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Patient perceptions of opioids and benzodiazepines and attitudes toward deprescribing

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Abstract

Background: Opioids and benzodiazepines (BZDs) pose a public health problem. Older adults are especially susceptible to adverse events from opioids and BZDs due to increased usage of opioids and BZDs, multiple comorbidities, and polypharmacy. Deprescribing is a possible, yet challenging, solution to reducing opioid and BZD use.

Objective: To explore older adult patients' knowledge of opioids and BZDs, perceived facilitators and barriers to deprescribing opioids and BZDs, and attitudes toward alternative treatments for opioids and BZDs.

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Competing Interests: The authors (CJK, JN, SPF, CS, LTA, TDH, CBH, JBW, and ER) declare that they have no competing interests.

Methods: We conducted 11 semi-structured interviews with patients 65+ years old with chronic opioid and/or BZD prescriptions. The interview guide was developed by an interprofessional team and focused on patients' knowledge of opioids and BZDs, perceived ability to reduce opioid or BZD use, and attitudes towards alternative treatments.

Results: Three patients had taken opioids, either currently or in the past, three had taken BZDs, and five had taken both opioids and BZDs. Generally, knowledge of opioids and BZDs was variable among patients; yet facilitators and barriers to deprescribing both opioids and BZDs were consistent. Facilitators of deprescribing included patient-provider trust and slow tapering of medications, while barriers included concerns about reemergence of symptoms and lack of motivation, particularly if medications and symptoms were stable. Patients were generally unenthusiastic about pursuing alternative pharmacologic and non-pharmacologic alternatives to opioids and BZDs for symptom management.

Conclusion: Our findings indicate that patients are open to deprescribing opioids and BZDs under certain circumstances, but overall remain hesitant with a lack of enthusiasm for alternative treatments. Future studies should focus on supportive approaches to alleviate older adults' deprescribing concerns.

1 Background:

Opioid and benzodiazepine (BZD) use is a serious public health problem in the United States [1-3]. Older adults (age 65 years and older), specifically, have shown a steady increase in opioid and BZD use in recent years [4,5]. Over a 9-year period from 2006 to 2015, the rate of opioid and BZD prescribing for older adults increased from 5.9% to 10.0% and 4.8% to 6.2%, respectively [4]. Older adults' healthcare utilization and treatment for pain are much higher than their younger counterparts, which puts them at an increased risk for opioid and BZD misuse and adverse events [6-8].

Frequent comorbidities, polypharmacy, and changes in pharmacokinetics and pharmacodynamics that come with aging make older adults especially susceptible to experiencing one or more adverse events with opioid or BZD use [9]. One of the most common and potentially harmful medication-related adverse events an older adult can experience is a fall. Both opioid and BZD use have been associated with an increased risk for falls in older adults [10-12]. Older adults taking opioids or BZDs that fall are at an increased risk of hip fracture, which has been associated with increased morbidity and mortality [13,14].

Deprescribing is a possible solution to reducing potentially inappropriate use of opioids and BZDs and improving patient outcomes. Deprescribing is defined as the supervised reduction or discontinuation of a medication that may no longer be beneficial or when the potential benefits of treatment no longer outweigh the potential harms [15]. Several studies have shown deprescribing to be a safe and feasible means to optimize medication use [16,17]. However, several barriers continue to stand in the way of widespread implementation of deprescribing in practice, including devolved provider responsibility, fragmented care, fear of damaging the provider-patient relationship, and lack of provider knowledge of deprescribing and time needed to deprescribe [18-21]. Other studies have

reported on patients' perceptions of deprescribing [19,22-24]. For example, when discussing the possibility of deprescribing cardiometabolic medications, patients expressed concerns related to beliefs, fears, and experiences with using or stopping the targeted medication [19]. Although there are likely similarities in patients' perceptions of deprescribing across medication classes, few studies have evaluated the perceptions of older adults with regards to deprescribing opioids and BZDs specifically. Additionally, many of these studies have utilized surveys to interpret the patient perspective of deprescribing [22,23,25]. While this methodology increases sample size, it limits the depth of understanding of the complexities of patient attitudes and perceptions of deprescribing.

This manuscript explores an assessment of older adult patients' knowledge of opioids and BZDs, perceived facilitators and barriers to deprescribing opioids and BZDs, and attitudes toward alternative treatments for opioids and BZDs.

