Pharmacists ascribing value of technician certification using an organizational behavior framework

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Shane P. Desselle, BSPharm, PhD, FAPhA, Touro University California College of Pharmacy, Vallejo, CA

Kimberly C. Mckeirnan, PharmD, Washington State University College of Pharmacy, Spokane, WA

Kenneth C. Hohmeier, PharmD, University of Tennessee Health Sciences Center College of Pharmacy, Nashville, TN

Purpose. To gather rich details about the value of technician certification from diverse groups of pharmacists of various practice settings and levels of experience.

Methods. Focus groups of pharmacists were conducted using a semistructured interview guide in 4 states (California, Idaho, Tennessee, and Washington) varying in pharmacy technician scope of practice, regulation, and education and/or training environment. Participant pharmacists came from health-system, clinic, and community pharmacy environments. The focus groups took the unique approach of an organizational behavior perspective to contextualize technician readiness for practice change and employer fit. The sessions were audio-recorded and transcribed verbatim. Rapid-based qualitative analysis was used to code the data, with summary templates completed by 2 of the researchers for each of the 4 sessions.

Results. There were a total of 33 focus group participants, including 13 male and 20 female pharmacists ranging in age from 27 to 68 years. The 4 major themes yielded by the data were (1) impact of certification, (2) context of certification, (3) organizational culture considerations, and (4) future credentialing. Certification was deemed to have a greater impact on technician maturation, professional socialization, and career commitment than on actual job skills, even while job knowledge was also deemed to be enhanced. In fact, the certification process was also deemed beneficial in that it meshes with on-the-job training. Participants indicated preferences for technician certification examinations to incorporate more content in "soft skills" and also for development of more specialty and/or differentiated certification products.

Conclusion. Pharmacists from 4 states saw value in certification but agreed that certification is but one component of readying technicians for future practice. Suggestions for furthering the value of certification were shared.

Keywords: certification, pharmacy technician, practice change

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There is growing awareness of the need for well-trained, qualified pharmacy support personnel to facilitate effective delivery of patient-centered pharmacist care in all practice settings.[1] To date, initiatives to meet this need have been primarily under the auspices of re-engineering models, such as "tech-check-tech" and "technician product verification," whereby technicians are delegated even more tasks in the dispensing process so as to free up time for pharmacists to engage in more direct patient care activities.[2] Deployment of technicians in this way has been demonstrated to streamline operations and make more effective use of pharmacists, all while maintaining patient safety.[3,4] It should be noted, however, that technician roles have been expanded beyond dispensing functions to include involvement in medication reconciliation, hospital discharge services, immunizations, assistance with medication therapy management (MTM)

Address correspondence to Dr. Desselle (sdesselle68@gmail.com).

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administrative functions, quality assurance, customer service initiatives, and other functions.[5-11]

Given the importance of pharmacy technicians in the delivery of care, leaders in the pharmacy profession have been calling for national standards for technician education, training, and state licensure and defining technician roles at a more advanced versus basic level. The call for standards has been resonating for 2 decades or more[12,13] and has gained even more momentum following a stakeholder consensus meeting of various pharmacy leaders.[14] Despite these calls, there is still wide variation in technician training and credentialing requirements from state to state. Entry-level practice requirement statistics for pharmacy technicians across the United States indicate that just over half of the 50 states and the District of Columbia require no education and/or training or certification; 5 require certification only; 4 require education and/or training but not certification; 7 require some sort of education and/or training and certification; another 7 require either education and/or training or certification; and 7 have no requirements for education, registration, or licensure.[15] However, the call for standardization and raising of standards is not unequivocal.[16] There is concern that precipitous increases in delegation by pharmacists could result in them being overly remote from the distribution process.[17] Additionally, the National Association of Chain Drug Stores and other entities have expressed concern that a training mandate could have a deleterious economic impact and that the education and training needs across different settings might be too diverse for such a mandate.[18]

Still, a growing number of states and employers are requiring national certification administered by either the Pharmacy Technician Certification Board (PTCB), which administers the Pharmacy Technician Certification Exam (PTCE), or through the National Healthcareer Association (NHA), which administers the Exam for the Certification of Pharmacy Technicians (ExCPT). Both national technician certification procedures involve a self-study process culminating in an examination with components in the following areas: names and indications of common drugs, basic pharmacology, federal jurisprudence, dispensing processes, compounding, sterile intravenous admixture, medication safety and quality assurance, and issues surrounding controlled substances.[19,20] National certification was recommended for adoption across all states during the aforementioned consensus conference.[14] However, the future impact of that consensus meeting is not known, and other questions regarding pharmacy technician credentialing have yet to be adjudicated.

