Past Event: 2026 NCSBN Scientific Symposium - Nurse Cannabis and Substance Use Impact on Patient Care Video Transcript

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2026 NCSBN Scientific Symposium

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Presenter
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- [Dr. Rainbow] Hello, my name is Dr. Jessica Rainbow. I'm an associate professor at the University of Arizona College of Nursing, and I am here today on behalf of my wonderful team to share our work. Our study was titled "Nurse Cannabis and Substance Use Impact on Patient Care."

I would like to acknowledge that this study was funded by the National Council of State Boards of Nursing, the Center for Regulatory Excellence, and that myself and the other authors have no conflicts of interest to declare. So, to start out with a little bit of background, as we know, cannabis legalization for medicinal and recreational purposes has been changing a lot in the last couple of years on state level as well as federally.

We know that nurses are at risk for substance abuse. This is due to their ease of access as well as attitudes towards using cannabis for relief of stress, pain, and anxiety. Nurses also have high rates of stress as well as a lack of education about how to use cannabis, and they often self-medicate for pain or other problems. Also, shift work, which many nurses do, is a risk factor for increased substance use.

The COVID-19 pandemic really made a difficult situation in many healthcare settings, and new research coming out has shown that pre-pandemic, pandemic, and post-pandemic working conditions are not drastically different. We know that the work environment has not returned to pre-pandemic levels, so we know that this is going to be an ongoing issue.

Prior work by Trinkoff and others have found that nurses have rates that are similar to or lower than general population for substance use in general. The question that my team was really interested in looking into was, how exactly are these substances being used in relation to patient care activities? So this led us to our study. The purpose of our study was to describe nurse cannabis and other substance use and to explore the patterns of cannabis use in relation to patient care.

So overall, this study used an explanatory sequential mixed methods design. In this design, you're collecting and analyzing quantitative data followed by qualitative data, and then you're doing

integration. So as far as our quantitative data, we collected cross-sectional survey data, and on that we also had some open-ended qualitative questions that we analyzed with the qualitative data. So the qualitative data included those open-ended questions as well as semi-structured interviews we completed.

The interviews were specifically with individuals who affirmed that they used cannabis and were willing to be interviewed. So after we analyzed both of these data sets separately, then we integrated them together. So overall, our sample was recruited from November of 2021 to June of 2022. We used State Board of Nursing email listservs as well as social media to recruit. There was a raffle incentive that was offered where individuals who completed the survey could provide their email address and they could be entered in a raffle for gift cards.

The inclusion criteria for our study overall were that you had to self-affirm that you were a registered nurse, you practiced in a direct patient care role, and were working full or part time. As far as the qualitative portion, like I mentioned, those individuals also had to affirm that they were willing to participate in a qualitative interview, and also these were specifically individuals who affirmed that they used cannabis.

Those individuals were given an additional gift card for completing the interview portion as an honorarium for their time. So to talk a little bit about what exactly data was collected, on the cross-sectional survey, there were four different types of data we collected. The first was participant and work demographics. Then we also looked specifically at substance use. And so to do this, we used clinically validated and reliable tools.

We used the tobacco, alcohol, prescription medication, and other substance use tool, which is called the TAPS. And then for individuals who reported that they use alcohol and cannabis, we had specific tools that looked specifically at quantifying if there was a risk for misuse. So we used the alcohol use disorder identification test, the consumption version.

This is called the audit C. For cannabis, we used the cannabis use disorder identification test, the revised version called the CUDIT-R. And then we did something where we had individuals look at their last week and complete a little calendar. They looked specifically at what days in the last seven days they worked, and then substances that they used across those days, and the timing of use.

Like I mentioned, we also had free response questions on that survey as well. So there were six open-ended questions that were asked, and those included questions about overall health and well-being, the perceived impact of substance use on patient care, the prevalence of substance use among their peers, and the factors influencing their decisions to use substances. The question about influencing decisions to use substances was specifically asked individuals who reported cannabis use.

Interview questions focused specifically on how long participants had been using cannabis and how they started, how they were currently using cannabis and other substances. We were really interested as well in their decision-making process of when to use cannabis and other substances, specifically in relation to when they would be working, and then their perceptions of what, if any, impact there was on patient care or work performance.