2 Methods:

The present study was an analysis of data collected to inform the development of a randomized controlled trial (RCT) of a pharmacist intervention to reduce falls through deprescribing of opioids and BZDs for older adults seen in primary care [26,27]. The study was reviewed and approved by the University of North Carolina at Chapel Hill Institutional Review Board (IRB # 18-2920).

2.1 Patient recruitment

From May 2020 to April 2021, we conducted semi-structured interviews among patients who were eligible for inclusion in the trial. The patients interviewed were at least 65 years of age and had chronic prescriptions for opioids, BZDs, or both. Chronic use was defined as at least 4 prescriptions or refills in the past 12 months, with at least one in the past 3 months for opioids and 6 months for BZDs. This definition was chosen due to the nature of opioid and BZD prescribing guidelines (i.e., days supply permitted) and based on analysis of prescription refill records with adjudication by clinical pharmacists for which patients would be most appropriate for deprescribing [26]. Patients were excluded from participation if they were undergoing active chemotherapy, received radiation within the past year, had a dementia diagnosis, or were non-English speaking. Provider referral sampling was used to recruit eligible patients who were regularly seen in primary care clinics receiving the intervention. Providers presented the study to eligible patients and subsequently referred them to the research team for interviews if they were interested in participating [28]. After an eligible patient was identified, a member of the research team contacted the patient via telephone to explain the study and invite them to participate in an interview. Interviews took place via video Zoom unless the patient requested a telephone Zoom interview. All patients were offered a Zoom practice session to reduce technology access problems. All interviews were video- and/or audio-recorded and notes were taken by research team members. Patients received a $50 gift card as compensation for their time. Written informed consent was obtained before each interview.

2.2 Semi-structured interview guide

The interview guide was developed by an interprofessional team with expertise in pharmacy, medicine, gerontology, public health, and qualitative research. Interview questions were created by the research team and informed by their interprofessional expertise. Questions were designed in such a way as to elicit patients to share their experiences and tell stories, rather than answer specific situational questions. The development of the interview guide was grounded in the COM-B system [29], a framework used to understand behavior. According to the framework, behavior change is achieved through interventions that address the individual's capability, opportunity, and motivation. As it relates to the current study, behavior change refers to reducing or stopping their medication, capability includes the individual's ability to act based on their own knowledge and skills, opportunity includes potential barriers to action, and motivation includes facilitators that inspire action. The interview guide was not pilot tested prior to the study, however it was reviewed and edited by the Odum Institute, which is an organization that is internal to our institution, whose purpose is to support research and offer consulting services in qualitative methods. The interviews were led by ER, an associate professor of medicine, possessing a PhD in health promotion and education and a Master of Public Health degree with over 40 years of experience in public health education and qualitative research. Using a semi-structured interview guide, she conducted the interview in the presence of other research team members who were taking notes and providing technical support. Questions focused on patients' knowledge of opioids and BZDs, perceptions about their ability to reduce or stop their opioids or BZDs, and experiences and attitudes towards alternative pharmacologic and non-pharmacologic treatments in lieu of their opioid or BZD prescription. Patients' knowledge was assessed by asking *"What, if anything, do you know about opioids/BZDs?"* (respectively), with prompts for the patient to identify medications that are opioids and BZDs and to explain ways in which they may be helpful and harmful. Patients' perceptions about their ability to reduce or stop their medications was evaluated by asking *"If you were to reduce your medicines, how, if at all, could your health care providers (doctor, nurse practitioner, physician assistant) help you during the medication reducing process?"* Patients were also asked *"How would you feel about alternative treatments for your 1) pain, 2) anxiety, and/or 3) sleep?"* with prompts to discuss pharmacologic and non-pharmacologic alternatives. Basic demographic information, including sex, age, race, and ethnicity, was also collected from each patient. Interviews lasted an average of 28 minutes. There was no follow-up with participants after the interview. See Supplemental Materials 1 for a copy of the interview guide and Supplementary Materials 2 for the demographic data collection form.

