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Recovering substance-impaired pharmacists' views regarding occupational risks for addiction

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Abstract

Substance misuse, abuse, and dependence are serious problems among a minority of pharmacists. Though various environmental risk factors have been implicated, few data are available describing the underlying mechanisms or the extent to which the environmental risk factors actually contribute to the problem. In the present study, 32 pharmacists (72.7% male), under contract with a State impaired healthcare provider monitoring program, were recruited to participate in one of 6 guided group discussions regarding substance use among healthcare providers. These groups included 4–6 pharmacists, on average, and lasted approximately 60–90 minutes each. Participants anonymously contributed to the group discussions, providing in-depth commentary and describing their substance-related experiences. The discussions were digitally audio-recorded and transcribed for analysis using the Grounded Theory method. Results indicated that several occupational hazards unique to the pharmacy profession might contribute to the problem of substance use disorders among some members of this population, including: increased access to potent drugs of abuse, a stressful/unpleasant working environment, a culture that unofficially condones medication diversion, lack of education related to addiction, and lack of support for individuals seeking treatment. These results have important implications for the education of pharmacy students, the continuing education of licensed pharmacists, and the management of pharmacies in which these individuals work.

Pharmacists' views regarding occupational risks for substance use disorders

Prescription drug misuse, abuse, and dependence are growing problems in American society.¹ Indeed, over the past decade, misuse of prescription opioids, stimulants, and anxiolytics has reached an all time high.² Though iatrogenic addiction to medically-indicated pharmaceuticals has been identified as one contributor to this problem, it does not fully explain the epidemic.³ The increase in recreational use of prescription drugs appears to

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be an additional contributor,⁴ with easy access and diversion remaining significant concerns.⁵ Though healthcare providers tend to display healthier habits than the general population, they are not immune to the disease of addiction. Rather, healthcare professionals have been identified as a population at special risk for the development of substance use disorders.⁶ Physicians⁷ and pharmacists,⁸ in particular, are believed to be particularly vulnerable to prescription drug abuse and dependence, due to increased access and other job-related factors. Availability of drugs has consistently been associated with increased substance use among physicians, nurses, and other healthcare providers.⁹⁻¹¹ However, despite their obvious access to prescription drugs, the risk to pharmacists has not been widely studied.

Substance use among pharmacists and other healthcare providers represents a significant threat to public safety. Indeed, a pharmacist's error in compounding or dispensing medication can cause fatalities. As a result, most States now sponsor a monitoring program to oversee the recovery process and verify abstinence among licensed healthcare providers who are referred for substance-related impairment. Participants in these monitoring programs may be self-referred or involuntarily-referred, and typically undergo an evaluation by an addiction medicine specialist. In many cases, the providers may retain their license to practice if they comply with contract requirements, though most are mandated to withdraw from practice until they have achieved stable recovery. Most are also mandated to long-term treatment, participation in 12-step meetings, weekly monitoring group meetings, and random urine drug screening. In general, contracts with the State monitoring programs last 5 years, though they are typically extended in the case of noncompliance and/or documented relapse.

Unfortunately, previous studies have been inconsistent in their description of non-medical use of prescription drugs. Though there is no formally accepted definition, "misuse" of prescription drugs generally refers to any deviation from prescribed use (e.g., using a medication without a prescription, using more or for longer periods than prescribed, hoarding pills for future use, obtaining a prescription fraudulently, changing the route of administration to circumvent safety features, or acquiring multiple prescriptions for the same or similar medications). Substance abuse and dependence are recognized psychiatric diagnoses.¹² "Abuse" refers to a maladaptive pattern of use resulting in significant social/interpersonal/legal problems or hazardous use; whereas, "dependence" (i.e., addiction) refers to uncontrolled use resulting in significant physical/psychological problems and impairment.

Since 1982, the American Pharmaceutical Association has upheld a policy addressing substance-related impairment of pharmacists.¹³ In 1999, the American Association of Colleges of Pharmacy released guidelines for the development of such policies in pharmacy schools,¹⁴ and in 2009, the president of the American Association of Colleges of Pharmacy announced the appointment of a Substance Abuse and Pharmacy Education Special Committee.¹⁵ Despite these efforts, substance-impairment remains a significant problem among a minority of pharmacists. Although the majority of pharmacists do not abuse prescription drugs, research has demonstrated fairly substantial rates of at least occasional misuse of opiates and anxiolytics among pharmacists,¹⁶ and past studies have estimated that 18-21% of pharmacists have misused prescription drugs.^{17, 18} Self-reported rates of past-month opiate and anxiolytic use are significantly higher among pharmacists than members of the general public, and lifetime opiate misuse is higher among pharmacists than other healthcare providers.¹⁶ Indeed, Dabney demonstrated that more than 60% of pharmacists have used a prescription medication without obtaining an appropriate prescription.¹⁹ Pharmacy students also report relatively high rates of misusing prescription opiates (7.9%), sedatives (5.0%), and stimulants (6.7%), with the overwhelming majority of lifetime misusers endorsing past-month misuse.⁸ Many even acknowledge abusing medications for which they previously had a valid prescription.⁸ In addition, estimates of recreational

substance use among pharmacy students have ranged from <1% to 28%, depending on the sample and the drugs of study.^{17, 20-22} Of note, as early as 1988, the National Association of Retail Druggists estimated that 1 of every 7 pharmacists would suffer from substance dependence at some point in their lives.²³