Studies on the value of certification were undertaken approximately a decade ago. In one study, certification was reported to make moderate contributions toward various skills, similar to previous work experience.[21] A qualitative study of pharmacists' opinions around that same time period uncovered 3 themes: benefits of certification (knowledge, skills, and profession commitment), pharmacist reliance on support staff (ie, needing high-quality technicians for effective organizational performance), and barriers to certification (lower salaries and little financial incentive for technicians to become certified).[22] In that study, pharmacists indicated a preference to see stricter criteria for eligibility to sit for the technician certification examination (the PTCE was the only national exam available at the time). Since those studies, much has changed, including the expansion of technician roles, initiatives to require some level of mandatory certification, and hundreds of thousands more technicians having become certified.

With all of these changes, a remaining constant is that technicians serve as extenders of pharmacists, who are ultimately responsible for delegating tasks to technicians. Pharmacists will likely retain some level of autonomy in delegating within the same health system or chain pharmacy organization. Additionally, pharmacists are largely responsible for hiring, supervising, and terminating technician employees under the policies of their employer organizations. It is important to understand how pharmacists see certification and how it fits into the broader context of technician scope of practice in preparation for work in their organizations. The purpose of the study described here was to gather details about the value of technician certification from diverse groups of pharmacists varying in practice setting and level of experience from an organizational behavior perspective.

KEY POINTS

- Focus groups of pharmacists from 4 states differing in regulatory climate described the value of pharmacy technician certification from an organizational behavior perspective.
- The self-study process of technician certification is seen to imbue greater profession commitment and professional self-identity among pharmacy technicians.
- The results of this study provide direction for certification organizations, pharmacy leaders, and educators in their plans to standardize and raise the bar of technician education and training.

Methods

Study design. The study methods were deemed exempt from full review by the principal investigator's institutional review board. A qualitative study design was employed to gather detailed viewpoints regarding these issues rather than only to provide summative ratings such as would be yielded through use of a survey questionnaire. A focus group methodology rather than individual interviews was employed,

as the research aimed to describe the phenomenon of interest rather than induct theory, and it was believed that the participants would be able to leverage one another's experiences, potentially yielding additional thoughts and ideas while concomitantly comparing and contrasting viewpoints from their own experiences, especially given the diverse types of settings and scopes of practice represented by the participants.[23] To that end, a phenomenological approach was taken; specifically, from the participants a philosophical perspective was sought to emphasize their "lived experiences" and how those experiences have shaped their interpretations of practice activities undertaken as supervisors of technician activities.[24]

Theoretical framework. An organizational behavior framework adapted from that of Roberts et al[25] served as the basis for the study, specifically in creating the focus group interview guide (eAppendix). This framework provides a useful perspective for recognizing the contributions of employees within an organization and, in turn, how their behaviors may affect other employees and the organization as a whole. In this case, given the evolving nature of pharmacy practice, it was believed that approaching the question of the value of technician certification should incorporate the possibilities of practice change and organizational adaptation, as well as the possibility that technician scope of practice will most likely continue to evolve and that pharmacy employers might hire, evaluate, and value technicians (and pharmacists and other employees) for best "fit" with their organizations moving forward.[26]