2.3 Data analysis

Transcripts were reviewed regularly by the study team to identify emerging themes and to determine a point at which it was reasonable to conclude that thematic saturation had been reached, based on a lack of new concepts emerging. A total of eleven interviews were completed. Ten of the eleven interviews were transcribed verbatim using an online transcription service. One interview had poor audio quality and was unable to be transcribed. The notes of three research team members were combined and used in the analysis of this interview. Two data-rich transcripts were reviewed by two coders (CJK and CS) who

developed their own independent codebooks using the COM-B framework to guide the development of primary domains, while allowing for inductive coding. The two coders (CJK and CS) met with a third member of the research team (ER) to review the two independent codebooks and create one consensus codebook. The consensus codebook was used by the coders (CJK and CS) to code all 10 transcripts and the single set of compiled interview notes in NVivo Version 12 (QSR International). The three research team members (CJK, CS, and ER) met periodically to compare coded interviews and reconcile any coding discrepancies. Each coder's interview notes, as well as the combined interview notes were retained to preserve an archive of coding decisions (i.e., audit trail). Of particular interest, coders used thematic analysis [30], based on code frequency and depth of responses to abstract information on knowledge of opioids and BZDs, facilitators and barriers to deprescribing opioids and BZDs, and alternative treatments for opioids and BZDs.

3 Results:

Characteristics of interviewed patients (n=11) are presented in Table 1. On average, patients were mostly female (81.8%), 65-74 years old (54.5%), White (90.9%), non-Hispanic/Latino (100%), and had greater than a high school education (63.7%). At the time of interview, three patients (27.3%) were current opioid users, three patients (27.3%) were current BZD users, and five patients (45.5%) had taken both opioids and BZDs (one current opioid and BZD user, 4 current opioid and former BZD users). Analysis of interview transcripts identified four emergent themes: 1) Knowledge of and experiences with opioids and BZDs, 2) Facilitators to deprescribing opioids and BZDs, 3) Barriers to deprescribing opioids and BZDs, and 4) Alternative treatments to opioids and BZDs. A tabular representation of overarching themes and subcodes are presented in Supplementary Materials 3.

3.1 Knowledge of and experiences with opioids and BZDs

Knowledge of opioids and BZDs varied among patients. When asked to name medications that were opioids and BZDs, the majority of patients were able to accurately identify at least one opioid and BZD, respectively. Despite their ability to identify at least one opioid or BZD, nearly half of patients also misidentified opioids or BZDs. All but one of the patients that misidentified opioids or BZDs was taking the medication class that they misidentified. Misidentifying opioids or BZDs included: stating a medication was an opioid or BZD when in actuality the stated medication was not an opioid or BZD; stating a medication was not an opioid or BZD when it was indeed an opioid or BZD; or misassigned the intended purpose of an opioid or BZD (i.e., using an opioid as a sleep aide, using a BZD for pain relief, etc.). One patient said,

> "I take Tramadol … I know they [opioids] can be addictive and I know I've never taken any that I know of."
>
> [P5, current opioid user]

When asked about BZDs, one patient remarked,

> "My husband doesn't take them [BZDs], and I only use the alprazolam. Now, I use it mainly to help me sleep because I have a problem sleeping…. I know nothing [about BZDs]…What is that? Is that an opioid?

[P4, current BZD user]

Patients named several ways in which opioids and BZDs could be helpful. Pain relief was the most common answer for opioids, while one patient also mentioned end of life care as a way opioids can be helpful. Several patients spoke about how opioids have been helpful in their own life. One patient said,

> "The removal of opioids from my life would probably mean I couldn't execute a great deal of my day."

[P1, current opioid and former BZD user]

Another patient spoke about how they prefer to take an opioid rather than over-the-counter analgesics because they perceive over-the-counter medications to have more side effects. That same patient said,

> "…that's what this drug [opioid] has done for me. It's given me life. It's given me the ability to do what I've done this afternoon and go find a lawn mower for resale … And if I have to come off of this [opioid] and go on to something across the counter, within six weeks, I'll be having stomach problems. And it could lead to the end of my life. I don't want to do that."

[P11, current opioid and former BZD user]

Patients stated that BZDs were helpful to them in controlling anxiety and panic attacks, as a sleep aid, and to reduce the effects of restless leg syndrome. Similar to opioids, some patients were hesitant to give up their BZD prescription, even if they do not experience the problem they say it helps alleviate.