Because pharmacists share many of the work-related risk factors for substance abuse that are observed among other healthcare providers, more research is needed to understand the specific ways in which the pharmacy profession might uniquely contribute to substance use, abuse, and dependence. For example, a high-stress work environment has been associated with substance abuse among physicians,²⁴ and McAuliffe and colleagues demonstrated almost three decades ago that the high-stress environment of the pharmacy could contribute to substance use disorders.²⁵ Indeed, pharmacists and pharmacy students working in retail pharmacies (which are typically viewed as more stressful positions) report greater substance use than those working in other pharmacy settings, such as hospital pharmacies.²⁶

In order to better understand the occupational risks for substance use disorders among pharmacists and possibilities for improved prevention, the present study utilized guided in-depth discussions with substance-impaired pharmacists who were participating in their State monitoring program. This unique method of collecting epidemiological data was selected due to the relative lack of knowledge on this topic across the field. Obtaining primary source information (i.e., from individual pharmacists who have suffered from substance-related problems) provided a wealth of data that can be used to better understand the experiences of this special population, in order to develop future large-scale studies.

Method

Procedure

All procedures were approved as human subject research by the Institutional Review Board at Washington University. The requirement for written informed consent was waived in order to protect anonymity of the participants. The study was also approved by the University of Florida Institutional Review Board, as well as the health professionals monitoring program in a southeastern State. The monitoring program participants attend weekly groups with other recovering professionals in their geographic region. These meetings are utilized to “check in” with the program participants and identify any potential barriers to recovery as soon as possible. In order to facilitate participant recruitment for the present study, the decision was made to recruit participants from the impaired professionals monitoring groups in the geographic regions within the State that had the greatest number of physicians, pharmacists, and allied health professionals currently under monitoring contracts for substance use disorders. Program staff queried their clinical database to identify the monitoring group facilitators with highest enrollment of these professionals in their groups. Identified facilitators were contacted by the research staff to coordinate anonymous recruitment of their group members.

The group facilitators reviewed their group rosters to identify the professionals eligible for participation (i.e., individuals from the professions of interest who were being monitored for a substance use disorder), then informed these individuals about the study. An effort was made to primarily invite individuals who misused prescription drugs (with or without concurrent or past abuse of alcohol or illicit drugs) to participate. However, professionals with other substance use disorders were also invited to participate in some cases. Individuals who agreed to participate in the study were told by their monitoring group facilitators about when/where to attend the guided group discussions, in lieu of their regularly-scheduled monitoring group meeting. Guided discussion groups for this study were scheduled to

involve 6-10 participants at a time. The healthcare providers were not compensated for their participation in the discussion groups.

Individuals who elected to participate in the study met the discussion group leaders at the designated place and time. Discussion group leaders were 2 experienced researchers (SMC & LJM), and were unknown to the study participants. The leader(s) welcomed each participant and assigned them a code number to be used throughout the discussion session. During the initial 5-10 minutes, the participants filled out a demographic questionnaire. A discussion group leader reviewed the purpose and procedures of the study with the participants and answered questions. Written informed consent was not collected, in order to protect anonymity. Instead, participants were provided with a research information sheet detailing the aims of the study, funding sources, and risks/benefits of participation. The discussion group leaders began the group discussion, utilizing a pre-determined list of topics. Discussion group participants shaped the content of the conversation through their own contributions. In general, the guided group discussions were similar to focus group sessions;²⁷ however, the topics were explored more in-depth than may be typical in a focus group setting, with an effort to elicit contributions from all participants in order to obtain a full understanding of their unique experiences.

All communications during the discussion group meetings were recorded with a digital voice recorder. Audio files were transcribed by a professional transcriptionist for analysis. The Grounded Theory method²⁸ was used to analyze the data. This involved reading each transcript multiple times, focusing in greater detail during each read-through, in order to identify common themes communicated by the research participants across discussion groups. The researchers who led the discussion groups independently reviewed the transcripts in order to develop a list of codes for each theme. Discrepancies in coding were discussed and mutually resolved. The code lists were edited, as needed, to ensure consistency in vocabulary, and then were consolidated. When the final master coding list was agreed upon, the researchers entered the text files into Atlas.ti, a qualitative analysis software program, to be coded and analyzed. Using Atlas.ti, the researchers assigned relevant codes to each section of text from the various transcripts. Based on the content of the quotations, each section could receive multiple codes. The researchers then ran a query of all pharmacist transcripts in order to identify quotations relevant to the topics of interest for this paper (e.g., searches for “stressful work environment” or “easy access to drugs”). Quotations that were most representative of the group consensus and those that highlighted particular areas of interest were identified for inclusion.

Measures

Demographics—A demographic survey was developed for this study. Items assessed participant age, gender, race/ethnicity, education, health profession specialty, work history, relationship history and family information, and substance use history.

Guided group discussion topics—Each discussion group was guided by a pre-determined set of topics in 5 major categories, including: 1) initiation of substance use, 2) frequency, pattern, and route of substance use, 3) perceived positive and negative consequences of substance use, 4) acquisition and diversion of prescription drugs, and 5) experiences with treatment and the impaired professionals monitoring program.

Participants

For the overarching study, a total of 18 guided discussion groups were conducted. Of these, 9 groups consisted of physicians (n = 56), 6 groups were comprised of pharmacists (n = 32), and 3 groups (n = 22) included various allied health professionals (e.g., radiology

technicians, respiratory therapists, massage therapists, occupational therapists). For the present study, only results from the pharmacist discussion groups were included. The monitoring group facilitators were asked to invite a total of 37 pharmacists (i.e., all the pharmacists in their groups being monitored for substance use disorders) to participate. In total, 32 (86.5%) participated in the discussion groups. This sample represented 22.2% of the pharmacists who were under contract with the State monitoring program at the time of the study (N = 144). Demographic data are listed in Table 1. For the purposes of this paper, quotations presented in the Results section are identified by the participants' group number and participant number. For example, quotes provided by participant # 4 in group #2 are followed by the notation, "[2:4]." Quotes have been edited slightly for readability (e.g., nonverbal utterances such as "um" and "uh," as well as repetitions and superfluous phrases such as "you know" have been removed).