Participants. Focus group sessions involving pharmacists convened by the researchers were conducted in 4 states: California, Tennessee, Washington, and Idaho. Budgetary and logistical constraints precluded the conduct of focus groups in all 50 states. The 4 states selected were unique in terms of technician scope of practice and represented fairly wide geographic diversity. California licenses technicians but does not require certification, even though its board of pharmacy has contemplated an advanced-practice designation for technicians that would include a certification requirement.[27] Idaho does not mandate certification but has a rather progressive pharmacy technician scope of practice by virtue of deregulation.[28,29] The state of Washington, in contrast, mandates certification, education, and continuing education for all pharmacy technicians. Since 2009, all Washington pharmacy technicians are required to complete a board-approved training program (accredited on-the-job and traditional coursework programs are allowed) containing 520 hours of didactic and experiential coursework, 8 hours of education in Washington pharmacy law, and 4 hours of HIV/AIDS education and to pass the national PTCE or ExCPT.[30] Washington technicians must also complete a minimum of 10 hours of continuing education per year to maintain licensure. The state of Tennessee requires licensure by the board of pharmacy but does not require certification, although additional duties are permissible for technicians who become certified, including receiving new or transferred prescription orders and receiving and transferring copies of oral presentations between pharmacies; the state also permits an increase in the technician-to-pharmacist ratio from 2:1 to 4:1.[31] Thus, the project undertook these purposive samples to compare and determine if there were still common themes that arose from data derived from practitioners in such diverse states.

Even while the process employed a focus group, selection of participants was based upon tenets for selecting Delphi procedure participants.[32] Specifically, we sought participants for their likelihood to contribute and be engaged in this process[33] while also seeking representation by pharmacists with various practice settings and types of employer (eg, independent, chain, and health-system employers) as well as representation of pharmacists of differing demographic characteristics (eg, sex, age, race and/or ethnicity). Given these criteria, the researchers knew of personal contacts through previous research and also sought advice from personnel at their respective institutions' offices of experiential education for recommendations of persons to contact within an approximately 1.5-hour drive from the institutions. The researchers created their own lists of potential participants, with a preference for a heterogeneous mix, then contacted preferred candidates by phone or email. It was hoped to obtain up to 10 persons for each focus group. Each researcher contacted 12 to 15 persons to acquire affirmative responses from participants. The focus group sessions were conducted by the 3 investigators, all versed and experienced in conducting them.

Data analysis. Focus group sessions were audio-recorded and transcribed verbatim. Rapid-based qualitative analysis[34] was used to code the data. This approach assists in providing an in-depth understanding of the information gathered and its context.[35] Rapid analysis has been used in various qualitative studies and is particularly useful for analyzing content in the absence of an attempt to induct theory[36]; this approach was employed successfully in an evaluation of healthcare organizations and delivery models.[37]

In this case, the researchers developed a template (eAppendix) corresponding with the interview guide. The template was used to summarize the transcripts and list various quotes that supported the summaries. Two researchers completed summary templates for all of the interviews. The templates were then transferred into a matrix to allow for all participant comments to be viewed.[34] This method allowed for the synthesis of important findings and identification of major themes.

Results

There were 9 participant pharmacists from California, 8 from Idaho, 7 from Washington, and 9 from Tennessee.

The age range of participants was 27 to 68 years. There were 13 males and 20 females. There were approximately equal numbers of representatives of chain, independent, and hospital pharmacy, as well as 2 from clinics (one being a federally qualified health center) and 2 others working in specialty pharmacy (home health and mail order, respectively). Many participants were staff pharmacists, but there were several managers (store and district or regional managers), pharmacists-in-charge, and pharmacy owners. The 4 major themes yielded by the data were (1) impact of certification, (2) context of certification, (3) organizational culture considerations, and (4) future credentialing. The following section presents a brief description and some general comments and findings in regard to each theme, with supporting quotes found in the appendix.

Impact of certification. Opinions about the impact of certification on technician skills were mixed. A number of participants expressed that the greatest impact they saw was increased confidence of certified technicians to perform their roles resulting from greater knowledge about their jobs and greater appreciation of job context. Some thought this to be more prominent in certain settings—for example, where certification imparted skills to perform more complex tasks, as in the hospital environment. Perhaps the greater impact of technician certification pertains to issues related to attitude. Participants claimed to observe greater profession commitment, greater general knowledge about and socialization toward the profession, and greater professionalism, maturity, and self-identity among certified technicians. However, the opinion of a positive and momentous impact of certification was not shared by all. In the state of Washington, technicians have to complete rigorous board- and Accreditation Council on Pharmacy Education (ACPE)–approved educational requirements, which typically include up to 2 years of didactic and experiential training. Pharmacists largely saw certification as being less rigorous and impactful than what is already required by Washington State technician licensure requirements. In some cases, participants believed that while beneficial overall, certification might provide a bit too much confidence and could lead to technicians taking on responsibilities and engaging in conversations beyond their level of training.