> "Well, it [BZD] probably helps me fall asleep. And if that's the case, I like it a lot. Not that I have sleep issues necessarily, but I probably have become dependent that I would fall asleep easier with half of a Klonopin."

[P6, current BZD user]

Patients were also able to identify a number of ways in which opioids and BZDs could be harmful. The most common harmful effects of opioids that patients listed include the potential to become addicted, overdose, and potential death. Patients also listed a number of side effects of opioids that they knew of or experienced, including constipation, nausea, vomiting, and dizziness. One patient that had previously been diagnosed with multiple sclerosis, described an encounter with their physician where they expressed concern about taking an opioid.

> "…my orthopedist put me on Oxycontin and I was on it for two days. And I told him that he had to take me off of it because it was the first time in 20-some years that I had been pain free. And I could see where I could get addicted to that, because it was such a great feeling, not to feel pain. So, I knew then that, that one wasn't for me as much as I loved the drug, I knew that I couldn't stay on it."

[P10, current opioid and BZD user]

Several patients expressed concern about experiencing a fall because of taking an opioid.

> "I don't want to be on an opiate for pain and then go out and trip and fall and break my hip."
>
> [P3, current opioid and former BZD user]

One patient explained that they knew opioids were addictive but thought that they mainly affect young people.

> "Well, I hear a lot about them [opioids] and I read a lot … I hear a lot about them, but I always thought that it was younger people that was addicted. I never thought that an older person would be addicted to any of these."
>
> [P4, current BZD user]

Similar to opioids, some of the most commonly named ways BZDs could be harmful included the potential to become addicted, overdose, issues related to balance and coordination, and risk for falls. Some patients also mentioned feeling "fuzzed out" and uncomfortable driving when they take BZDs as well as the possibility of developing dementia from taking BZDs. One patient described their experience taking BZDs.

> "I know there's an increased risk of falling, and I wouldn't want to drive on them. I think mainly again, you're missing out on a lot of the world if you, if you have too much of it in your system or just enough to make you fuzzed out, you know."
>
> [P3, current opioid and former BZD user]

Patients were asked if family members or friends had ever expressed concern about them taking an opioid or BZD. While some patients noted concern from family and friends, the majority of patients said that their family and friends were unaware that they take or had taken opioids or BZDs.

3.2 Facilitators to deprescribing opioids and BZDs

Patients were asked to describe their own experiences, if any, trying to reduce or stop taking their opioids or BZDs, as well as their perceived ability to reduce or stop taking them. Of the 11 patients interviewed, six stated that they had previously attempted to reduce their opioid prescriptions, with varying degrees of success, while one had completely stopped taking opioids. None of the patients noted reducing or stopping a BZD, although two stated that they would be willing to try if their provider wanted to reduce or stop their prescription. When discussing actions that would be helpful to deprescribing, patients had similar thoughts for both opioids and BZDs. Patients mentioned slow tapering of the medication as opposed to a sudden stoppage of it. Patients also noted they would likely need an alternative to their opioid or BZD prescription, either pharmacologic or non-pharmacologic. Patients discussed their trust in their providers as being a key facilitator to deprescribing. One patient said,

> "Well, I'm willing to try it if the doctor's willing. If she wants to try something, I'd be willing to do that."
>
> [P4, current BZD user]

Another patient mentioned their trust in their primary care provider and that they are more skeptical of prescribers that are not their primary care provider.

> "The only situation would be if I were being prescribed [the medication] by [someone] other than my primary care provider. I would trust him [primary care provider] absolutely. But if I were in another place and someone else was a stranger, [a] strange doctor was prescribing for me, I would have more questions."
>
> [P2, current opioid and former BZD user]

One patient discussed their relationship with their provider and their provider's persistence in discussing deprescribing. Although reluctant to reduce their BZD prescription, they attribute their openness to the idea to their provider's continued engagement and conversation about the need to deprescribe.

> "Oh, it makes me a little anxious, a little bit, to think about not having it. I didn't realize how, I guess the word is addicted or psychologically dependent on it until she kept bringing it up. The first time, I was like, 'Yeah, yeah, okay,' but I could see she was going to keep talking about it and I either needed a new doctor, I needed to go find a new doctor, or I needed just to listen to her. So here we are. So, yeah, I don't like the idea so much, but I guess I'm open to it."
>
> [P6, current BZD user]

Patients also discussed what types of support providers and pharmacists could provide that would be helpful for deprescribing. Patients mentioned written instructions for dose reduction and conversations with their primary care provider and pharmacist about adverse events to look out for. Some patients discussed speaking with their pharmacist about potential drug interactions, while others said that they would not turn to their pharmacist for help with deprescribing but might for other advice.