Results

Participants were asked to report the first prescription drug they had ever "used in a way that was not prescribed for [them] or that [they] used in a way other than prescribed." Results are listed in Table 2. Four pharmacists (12.5%) denied misuse of prescription medications, and had been referred to the monitoring program due to alcohol or illicit drug use disorders. Among the prescription drug misusers (n = 28), 27 reported how they had been introduced to misuse of the drug. Results are included in Table 2.

Common reasons for substance use

During the guided group discussions, the pharmacists described a number of reasons for using prescription and/or illicit drugs and alcohol. As with most individuals suffering from substance use disorders, many reported using for recreational purposes (e.g., "*A high was always welcome with me.*" [4:2]). They described various positive experiences with recreational substance use, including experiencing pleasurable results from experimentation (e.g., "Initially, I think the first time I tried it, I was like nineteen and it was just out of curiosity... I did like the feeling that it gave me" [3:1]). Others reported that recreational substance use became an increasingly important part of their lives:

"I guess I didn't mind being high since I started smoking pot when I was thirteen and consuming alcohol probably about the same age. The addictive personality it just, became worse over the years I guess." [4:2]

Some described using prescription drugs recreationally because they were easier to manage than other substances of abuse:

"The reason I used opiates is because I loved getting high and drunk, but it's very hard to conceal a liquor bottle or smoke weed anywhere you want; whereas, pills were very compact and easy. So, it meant all of the things I was looking for and it was convenient." [6:1]

In each of these cases, the common factor was a desire to achieve a high from the prescription drugs, similar to that observed among illicit drug users in the general public.

In contrast to those who described purely recreational use, several pharmacists reported developing an addiction to prescription medications following legitimate medical use of the drugs. In some cases, these individuals suffered from a chronic condition that required long-term pharmacotherapy. In other cases, they recalled experiencing pleasurable sensations after taking a medication they were prescribed, and seeking to recreate that sensation by taking the medication again at a later point in their lives. In both cases, many of the pharmacists denied understanding that they might be vulnerable to the development of addiction (e.g., "My addiction began with valid prescriptions. I was involved in a rather

serious car accident and I was taking hydrocodone for a long time. And didn't realize what addiction was all about" [1:6]). This was especially true among pharmacists who did not have a significant history of recreational drug use (e.g., "So, never having used any drugs, with any consistency anyway, I believed that it was impossible for me to ever get addicted to something, and before I realized it, I'd lost control and I was very addicted to 'em" [2:1]). Indeed, many of the participants acknowledged intentionally misusing their prescription medications without realizing the risks:

"Basically I had started abusing prescription opiates that I was prescribed, and since I was a technician-slash-intern in a pharmacy, I decided to just steal 'em to, you know, get my supply, instead of buying them or doctor-shopping." [6:1]

Some described obtaining prescriptions (or extra prescriptions) specifically for the purpose of abusing the medications:

"I had a prescription for Xanax and Ambien and I would, I would—man, you know, it wasn't right—but I would manipulate the doctor into giving me prescriptions for Percocet. You know, I have a bad back and I would go to the doctor and be like, 'Look, I'm in pain,' you know, and I would get prescriptions for Percocet or, you know, couple times I had Demerol. Stuff like that. And then I would abuse it. You know, I wouldn't use it like the doctor prescribed." [1:1]

However, in some cases, the pharmacists reported that their dependence intensified until they could no longer satisfy their cravings with doctor-prescribed medications (e.g., "I started using opiates that I got through a prescription and then it just escalated, escalated till I started writing my own and stealing from the pharmacy" [6:2]).

Though the majority of pharmacists described developing addiction to medications that had been prescribed for physical ailments, some reported misuse of psychotropic medications meant to treat mental illness. In addition, many pharmacists reported using substances to self-medicate for stress or other mental health symptoms:

"Whenever a situation came up and I had to deal with anxiety or a problem like that, I always turned to drugs or chemicals or alcohol, from a pretty young age. When I got into retail [pharmacy], because I hated my job so much and everything, and the stuff was accessible, every day you know, 'Today's a bad day, so I gotta use. I gotta get out of this place. Gotta, gotta get out of this head.'" [1:2]

Those who likely had a diagnosable psychiatric condition seemed particularly at risk (e.g., "Mine was health issues—depression and a lack of, not being, inability to sleep. And also that my mom was dying, and depression and everything like that. And I couldn't sleep properly and I was working too much. So, it was, a lot of it was health issues, you know. And it was a way to cope" [3:4]). However, many reported turning to substances to manage traumatic life events as well (e.g., "I started drinking chronically and daily after a divorce. Or while waiting for my divorce" [4:3]). Still others indicated using substances to manage day-to-day stressors:

"I was an intern at the time, in pharmacy school and was working full time as well as going to school. Didn't deal with the stress well. I had tried Percocet in the past and it relieved my anxiety, so I started helping myself to large quantities of Vicodin and then Vicodin and Soma." [6:4]

This was particularly true when it came to dealing with the challenges of a stressful career and its associated problems:

"I remember thinking that when I got off work, that it was time for a mind change, and I was privileged in that I had a job where I could do that and no one would

know... And I used to think what a waste of time it would be to lay in bed not being able to go to sleep, when I don't have to lay there like that. I can take something and go to sleep and wake up refreshed." [2:4]

Finally, some pharmacists reported using recreational drugs in place of psychiatric medications that they had been prescribed:

"And being dual-diagnosed... you don't wanna take your medicine sometimes, 'cause you don't wanna think that you're crazy, you know? So you don't take it, thinking, 'Okay, I'm like everybody else.' So the next thing you know, you're out trying to take something on the street that's gonna take the place of the drug you should've taken." [6:6]

Overall, as expected, the pharmacists described several common reasons for substance use that are repeated by members of the general public. However, in addition to the aforementioned reasons, participants in these discussion groups also reported a number of factors affecting their substance use that were unique to individuals practicing pharmacy.