Certification context. In a separate but related theme, focus group participants contextualized the issue of certification in a greater sense; that is, to what extent it is "needed" or helps in the standardization process. They largely saw certification as one piece of the puzzle (ie, certification alone is not enough for someone to be fully prepared for all the responsibilities of a technician, particularly the emerging roles) and expressed a desire for certification to include some sort of experiential component. They commented positively, however, on how certification dovetails nicely with vocational education and with in-house training programs.

To provide additional context, even when not prompted specifically, many participants favored certification quite a bit but wondered about how "we" (ie, the pharmacy profession) could keep raising the bar without raising the pay and perhaps other working conditions of technicians.

Organizational culture considerations. Participants remarked on issues pertaining to quality of work life for pharmacists and technicians throughout the focus group discussions, even when not prompted specifically to do so. They consistently referred to being part of a team. They discussed how delegation becomes more part of the norm in the organization when technicians are prepared, noting that while certification alone did not inspire this phenomenon, it establishes a baseline and also engenders a more professional culture in the pharmacy that they all share together. However, not everyone agreed that certification alone prepares technicians for organizational change.

Future credentialing. Panelists generally saw the need for the certification examination to include more content on so-called soft skills, such as communication and ethical decision making. Pharmacists also thought it best to leverage the process of self-study and self-selection (when not mandated) and have the examination further ripen the professionalism of technicians.

Discussion

The study re-examined pharmacists' opinions of the value of pharmacy technician certification approximately a decade after an initial exploration[21,22] and also following considerable changes in technicians' scope of practice and, for the first time, using an organizational behavior lens to ascribe value given the constant state of flux in healthcare and pharmacy delivery and the need to consider person-environment fit. In using this sort of framework, focus group participants recognized the need for technicians capable of ethical reasoning, adept at communication, and keen on developing themselves. The 4 major themes yielded by the data were impact of certification, context of certification, organizational culture considerations, and future credentialing.

Certification impact. With regard to impact, attitudes were generally positive as to the impact of certification on knowledge. In the absence of an experiential component, focus group participants recognized that increased knowledge does not always translate directly to skills development or acumen but suggested that the overall confidence gained from that knowledge is indeed helpful. Many believed they could discern distinct differences among technicians who had been certified and those who were not with regard to basic math skills, knowledge of pharmacy law, and at least some knowledge of common drug names and indications. Recent research employed a cluster analysis to identify different groups of technicians to prioritize for delegating responsibilities

based on their experience, attitudes, and self-efficacy.[38] These groups included "most ideal," "trainable and new," "can-be-motivated veteran," and "status quo." Many of the "most ideal" and "trainable and new" technicians in these groups were already certified. This finding corroborates additional research demonstrating high self-efficacy for emerging responsibilities for certified technicians.[39] Employers might consider weighting even more heavily prospective technicians' values and self-efficacy in hiring decisions if technician practice will continue to evolve, and technician educators and certification organizations might consider more types of exposure of technicians and technician students to education and training that will boost technicians' self-efficacy.

The impact of certification might vary to some extent by practice setting, and previous research has shown that technician attitudes and preparation for practice may differ across settings.[40] In the community setting, it might be more of a matter of pharmacists having greater confidence in delegating to technicians who are certified and/or otherwise more adequately educated and trained. Gatwood et al[41] found that successful implementation of advanced duties for technicians in the community setting occurs when pharmacists can more effectively delegate and design their practice to focus more time on billable services.

Certification context. Focus group participants contextualized the issue of certification in a greater sense: the extent to which it is necessary and helpful in standardization of the education process. They saw certification as one piece of the puzzle, largely indicating that certification alone was not enough for someone to be fully prepared for all the responsibilities of a technician, particularly the emerging roles. They commented positively, however, on how certification dovetails nicely with vocational training and with in-house training programs. The aforementioned consensus conference highlighted the need for better integration of certification with vocational training. This is challenging, however, given the vast differences in quality among the vocational programs themselves.[42] Anderson et al[42] noticed "how little the profession of pharmacy is actually involved in these programs." Additionally, relatively few vocational programs require a high school diploma or equivalent. A positive development is formation of the Pharmacy Technician Accreditation Commission (PTAC), a collaborative initiative by ASHP and ACPE to promote, assure, and advance the quality of pharmacy technician education and training programs in the United States.[43] This group is seeking to further leverage the "model curriculum" created for pharmacy technicians, and there exists the potential to leverage the work of the PTAC to further integrate vocational training with certification.[44]