Patients were asked if they could provide any advice for someone else that was trying to reduce or stop their opioid or BZD prescription. While many patients mentioned some of the facilitators described above, many felt uncomfortable advising others. One patient mentioned the need to have an honest assessment of your pain levels and that you should not expect to be totally pain free.

> "I would say keep an honest, open relationship with your physician. Find things to distract yourself with you know, get involved socially, and try to substitute other things like incense, you know… So, I guess that's what I'd say, you know. Do the best you can but be honest about your pain levels. Don't take more than you need, you know? So again, you know, I'm not expecting to be a hundred percent pain free, and I don't know that anybody can. So, you got to really be honest with yourself and your doc."
>
> [P3, current opioid and former BZD user]

3.3 Barriers to deprescribing opioids and BZDs

Patients identified several potential barriers to deprescribing opioids and BZDs. When discussing opioids, patients expressed a general concern about the amount of pain they would be in if they had to reduce or stop taking their opioid. One patient said that they would not ask for their dose to be increased, but they do not want it to be decreased either.

That same patient discussed their concerns when asked if they feel they would be able to reduce their opioid dose.

> "I would have concerns that I might have to deal with more pain than I do now. And at 80 years old, when I sit down at night and I get stiff from having worked during the day, it don't take long for some of my body to start to hurt, my hips, my legs, my hands. I've got a lot of arthritis and things in my hands that change with the weather sometimes. And sometimes they won't wait for a change in the weather to start hurting. I always feel that I was being shortchanged and being treated ugly at 80 years of age when I really needed something to help me instead of hurt me. Right. That's how I'd feel."
>
> [P11, current opioid and former BZD user]

Another patient expressed reluctance to reduce their opioid prescription and shared a story about a friend that had their medications stopped against their will.

> "…I have a friend that was actually hit by a truck a long time ago; they took her off all her pain medicine. She's now on street drugs and I'm afraid she's going to die because she can't find any relief. So that's my big concern. I don't want people left, that truly have significant pain, left in the lurch."
>
> [P3, current opioid and former BZD user]

Patients expressed similar concerns when discussing barriers to deprescribing BZDs. They expressed concerns about anxiety and their inability to sleep without BZDs. Some patients said they do not see their BZD prescription as a problem and that they are unmotivated to reduce their dose because they have not increased it either.

> "I have to wean myself off of it for some reason, which I have not been motivated to do at all because I didn't really see myself increasing its usage. However, my primary care physician has, on several occasions, addressed this with me. And I think when she first started talking about it, I was skeptical because it just seems like every medicine has some side effect and that this one has worked for me. I'm not using multiple pills a night. I'm still on kind of pretty much the same as I always have been, and that whatever this new medicine is that she has, I was just kind of like, 'I don't really see the need to change this.'"
>
> [P6, current BZD user]

3.4 Alternative treatments for opioids and BZDs

In addition to deprescribing, patients were asked to discuss their thoughts about alternative treatments to opioids and BZDs, including both pharmacologic and non-pharmacologic alternatives. Patients had mixed feelings about alternative treatments, generally, with some noting that they work better when it is the patient's idea to try them. One patient said,

> "Well, they worked when [I] was ready, I was the one who decided to do it… in my case I'd made up my mind, so it was helpful to me and they worked."
>
> [P2, current opioid and former BZD user]

Another patient mentioned their opposition to alternative treatments, specifically over-the-counter medications because they perceived them to have more side effects.

> "And at my age of 80 years old, when I have pain and I have to take something for it, I don't want to be taking something that's going to give me more problems. Which a lot of over-the-counter stuff in the past…"
>
> [P11, current opioid and former BZD user]

Patients discussed some of the pharmacologic alternatives they currently take or have tried in the past. Pharmacologic alternatives to opioids included Tylenol (acetaminophen), ibuprofen, Theraworx (topical cream), baclofen (for muscle spasms), and injections for knee pain. Patients also discussed pharmacologic alternatives to BZDs they have tried. These included trazadone, muscle relaxants, cannabidiol (CBD), melatonin, and escitalopram.

