+3.4%
Working Conditions	+7.6%	+4.5%	+13.3%	+7.4%	+3.7%	+10.8%	+7.1%

Appendix K

Percent Changes in Average SAQ Scores between 2021 and 2023 based on Total Number of Years of Work Experience in Community Pharmacy Practice and Type of Pharmacy Workplace

Safety Attitudes Domains	Years of Work Experience in Community Pharmacy Practice				Type of Pharmacy Workplace		
	0-5 years	6-10 years	11-20 years	20+ years	Banner	Corporate	Independently Owned
Teamwork	+7.0%	-0.9%	-2.4%	-2.2%	-0.2%	+0.5%	-0.2%
Safety Culture	+5.6%	-0.2%	-1.6%	-2.6%	+0.5%	-0.7%	+0.7%
Job Satisfaction	-1.0%	-0.5%	-1.4%	-3.7%	-2.6%	-2.7%	+0.4%
Stress Recognition	-1.3%	-6.6%	+2.4%	+3.0%	-0.5%	-1.4%	+4.8%
Perception of Management	+1.8%	+0.2%	-2.2%	-2.8%	-2.6%	-2.0%	+2.7%
Working Conditions	+5.7%	+2.1%	+1.7%	-4.7%	-1.0%	-2.8%	+2.3%

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