Organizational culture considerations. Participants remarked consistently on issues of quality of work life for all pharmacy employees. They discussed the functioning of teams of employees, emphasizing that "we're all in this together" and that "teams of us function to ensure the safety of patients." They suggested that working harmoniously as a team created a work environment that resulted in reduced absenteeism, less job turnover, and, ultimately, better service to clients in both the community and in hospital settings. They indicated that they could see among certified technicians ownership in the patient care process. They noted, though, that technicians' sense of ownership has to be reinforced by employing organizations and by the pharmacists working with them. These observations are in tune with organizational culture theory advanced by Schein.[45] In a strong organizational culture, such positive workplace climates prevail, affording greater stability and innovation among constituent members. Rosenthal et al[46] demonstrated the importance of strong organizational culture in pharmacy leading to the more rapid and thorough adoption of direct patient care services. Scahill et al[47] found considerable differences in organizational culture among pharmacies, with some of them placing greater value on camaraderie and innovation. ACPE has recognized the importance of organizational culture in its 2016 standards for doctor of pharmacy student education.[48] As this research evinces the importance of organizational culture from pharmacists' perspectives, national pharmacy technician certification organizations might also need to incorporate more content on organizational behavior and package existing content into an organizational behavior framework so as to aid technicians in understanding the larger picture in their practice and see how their daily work contributes to organizational and profession-wide goals; this could in turn help technicians more effectively achieve their own self-identity.[49]

Future credentialing. Panelists discussed certification to some extent on its own but also as part of a larger discussion on future technician credentialing. They stressed the need to promote greater education in communication, leadership, and other soft skills. This corroborates research on employers conducted by NHA indicating that patient communication, critical thinking, and professionalism are among the top 5 skills in which pharmacy technicians require further development.[50] That same study reported that active listening and nonverbal communication were the 2 types of communication skills that should be developed in technicians. It is sometimes argued that skills such as communication, leadership, and ethics are innate and not learned. However, the results of many studies would suggest otherwise, as reflected in the Center for the Advancement of Pharmacy Education (CAPE) outcomes for PharmD student training.[51]

Perhaps, though, there is still much to be gained from turning toward international colleagues in the profession. Revalidation of requirements for practice in Great Britain is considered concomitantly with requirements for pharmacists by the General Pharmaceutical Council,

even while there is still debate over precisely what this means for technicians.[52] In the Netherlands, a Delphi panel of experts produced 6 domains of essential technician competencies: communication in patient care, interdisciplinary collaboration, pharmaceutical expertise, organization of care practice, collaborative leadership, and personal development.[53] In Denmark, "phamaconomists" (akin to technicians) undertake formal study that includes an in-residence requirement prior to being licensed to practice in that country.[54] One or more of these approaches might be adapted for use in the United States, likely with national certification being a major component. This will require even further cooperation with accrediting bodies, national certification organizations, and perhaps the National Association of Boards of Pharmacy (NABP) as well as major employers. The consensus conference produced some initial guidance, but much more work is needed.

Focus group participants also opined on issues that would make certification even more valuable, including separate testing for community and hospital certification, with the aforementioned soft skills assessed in both types of examinations, in addition to an increased number of affordable specialty modules in areas that are more directly translatable into job functions within increasingly diverse pharmacy practice arenas, such as administration of vaccinations, basic epidemiology and public health, accounting and inventory management, and patient assistance programs. These are not unlike the recommendations made by employers in a British study of technicians' "fitness for purpose," suggesting greater role clarity in technician responsibilities and specific, tailored education and/or training to match it.[55]