Patients also discussed several non-pharmacologic alternatives to opioids and BZDs they are aware of. Yoga and meditation were mentioned as alternatives for both opioids and BZDs. Some alternatives specific to opioids for the management of pain included use of heating pads, exercise, staying hydrated and regulating body temperature, social involvement, engagement with pets, water therapy and physical therapy, acupuncture, and massages. However, it was noted that water and physical therapy, acupuncture, and massages actually made their pain worse in some cases. Non-pharmacologic alternatives to BZDs for the management of anxiety and/or insomnia included behavioral changes (adjusting lighting, not drinking fluids or food after 6pm), using a tablet device on "night mode" when reading before bed, as well as not reading before bed, avoiding exercising late in the day, reducing caffeine intake, staying busy during the day (cooking, cleaning, gardening), and trying to let your mind wander in a darkened room when trying to sleep.

4 Discussion:

In this manuscript, we examined older adults' knowledge of opioids and BZDs, perceived facilitators and barriers to deprescribing opioids and BZDs, and attitudes toward alternative treatments for opioids and BZDs. Overall, patients were able to name ways in which opioids and BZDs are beneficial and potentially harmful, but displayed a general lack of knowledge about which medications were opioids or BZDs as well as their intended uses. Patients stated that opioids were most beneficial in alleviating their pain and that BZDs helped them manage their anxiety and difficulty sleeping, while acknowledging the potential for dependence, risk of overdose and death, and falls risks associated with both opioids and BZDs. Patients identified several facilitators to deprescribing both opioids and BZDs, including slow tapering of medications accompanied by substitute treatment, detailed instructions for monitoring for adverse events, trust in their provider, particularly their primary care provider, and persistence by their provider to discuss deprescribing. Barriers to deprescribing opioids and BZDs included concerns about recurrent pain, anxiety, and/or inability to sleep and a general lack of urgency to try deprescribing if their symptoms were well-controlled. Patients had mixed feelings about alternative treatments to opioids and BZDs, but were able to name both pharmacologic and non-pharmacologic treatments they have tried in the past. The findings from the current study, as well as the findings from a

focus group of prescribers [31], were used to inform educational materials and conversation starters offered to providers as a part of the RCT previously described [26,27].

Few studies have examined older adults' perceptions of deprescribing opioids and BZDs, but several have focused on one of these medications, other medication classes, or deprescribing in general. Older adults' trust in their healthcare providers has been a key facilitator to deprescribing identified by several studies [19,23,32,33], including the current study. A survey conducted by Lundby et al. [23] revealed that while only 33% of participants would try stopping one of their medications on their own, 87% would be willing to stop one of their regular medications if their physician said it was possible. Our study supports these findings and offers further insight that older adults may be even more receptive of deprescribing if the message comes from their primary care provider, specifically, and with continued persistence and follow-up. In addition to trust, slow tapering was identified as a facilitator to deprescribing in our study, which is supported by prior literature [24,34]. One study found that patients were generally receptive to gradually tapering off BZDs and that those who successfully tapered their dose had higher self-efficacy for being able to completely discontinue their prescription [34]. Our findings, along with those of prior studies, suggest that initiation of deprescribing is most successful when a provider with an established relationship with the patient utilizes a slow tapering schedule.

Reeve *et al.* [24] conducted a systematic review to determine patient barriers to deprescribing and identified fear as a common barrier to deprescribing medications. Specifically, fear of the return of a previous condition and fear of withdrawal were cited as barriers to deprescribing. In fact, fear was such a strong barrier to deprescribing that it was even expressed by patients that reported receiving no benefit from taking the medication. These findings are supported by our study, as patients expressed concern about the pain, anxiety, and insomnia they might experience if they reduced or discontinued their opioids or BZDs. One patient even shared the story of a friend that had her pain medications discontinued and has subsequently turned to illegal substances as a source of pain relief. Another patient in our study stated their reluctance to reduce the BZD they use as a sleep aid, despite stating that they have no issues with insomnia. Interventions that aim to increase self confidence in deprescribing and offer greater social support to patients attempting to stop their opioid or BZD prescriptions may be able to alleviate patients' fears and increase successful deprescribing. For example, a randomized controlled trial that tested the efficacy of a BZD discontinuation program identified self-perceived competence to deprescribe as a predictor of successful long-term discontinuation. Additionally, satisfaction with available social support reliably predicted successful short and long-term discontinuation of BZDs [35].