Risks associated with the pharmacy profession: Access to prescription drugs

The primary contributor to prescription drug abuse reported by the participants was their work-related access to the drugs (e.g., "*It's an unlimited source with no checks*" [1:6]). It appeared that easy access to the drugs encouraged several of the participants to take them. As one participant remarked:

"If I was a pencil salesman, and you were talking about pencils, and you said, 'Why do y'all guys take pencils?'... 'Because it's available,' you know? It's the same thing, basically, it was available. I mean, we're in a position where there's a lot of things that are accessible. Like, if you're a bartender, you might get a sip of liquor for free. It's accessibility" [5:4].

Participants also indicated that such access provided the opportunity for an addiction to develop (e.g., "Having access to [the drugs], it definitely was a [factor]... 'cause I don't see how I could have sustained any kind of habit like I had... doing anything else" [2:3]). Indeed, some even stated that having the access directly led to their initial experimentation with prescription drugs:

"For me, it all occurred in one window. No history of drug use before or after. No pain, no medical problems. Absolutely no reason to do it. I just wanted to. I just stumbled across it by accident, you know? And, it was a lot of fun. And you know, I'm not a neurosurgeon, but when I'm in the pharmacy, I'm in charge. I have access to whatever I want. I could manipulate, hide, whatever I needed to do. And I knew that. It was just a lot of fun for a while." [2:1]

Access to prescription medications was identified by participants as particularly problematic once they experimented with or experienced the effects of the drugs:

"I think it's obviously an occupational hazard, especially after discovering opiates before I started pharmacy school. 'Cause I was the guy that always said, 'No' all through high school and college. I didn't do any of that stuff. I drank and I, sometimes, would get drunk and make a fool out of myself, but that's what people did. So, I don't know if I would have, if I hadn't been a pharmacist, I might not have abused all the opiates that I had, 'cause I had access to those" [6:5]

However, other participants indicated that their increased access to prescription drugs primarily served to exacerbate or hasten the development of a previously-existing substance use disorder. Rather than using the drugs simply because they were there, they reported using those drugs to expand their repertoire of substance use and supplement their use of

illicit drugs or alcohol (e.g., “If anything, working in... retail pharmacy expanded my drug use. I mean, you had a whole menu to choose from. Like, ‘Whoa! Let’s try this one!’” [1:3]). Many reported combining prescription drug use with use of alcohol and illicit drugs (e.g., “The access was definitely part of, a big part in my entire addiction process. It wasn’t the only thing, because I was using street drugs also. But, the access to prescription medications definitely played a big part in it” [3:5]). Others indicated that their substance use might have remained manageable (at least for a longer period of time) were it not for their access to the prescription drugs:

“I had a drinking problem prior to becoming a pharmacist, but I hadn’t crossed the line at that point... And then I started having some health issues and, you know, started with the hydrocodone and, once I did, the easy access definitely became a problem for me as well.” [3:3]

Even those who acknowledged pre-existing substance-related problems indicated that the easy access to potent drugs of abuse served to magnify their disorder (e.g., “Well, I had a propensity to abuse to begin with, but I think being a professional perpetrated it for sure, and made it much more serious than it probably would have been” [2:5]). In fact, some indicated that being a pharmacist removed the primary barriers preventing drug abuse (i.e., lack of access to drugs), allowing the disease to develop rapidly:

“I don’t think that the job necessarily made me an addict, but it definitely progressed the disease a lot quicker than if I would have been out in the general public where I had to go find the doctors, you know, doctor-shop, go pharmacy to pharmacy, buy them on the street. They were just there, so I could just start off small, taking, picking up the ones on the floor. Filling the machine up, putting a couple in my hands, and then it just... ‘Cause they’re... you’re in it every single day. And if you find something that you like, if you’ve been searching for years and years and never found anything that you cared about, like, in terms of drugs or getting high, and then, when you do, it was like, ‘Boom!’ I was off to the races.” [6:2]

Some participants even talked about taking specific jobs or working extra shifts, just to maintain their access to the prescription drugs of abuse (e.g., “I did nuclear pharmacy for 14 years, but I kept my hand in retail. I worked every Saturday for 4 hours... mainly to do what I wanted to do with the drugs” [2:4]). Indeed, several of the pharmacists described feeling anxious to get to work, just so they could renew their access to the medications (e.g., “I remember jonesing going into work, you know, at night, and basically jonesing to get to work so I could grab something off the shelf” [1:1]). They described a number of behaviors that, in hindsight, appeared to be somewhat foolish to them:

“And running into the store in the morning, before the store opened up, because I had a day off and I had to get something... You know it was just total insanity [laugh], going in after the store closed and my partner was gone, and opening up the pharmacy at night.” [1:2]

In general, the majority of pharmacists who participated in the guided discussions felt that relatively unrestricted access to the prescription drugs contributed in some way to their addiction.