Study limitations. The results of the study should be taken in light of several limitations. The study employed use of a focus group with a purposive sample of individuals in 4 different states, and the results are not generalizable even to other pharmacists in those same states. There was no attempt at saturation, and it is quite possible that different groups of participants could have yielded additional or even alternative viewpoints. Still, a robust aspect of the study design was representation in the focus groups by panelists from various settings and with various levels of administrative authority. Though it was not our intent to compare and contrast, the research was able to take into account the perspectives brought forth from pharmacists operating under different regulatory climates to produce similar perspectives. The focus groups were conducted by 3 different researchers. Even while all were trained and experienced in qualitative research design and all used the same semistructured interview guide, there were likely some differences between the moderators' approaches and comportment that could have yielded somewhat different results. All of the inherent limitations of focus groups, such as the presence of groupthink, cannot be ruled out. Additionally, it was obvious that some focus group participants were not completely familiar with the certification process, as some were unaware of the requirement for continuing education, and others asked very basic questions during the focus group sessions. Again, this further mitigates the generalizability of the findings but also suggests that certification organizations and other leaders should do a better job at educating stakeholders on what certification is and is not. A strength of the study was that at least 2 of the investigators participated in coding each of the focus groups, and all agreed on the essential themes yielded by their conduct. Further research is needed to explicate the value of certification from a larger and even more diverse group of pharmacists, which should also be reconciled against the views and experiences of technicians themselves.

Conclusion

This study employed focus groups to uncover rich and meaningful perceptions of pharmacists in 4 states with differing regulatory climates about the value of certification for pharmacy technicians from an organizational behavior perspective. The participants' views were categorized into broad themes (impact of certification, context of certification, organizational culture considerations, and future credentialing). Pharmacists see the value of certification as largely due to the process of self-study and the resultant profession commitment this yields. Certification was seen as complimentary to other types of education and training, though more could be done to make them more synergistic, and certification organizations should entertain the incorporation of soft skills into the examination (or other certification products) and develop more specific modules given the evolving nature of pharmaceutical care delivery. Ascribing value to certification from an organizational behavior perspective should assist stakeholders interested in advancing an agenda for standardizing pharmacy technician education and training.

Disclosures

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Appendix—Quotes underscoring major themes uncovered in the focus groups

Theme

Impact of Certification

"It's a confidence thing. They have been through a process and feel good about what they are doing." (California, Participant 4)

"They feel confident. It's like they've taken that little step above the others." (Idaho, Participant 2)

"Having knowledge about your job makes you more prepared to do your job well." (Tennessee, Participant 3)

"At least in terms of math, those who [go] through school are far more comfortable than even those who have practiced for a while. Especially when it comes to . . . more involved calculations for the different dosing and the different diabetic products." (Idaho, Participant 4)

"One thing that I really appreciate with the certified technicians that I work with is their understanding of the law." (California, Participant 6)

". . . had been a technician for 20 years at a small hospital . . . she was just like a fountain of knowledge. . . she was certified, even though I don't think it was required of her at the time." (Idaho, Participant 6)

". . . the sterile compounding, i.v. room, [chemotherapy solutions], things like that, yeah. . . but I don't see where the exam helps so much in retail . . . ." (California, Participant 8)

"They understand the 'why' behind things that are being done. And that translates to how important they see their jobs . . . and that sort of thing, customers can see it—feel it." (California, Participant 1)

"If the technician has the desire and takes the initiative to become certified . . . that's likely going to lead to a more motivated employee, which leads to a more loyal employee, increased retention because it's not just a summer job . . . it's their career." (Tennessee, Participant 2)

"The ones that are certified, they are more so 'lifers.'" (Tennessee, Participant 3)

"I've noticed people who, through the test, may have a little bit of change in . . . attitude in that before they take their test it's almost like they're somebody from . . . another background working in pharmacy to . . . change to a pharmacy technician. So, they buy into it more . . . they're a little happier, a little more engaged in their job." (Idaho, Participant 5)

"[Washington] requires certification, but much more. Certification is good, but so is the 'much more' . . . . I think we need it all; the more education and training, the better." (Washington, Participant 5)

". . . our training requirements that we had outside of the national certification exams is so much higher than what I think other states have." (Washington, Participant 1)

"When they are certified . . . they have stronger personalities. That's good and all, but they have to be careful with that—doing and saying too much . . . ." (Idaho, Participant 6)

"They [certified technicians] sometimes need to watch themselves. They think they know everything . . . . They start making recommendations to patients . . . . I'm saying, 'Check with me first about that.'" (California, Participant 8)