Another finding of our study was that nearly half of the patients we spoke to misidentified or mischaracterized the intended purpose of opioids or BZDs. Specifically, some patients that misidentified or mischaracterized opioids appeared to also disassociate themselves with opioids, potentially in response to the negative perceptions of opioids that have resulted from media coverage of the opioid epidemic. While there is not much literature on patient knowledge of opioids and BZDs, prior research has shown a statistically significant, although relatively weak, relationship between health literacy and medication adherence

[36,37]. Opioids and BZDs are two classes of medications that have a high potential for misuse, as demonstrated by the declaration of a public health emergency in 2017 with regards to opioid abuse [2,3,38]. Therefore, public health campaigns that seek to improve health literacy around the identification of such high-risk medications may help to further underscore the risks for patients – of all ages – who are inappropriately prescribed opioids and BZDs for indefinite durations.

Our study has several limitations, including its focus on two different classes of medications. While the focus on both medication classes is warranted by the fact that they are frequently prescribed to older adults and both contribute to falls [4,5], the dual focus sometimes made it difficult to discern if comments were specific to either opioids or BZDs. However, many of the statements made by patients were similar for both opioids and BZDs; therefore, we are confident that ambiguous comments are applicable to both opioids and BZDs. Another limitation is the racial, ethnic, and geographic homogony of our sample. Patients we spoke to were mostly White, all non-Hispanic/Latino, female, and from North Carolina. The demographics of our sample limits the generalizability of our findings, as a more diverse population may have different views of deprescribing opioids and BZDs. However, the demographic breakdown (race and sex) did reflect the demographics of the patients in the study clinics who were taking opioids and BZDs and the fact that White females are prescribed opioids and BZDs more frequently [39-41]. Finally, this study is limited by its small sample size. However, we do believe we reached data saturation based on the content of our analysis, and it is unlikely additional interviews would have elicited concepts that had not already been discussed (see Table S1). Our study is strengthened by the decision to recruit older adults from primary care practices. The patients interviewed shared their experiences of having their opioid and BZD prescriptions managed by general practitioners, rather than geriatricians or other specialists that have advanced training caring for older adults and prescribing these medication classes.

5 Conclusion:

Older patients were able to identify ways in which opioids and BZDs could be both helpful and harmful, but often misidentified opioids and BZDs or mischaracterized their intended uses. This outcome suggests a potential gap that may be addressed through public health campaigns to increase awareness of high-risk medications. Barriers and facilitators to deprescribing expressed by patients were relatively consistent across medication classes. Facilitators included trust in their provider, slow tapering, and a need for an alternative treatment. Barriers to deprescribing opioids and BZDs included concerns about the reemergence of pain, anxiety, or insomnia and a lack of motivation to deprescribe if their medications are stable. Patients were able to name alternative treatments for pain, anxiety, and insomnia, but overall were unenthusiastic about their use. Future studies should explore strategies to support patients and alleviate the fears for both realized and unrealized adverse events related to deprescribing.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Key Points:

- Older adults were able to identify ways in which opioids and BZDs could be both helpful and harmful, but often misidentified opioids and BZDs or mischaracterized their intended uses.
- Barriers and facilitators to deprescribing were relatively consistent for opioids and BZDs.
- Facilitators to deprescribing opioids and BZDs included trust in their provider, slow tapering, and a need for an alternative treatment.
- Barriers to deprescribing opioids and BZDs included concerns about the reemergence of pain, anxiety, or insomnia and a lack of motivation to deprescribe if their medications are stable.

Table 1.

Patient characteristics (n=11)

Category	n (%)
Age	
65-74	6 (54.5)
75-84	5 (45.5)
Sex	
Male	2 (18.2)
Female	9 (81.8)
Race	
White	10 (90.9)
Black	1 (9.1)
Hispanic/Latino	0 (0.0)
Education	
High school	4 (36.4)
Some college	2 (18.2)
Associate's degree	2 (18.2)
Bachelor's degree	1 (9.1)
Master's degree	1 (9.1)
Doctoral degree	1 (9.1)