However, it is important to acknowledge that access to the drugs was not the only contributor. Indeed, other participants denied that their access to the drugs had a strong impact on development of their addiction, indicating that they felt their disease would have manifested in other ways (e.g., “I really thought that had really propelled me, my drug use, you know--the fact that I was a pharmacist. But what I learned in rehab is that, if I hadn’t

had the drugs available to me as readily as they were, that I would've started using something else, in place of it" [2:4]).

Risks associated with the pharmacy profession: Stressful work environment

The stress related to the pharmacy work environment was identified by many pharmacists as a factor in their substance use. This was particularly true of jobs in retail pharmacy (e.g., "The stress levels are extremely high in retail world... 'Cause I now work in a hospital realm and it's much less stressful, by about... a lot!" [5:5]). Several retail pharmacists reported dreading their work (e.g., "You go in feeling, 'How am I gonna deal with these people today? How am I gonna deal with twelve hours locked up in this place?'" [1:2], and described feeling overworked and overwhelmed (e.g., "Retail pharmacy is looked at like the war zone... it literally takes about fifteen minutes in a retail pharmacy for one person to start not doing their job right, and that's it. You're backed up for the next two, three hours" [1:participant number not identified]). The participants described becoming burnt out quickly, and noted that most pharmacists do not stay in the same position long-term (e.g., "A retail pharmacist's job life at one location is less than, maybe, four years. If you get that far. Most people change jobs every two to three years" [1:6]).

Perhaps not surprisingly then, the pharmacists reported using substances to cope with their stressful jobs (e.g., "I used a stressful profession as an excuse to drink. You know, 'You would drink the way I drank if you had my position' kind of deal" [5:6]). During discussions regarding jobs in retail pharmacy, the pharmacists were consistently critical of the environment, though many reported that their job was made much more manageable with substance use (e.g., "Retail's a hell of a stressful job, but with [the opiates], you could just keep rollin' through it, even on the worst of days" [1:4]). They indicated that using these drugs initially enhanced both their mood and performance at work:

"I would say, at first, [taking opiates had] a positive effect. I wasn't taking that many—one here, one there—but it was a positive effect. I was happier and more energetic and not as stressed. And you... I don't know about you guys, but the pharmacy I was working when this started, I would get yelled at a lot, you know, for everything. And I was finding myself not really getting angry at all" [2:1].

But most reported continuing to struggle with the stressful and unpleasant nature of their position as a retail pharmacist:

"I think I just had a breakthrough... I think retail is the reason why I began abusing drugs [laughter]. No, I hated my job so much that the drugs are the only reason I'd go in most days" [1:2].

In addition, the participants indicated that using drugs helped them to deal with the boredom and monotony of their job, even allowing them to work more efficiently (e.g., "I discovered hydrocodone in a retail pharmacy up in New York. And I found it was a wonderful drug to help you take care of some of the boredom in retail" [2:5]), at least at first:

"I have no history of drug use. Tried a few things throughout the years. And I got really sick in the pharmacy one time—should have went home—but, probably a little bit too strong of a work ethic. I won't call in sick or leave... And, you know, I took hydrocodone to alleviate the symptoms of being ill. You know, fever, headache, and so forth. And, you know, a few days later, I realized there was a few additional perks to that, which I had never experienced—that was my first one. And, a little euphoria, diminished stress. This was a real high-volume store. It just made work a little bit more fun, you know? Pumping scripts out all day and no lunch breaks and that whole scenario." [2:1].

Some participants actually reported significant performance enhancement that resulted from substance use (e.g., “The opiates...enhanced my job performance. I mean, I was like a horse. I could do enough work for three pharmacists. D’you know what I mean? No one complained” [1:5]). However, this was typically temporary. The pharmacists acknowledged that as their addiction progressed, their work tended to suffer.

Risks associated with the pharmacy profession: Culture

According to the participants, another primary contributor to prescription drug abuse among pharmacists is the “culture” of the pharmacy. In several cases, the participants reported feeling that taking medications from the pharmacy was an expected perk of their position:

“In pharmacy, it almost seems like the whole subculture is that everyone feels, like it’s almost like it’s okay to take something. I mean, they might not take narcotics or whatever, but, you know, if they got a sore throat or a cough or congestion or birth control or they have a headache or... You know, it’s like it’s okay, like no one looks down. No one thinks about it twice.” [1:5]

Surprisingly, this issue was brought up repeatedly by the participants across all discussion groups, and seemed to relate to pharmacists across multiple work environments and at all stages of their careers:

“You know, throughout my training---I got into retail pharmacy in ’92—to my knowledge, none of these pharmacists had any type of addiction problems. But I do not know a pharmacist that did not take something at one point in time—antibiotics for their children, for themselves, cough syrup, so on and so on and so on. You know, they got a headache at work, you know, ibuprofen, hydrocodone, whatever. I saw this my entire career.” [2:1]

The pharmacists did acknowledge that taking controlled substances from the pharmacy was not generally supported (e.g., “Nobody’s encouraging you to take... They might say, if you have a headache, take an ibuprofen, but they’re not gonna, nobody I work with is gonna say, ‘Okay you need something stronger.’ No they wouldn’t do that.” [4:1]).