Certification Context

"When not required, getting certification is a signal of something positive in that individual . . . they just have to be prepared for specific jobs that a test can only help them so much with." (Washington, Participant 7)

"I think the goals [of certification training and on-the-job training (OJT)] should be the same. Maybe the company could provide a little bit more job-specific [training] for that particular setting . . . versus the generalized training for the certification. So, first you learn why we're doing what we're doing, and then maybe a fine-tuning specifically for a specific setting." (Idaho, Participant 6)

"The time within a pharmacy? Oh my gosh, that's where the learning happens." (Washington, Participant 1)

"[Imparts] . . . baseline knowledge, and so [it is assumed that] if you come in with certification, you have that [knowledge], and then they build onto it with organization-specific training." (Tennessee, Participant 5)

"Certification improves the baseline . . . OJT provides growth on top of that baseline." (Idaho, Participant 1)

"I think the overlap [of certification and experience] is good because it does put all the pieces together for them. It equates to when I was in pharmacy school and working and

practicing as an intern. What I would learn in class and then what I would find [in practice], it just came together and made more sense. . . . They sometimes come in like, "Oh, I just learned this yesterday!" And they're pretty excited about it, and I think it empowers them to want to learn more and to do more as well." (Idaho, Participant 3)

"I think that any little bit of information that they know before they go into it . . . any kind of a training class is going to help because [that]—and the fact that they've done it—shows that they have an interest in it." (California, Participant 5)

". . . all the technicians that I've been working with, I do ask them, 'Are you PTCB licensed or are you planning to become licensed by PTCB? Some of them, they're . . . only getting a dollar raise, which is not a good incentive for them. Especially living here in California. So expensive . . . [and] their starting rate is [about] $12. And [I also ask], 'I was just wondering, how are they going to survive here?' . . . They should give more incentive for technicians, because they do a lot of work for us. (California, Participant 8)

Organizational Culture Considerations

". . . [competent technicians are] kind of the ones that run the pharmacy in terms of making sure things are going the way they're supposed to, and just to have them educated and happy about work I think is very important." (Washington, Participant 1)

"They [certified technicians] have personal ownership in [the] pharmacy." (Idaho, Participant 7)

"I think it [certification] gave her more confidence to be the leader in the team, too . . . [and] that kind of leadership with the technicians in the pharmacy helps us all." (Tennessee, Participant 1)

"Certification raises the quality standard within the organization." (Tennessee, Participant 6)

"I personally feel like the profession of pharmacy has not advocated enough for higher certified pharmacy technician salaries. . . . Because they're certainly helping you out a lot more with certification when they can take that [prescription] over the phone or come in with a higher knowledge about [brand vs generic drug names] and that type of thing." (Tennessee, Participant 4)

"The thinking is, 'They're [certified technicians] doing more. How can I get certified so I can do those activities'?" (Tennessee, Participant 7)

"Certification helps make them more flexible, and they are more likely to fit better." (California, Participant 9)

"The problem is, the test is one time, so if they take it now, they don't have to retake the exam [approximately] five years from now. So, how can you ensure that they're going to be willing to change or be adaptable?" (California, Participant 1)

"We don't want people to be specialized in—to be 'prima donnas' and say, 'Oh, I'm certified, so I'm not going to work on filling the carts.' So, there's that downside to it." (California, Participant 2)

Future Credentialing

"I definitely think [certification] gives our technicians a lot of confidence, but I feel like additional training in communication will give them a little bit more." (Idaho, Participant 8)

"In the specialty world, it's a lot more note taking and communication between patients, between physicians, between pharmacists—all back and forth—because we depend on our technicians to sometimes call offices and do things and set up deliveries." (Tennessee, Participant 6)

"Patient care and how the patients are doing, and knowing their patients' names, and getting to know them on a personal level . . . that's where communication is so important, so they can develop that skill [and] maybe use it elsewhere outside of [the] pharmacy." (California, Participant 7)

"The certification exam should be setting you up for how to adapt to [the future of] pharmacy . . . rather than setting it up for how it is today." (Idaho, Participant 4)

"I had thought of leadership as well . . . maybe that would come afterwards as a resource from your employer. For instance, maybe [chain pharmacy] should invest more in leadership opportunities for technicians, but it certainly could be a part of certification too, somehow." (Tennessee, Participant 3)