However, some indicated that, even early on, no one was providing adequate oversight (e.g., “When I was a technician, I ran the pharmacy too. I had that same 80 year-old guy in there. And when he wasn’t sleeping...” [1:6]), or that the pharmacy itself did not adhere to the standards of the profession (e.g., “I noticed some of the practices in this independent [pharmacy] were a little bit shady, so it gave me the excuse to be able to help myself to any of the opiates I’d like to try in the pharmacy” [6:5].) Others indicated that taking medications was actually supported or encouraged by their supervisors:

“As a young pharmacist, I always worked with or under pharmacists who were like, ‘Oh, if your back’s hurting, get a Motrin.’ Which, it was like really no big deal. You know, ‘Get what you want.’ So, when I had gotten to the point where I was diverting narcotics, it was just... I mean, I just took what I wanted, you know?” [3:3]

Indeed, some participants indicated that the practice was actually endorsed by their employers:

“The bottle’s right there. And a lot of times, your boss will encourage you. They don’t want you to take off sick... and you call the office and you say... ‘Look, I’m ill today. I need you to send me a relief person. I wanna go home’... ‘Well, is there anything in there you could take that’ll make you feel better, so you can go ahead and finish out the day’s work?’ ...That’s the standard reply... Their object is to keep you there working, ’cause that’s how they get money. And if it costs them a

couple of Vicodins to keep you there working, that's the cost of doing business.”
[1:6]

Further contributing to this problem, several participants described an unwritten “code” in which pharmacists cover for one another in hiding inappropriate behaviors. These individuals reportedly believed that many pharmacists turn a blind eye to medication diversion, and that pharmacists may expect their peers to ignore such wrong-doing:

“Let's face it, we're the ones who got caught. There's a whole lot of people out there that never get caught. A lot more than you'd care to know about... When I was working in another State, I knew of people who should've gotten caught. But, you know, we don't tell on people. That's one of the... That's part of the code.”
[1:6]

Though this view may be unique to the population of pharmacists who have a substance use disorder history, several participants described this loyalty to their colleagues (e.g., “*I think we look out for our own...*” [1:2]), but did acknowledge that this “code” is not ubiquitous in the field of pharmacy (e.g., “Some of the pharmacists, they're pretty strict... A lot of them will go by the numbers and they dot their 'I's and cross their 'T's. A lot of 'em are like that... they wear the pocket protectors and they follow the rules... They're not used to seeing someone like me that's gonna steal all their drugs and walk out and blame it on them” [1:2]). The participants also indicated that the historically lax standards of the pharmacy work environment have recently begun to change (e.g., “The only way most of these companies will drug test you is if there's a suspicion. So, I mean, watch yourself and they don't bother you. But, that is changing rapidly. So, I think it's gonna be harder and harder for pharmacists to take drugs.” [2:1]) They acknowledged recent progress in the field related to combatting medication diversion, and reportedly felt this change would benefit both pharmacists and their employers.

Risks associated with the pharmacy profession: Barriers to Treatment Access

Despite the recent increase in surveillance/drug testing, the participants did not report changes in the pharmacy culture regarding the acceptability of self-reporting a substance use disorder. Rather, they indicated that, “*Asking for help is the wrong thing to do*” [1:6]. Pharmacists suffering from substance use disorders generally expect punishment/prosecution when their behavior is discovered. As a result, most felt unable to admit their problem or seek treatment. As one participant remarked:

“Every employee has this Employee Assistance Program or line or whatever, and I never met anybody who used that, that had a good outcome. As pharmacists, it's difficult to use that because it's not like I'm in a bar drinking and I'm coming into work a little hung over and I have a problem and my wife kicked me out of the house. It's the fact that I've been stealing a lot of their drugs. You know, so it's hard to go there and say, ‘Well, you know, I stole about a hundred thousand dollars worth of your drugs. Can I get help now?’” [1:2]

Several pharmacists remarked that addiction prevention efforts were underemphasized and that most pharmacists were not aware of opportunities to access treatment confidentially. Some described feeling relieved when they were finally intervened upon:

“I was almost positive that they had put cameras in the pharmacy to catch me, even though they couldn't be seen. And I just didn't give a care. I would, you know, I was looking up at the ceiling when they made me review the tape. I was looking directly at it, as I was taking the bottles, because I knew [pause] there's no way out of this unless I end up getting caught or... So, I might as well just go full steam ahead. And so right then, I was like, ‘Yep, I think I'm an addict.’” [6:1]

In fact, several of the participants reported feeling grateful because they felt it was an opportunity to obtain the help they were afraid to seek for themselves:

“I had a moment of clarity and I felt like totally amazing... I felt like someone else is gonna help me with the problem that I’m not able to do on my own. It was like a huge ‘aha!’ moment and like, finally, this... maybe this cycle... maybe these people won’t let me keep doing this... Maybe I could get better. You know, because I was in so much pain and I didn’t know how to get out of it. Here [the impaired professional program] was gonna take control at the moment. You know, and it was kind of a relief.” [1:2]

The opportunity to achieve recovery from their substance use disorder was viewed as extremely important to the pharmacists (e.g., “The profession of pharmacy is a lovely profession... It’s very important that we have sobriety and clean time when it comes to our professionalism, because it comes to the distribution, the handling of prescription medications, where lives are lost. We have to be able to have all our cognitive skills” [5:4]).

Risks associated with the pharmacy profession: Education

Participants discussed their pharmacy education-related knowledge of pharmaceuticals as an additional factor that contributed to their prescription drug misuse/abuse (e.g., “I guess if I wasn’t a pharmacist, then, if someone would have told me, ‘Hey, you take two of these, you’ll feel high,’ I would have taken ‘em as well. But, you know, having knowledge and having access made it a lot easier” [4:2]). In some cases, they described how knowing about the effects of drugs helped them to choose substances for experimentation from among the many medications available to them (e.g., “We’re pharmacists, we know the things that make you loopy. You know, between Soma, Ultram, Fioricet, Nubain, you know, stuff like that. I mean those are all things that weren’t controlled.” [1:1]). Others talked about how their training and experience gave them confidence in their ability to “self-prescribe” various medications (e.g., “You know, ‘physician heal thyself,’ ‘pharmacist treat thyself,’ whatever. I decided to take the medication in my own hands. You know, I knew about medication, so why go to a doctor? That kind of stuff” [3:4]). Finally, some pharmacists discussed the fact that their education focused primarily on the positive benefits of drugs and neglected the potential negative consequences of drug use:

“They teach you in rehab that you can’t even take something as innocent as Benadryl. And, that just goes against what I... Of everything that I’ve been taught in pharmacy, is that we have drugs and the drugs or the medications are there to be... that there’s a wonderful aspect to them. And, I kind of got lost in the mindset of that.” [2:4]

Several pharmacists reported that they did not receive any/enough education regarding substance use disorders (e.g., “In school they never said anything about addiction for health care professionals or pharmacists” [1:2]). They reported feeling unprepared to manage the unrestricted access to drugs:

“During our educational process, this is not ever covered. The possibility of addiction, which should be on... You don’t have the tools going into the pharmacy situation to, you know. They might give you some warning... They basically take you right out of school. A pharmacist can start the day after they graduate, even before you take the boards, you can get an externship. And, you know, you take a 22 year-old kid who’s making a hundred thousand dollars the first day he sets out of college and they, you know, you feel big” [1:6]).

As a result, they reportedly did not realize they could be vulnerable to the development of addiction:

“If they had a class with a ‘bring in the junkie day’ or ‘bring in the pharmacist addict day.’ You know, for someone to tell their story, one or two stories. Then, maybe one or two people or three people in that class would be like ‘Man! You know, I better not touch that stuff. I better not think about it.’” [1:1]

Others noted that pharmacy schools are currently incorporating more education regarding addiction into the training program:

“I think more of the new pharmacists coming out know more about addiction, and how it affects the profession and that there is [an impaired professionals program] out there to help you... I mean, you know, like all of that stuff I didn’t know.” [6:2]

However, they also indicated that even these initiatives may not be sufficient (“In pharmacy school... they brought us, every year, they’d bring us a couple of guys to talk about losing their license. If you’re in active addiction, you don’t give a sh*t.” [1:5]), suggesting that more intensive early education and prevention programs are needed.

Discussion

Pharmacists have long been held in high esteem by the public, and are frequently rated as among the most honest and ethical professions.²⁹ However, this level of trust may put pharmacists at increased risk, as they may be seen as invulnerable to the temptation for drug diversion and abuse. Despite calls to improve the pharmacy curriculum¹⁴ and some efforts to increase education,³⁰⁻³² research has demonstrated that too little attention has been paid to the subject of substance abuse and impairment within pharmacy training programs³³⁻³⁷ and the profession as a whole.^{36, 38} Unfortunately, studies have also shown that addiction is a serious problem among a minority of pharmacists.¹⁶ Indeed, pharmacists are considered a population at special risk for the development of substance use disorders, particularly those involving prescription drugs.

Consistent with previous research,^{39, 40} results of the present study document that factors which commonly contribute to substance use disorders in the general public (e.g., history of recreational drug use, iatrogenic addiction following medicinal use, desire to relieve stress or manage mental health symptoms) are compounded by additional environmental risk factors that are somewhat unique to individuals practicing pharmacy. This includes a reluctance among pharmacists to report colleagues suspected of substance abuse/diversion.⁴¹⁻⁴³ Given the potential occupational risks for substance abuse associated with this profession, additional training, monitoring, changes to the work environment, and increased confidential access to treatment may be needed to safeguard pharmacy professionals and the members of the public they serve.

Whether the primary cause, a contributing factor, or simply a matter of convenience, the “unrestricted” access that pharmacists have to drugs of abuse was cited by the vast majority of discussion group participants as an important factor in their drug abuse histories. Consistent with previous research,⁴⁰ the ease of diverting, coupled with the perceived acceptance of this behavior within the pharmacy culture, were identified as particularly problematic for pharmacists with a propensity toward substance abuse. Similarly, many pharmacists in the present study indicated that work-related stress drove them to “self-medicate” with drugs of abuse in order to make it through the workday. Several participants also reported feeling unprepared to assume their positions as head of the pharmacy. As noted in previous studies,^{40, 44} they cited a lack of education regarding addiction as contributing to their perceived invincibility, and the pro-drug message of the pharmacy field as contributing to their desire to experiment with various medications.

Given the stressful work environment (particularly in retail pharmacy positions) reported by this sample, it may be worthwhile for employers to consider changes to improve quality of work life for the retail pharmacist. The participants described long hours standing on their feet, confined to the pharmacy counter with few or no breaks, dealing with angry supervisors and irritable customers. Small changes that would allow the pharmacists more flexibility and independence in their role would likely have a significant positive impact. The Grounded Theory method utilized in this study may be useful for eliciting suggestions from pharmacists and pharmacy managers regarding ways to improve the work experience.

As suggested by Baldwin,¹⁴ it is also likely that pharmacy programs would benefit from reviewing their curricula to determine areas where additional addiction prevention programs could be added. In addition to increasing the quantity and quality of course content regarding the disease of addiction, evidence-based prevention and treatment methods, and the topic of substance-related impairment among pharmacists, pharmacy students would also benefit from instruction in adaptive coping strategies to manage the stress associated with pharmacy work. Relaxation training, assertiveness training, and development of communication skills, leadership skills, and time management skills would all benefit pharmacy professionals, particularly as they transition from the role of student to head of a busy pharmacy.

This study has a number of strengths, in that it comprises the largest known collection of in-depth group discussion data from substance-impaired pharmacists. Data were collected from 6 groups with a total of 32 participants. The methodology allowed for the collection and analysis of detailed responses, providing a richer data set than would have been possible through chart review, distribution of a questionnaire, or administration of a structured interview. Building on previous studies utilizing personal interviews,^{39, 40} participants in this study were able to share personal (even idiosyncratic) views and experiences, for discussion with their peers. The discussions allowed for clarification of specific ideas, as well as the opportunity to express diverging views. The anonymous nature of the study allowed participants the freedom to remain open and honest throughout the discussions. In addition, though participants were recruited from only one State, many had experience practicing pharmacy in other areas of the country. The sample was comprised of pharmacists from different employment backgrounds (e.g., retail pharmacy, hospital pharmacy, nuclear pharmacy, nursing home pharmacy, etc.), and was relatively representative of the population of substance-impaired pharmacists participating in the State monitoring program.

However, the results should be interpreted within the context of some study limitations as well. For example, all participants in the study were recruited from the State impaired professionals program, and were actively being monitored due to a substance-related problem or disorder. Thus, the data collected in this study may not reflect the opinions and experiences of pharmacists who do not have a substance use disorder, or those who were never referred for monitoring by the State. Indeed, the sample was primarily made up of male pharmacists from Caucasian descent. Though this is consistent with previous research demonstrating that the vast majority of substance-impaired pharmacists are male and Caucasian,^{25, 39, 40, 45} as well as the demographics of the pharmacists participating in the State monitoring program (i.e., at the time of the study, 76% of the participants in the State monitoring program were male and 65% were Caucasian), it does not constitute a representative sample of pharmacists as a whole. According to the State Department of Health, there are currently 25,408 pharmacists with an active license in the State (though some are not practicing in the State). Of the 24,836 who reported their gender, 50.6% are female. In addition, only 57.1% self-reported as Caucasian. As a result, the experiences described by this sample may not accurately reflect the experiences of all pharmacists, including those who may currently be hiding their substance use. More research is needed to

assess the views of female pharmacists in particular, as well as pharmacists from other States. Similarly, the present study was limited by potential sampling bias, as participants were recruited from the geographic locations containing the largest numbers of pharmacists being monitored for substance-related impairment; with 13.5% of eligible individuals electing not to participate. However, it is noteworthy that the sample included 22% of all the pharmacists being monitored by the State. More research is needed to extend these findings to the population of pharmacists as a whole. Future studies should be conducted utilizing larger representative samples.

Despite these weaknesses, the present study contributes important information to the literature by documenting the persistent occupational risks for the development of a substance use disorder among pharmacists. The results have important implications for the field of pharmacy. First, as suggested decades ago,¹³ it appears that addiction prevention should be a bigger focus in the education of pharmacy students and the continuing education of practicing pharmacists. Previous calls to improve pharmacy education in substance use disorders^{46, 47} may have resulted in recent increases/improvements; however, the extent and impact of these efforts remains unknown. More studies examining the feasibility and effectiveness of such programs/curricula are needed. Second, pharmacy students would likely benefit from training and education regarding ways to manage the stressful aspects of pharmacy work in an adaptive way. This would help them to enter the field with more accurate expectations and to be more prepared to assume the professional role. Third, pharmacists may benefit from increased awareness of confidential/non-punitive options for obtaining substance abuse treatment. Again, various individuals have attempted to highlight the problem of substance abuse among pharmacists,^{15, 48} and to educate the field regarding the presence of pharmacist recovery networks.^{49, 50} However, it appears that improved dissemination of the message is still needed. Though many discussion group participants reported knowing they would benefit from treatment, many expressed a fear of self-referring and others expressed feeling relieved when they were finally caught and mandated to treatment. Finally, pharmacists would likely benefit from the implementation of workplace policies and procedures that would discourage medication diversion (either through changes to inventory/oversight practices, or a shift in the cultural expectations of the pharmacy).

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Table 1**Sample Demographics**

Age (years)	<i>M</i> = 43.44 <i>SD</i> = 10.58 Range = 26-65
Gender <ul style="list-style-type: none"> • Male • Female 	71.9% 28.1%
Race/Ethnicity <ul style="list-style-type: none"> • Caucasian • African American • Hispanic/Latino • Other 	78.1 15.6 3.1 3.1%
Education <ul style="list-style-type: none"> • Bachelor's Degree • Master's Degree • Doctoral Degree 	50.0 6.3 43.8%
Marital Status <ul style="list-style-type: none"> • Married • Separated/Divorced • Committed Relationship • Single (Never Married) 	45.2 29.1 6.5 19.4%
Children <ul style="list-style-type: none"> • Yes • No 	54.8 45.2%
History of Tobacco Smoking <ul style="list-style-type: none"> • Current Smoker • Previous Smoker • Never Smoker 	35.5 19.3 45.2%

Table 2
Prescription Drug Misuse in the Current Sample

First Drug Misused	N (% of 28 Who Admitted Prescription Drug misuse)
• Opioid	10 (35.7%)
• Sedative-Hypnotic	8 (28.5%)
• Stimulant	3 (10.7%)
• Weight-Loss Drug	2 (7.1%)
• Non-Opioid Pain Reliever	1 (3.6%)
• Anti-Depressant	
First Introduction to Prescription Drug Misuse	N (% of 27 Who Reported on Introduction to Drug Misuse)
• Self	11 (40.7%)
• Friend/Classmate	9 (33.3%)
• Co-worker	3 (11.1%)
• Romantic Partner	2 (7.4%)
• Relative	1 (3.7%)
• Internet	1 (3.7%)