We are also interested specifically in what they would like regulators and educators to know about cannabis legalization. So this was a topic that was covered in both the interviews as well as in the open-ended questions. So for our quantitative data, we analyzed it descriptively, and we weighted the data set

using a ranking algorithm to match the nursing workforce overall demographically. We utilized the National Council of State Boards in Nursing data on the nursing workforce that was published by Smiley in 2023.

For our qualitative data, we utilized content analysis of both the free response and the interview transcripts and triangulated those results prior to looking specifically at integrating the quantitative and the qualitative together. So on our cross-sectional survey, we had 1,010 respondents. The majority of our participants identified as women.

The mean age was 46, and of that 1,010 respondents, 237 reported cannabis use. When we compared respondents who reported cannabis use to those who did not, respondents who reported cannabis use were younger, a mean age of 42 years versus a mean age of 47 years. They reported their biological sex was male, 17.6%, compared to female of 9.2%, and had lower mean years of experience.

The difference there was 14.6 years to 18.1 years. Additionally, those who reported cannabis use had higher rates of stress, as well as were more likely to report lower mental health and [inaudible] disease on a item about comorbidities. When we looked specifically at the TAPS, so this is a tool, like I mentioned earlier, that looks at the prior three-month period.

The majority of respondents, 77%, reported that during that time period, they had drunk some alcohol, and cannabis use was reported by a quarter of respondents. Prescription medications used in a way not as prescribed, specifically of opioid pain relievers, was reported by 4%, and 8% of respondents reported using anxiety or sleep medications in a way other than as prescribed.

For the CUDIT tool, so this tool again specifically looked at cannabis use and if it was considered misuse or not. The threshold for misuse is a score of 8 or higher. The mean score in our sample was 7.1. However, there were 100 respondents in our sample of 237, again this is individuals who specifically affirmed that they used cannabis, who did have a score over 8.

93% of respondents reported that they were able to stop, 96% reported that they never failed to do what was normally expected of them because of their cannabis use, 80% reported never having memory or concentration issues related to their use, and 85% reported never using in situations that could be considered physically hazardous.

The next slide here reports audit scores. So like I mentioned earlier, so the audit was looking specifically at alcohol use and hazardous drinking or for an active alcohol use disorder. The score there for that threshold is 4. The mean age in our sample was 3.35, with the majority of respondents reporting that they use monthly or 2 to 4 times per month, and they did not report binge drinking.

As you'll see here, one individual's reported drinking, they generally reported having either no drinks or 1 to 2 drinks on typical days where they were reporting drinking. Now getting into our big question about when were individuals who were using cannabis using it in relation to work.

Of the 248 respondents who reported using cannabis, 158, which is 64%, reported using it in the last week and then they completed a 7-day recall. So in that 7-day recall, we asked them to specifically identify which days in the past week they worked and then also on each work and non-work day when they used cannabis and on work days whether they used it, when they use it in relation to work.

So overall, across those patterns of 263 work days in the prior 7-day period, a total of 81% used cannabis, or those work days had cannabis use only after work. The most common substance use alongside of cannabis was alcohol, which for that 7-day recall period was reported by 47.6%.

And now we're going to look at the qualitative findings. There were four themes that we identified when we did the analysis of the open-ended questions as well as the qualitative interviews, and like I mentioned, we triangulated the findings across those both. So the four themes were safer than other substances, impairment versus use, symptom management, and taboo. I will now detail each of these themes.

So on each of these slides, I do have a quote for you to read. So I'm going to let you read the quote and then I will talk a little bit about each theme. As you'll see from this quote, participants who self-identified as substance users frequently mentioned that they perceived cannabis as safer than other substances.

The most common substance that they discussed specifically was alcohol. This perception included the belief that there was a lower risk of addiction, fewer side effects, and less severe health consequences of using cannabis than other substances. As I mentioned earlier, the most common one they compared it to is alcohol. Participants cited fewer incidents of overdose and less aggressive behavior associated with cannabis use than other substances.

Our next qualitative theme was about impairment versus use. So this theme captures the distinction made by participants between the responsible use of cannabis during personal time and unacceptable impairment of using it in a way that would interfere with professional duties. Participants advocated for regulations and testing methods that recognize this distinction, similar to those that apply for alcohol, to ensure both fairness and safety in the workplace.

I will now give you a moment to read the quotes on this slide. Our third theme referred to symptom management. So this was quotes that we came up with that really talked about why individuals reported using cannabis and how they were using it.

So within this theme, we had three sub-themes. These were using cannabis in addition to or in lieu of treatment prescribed by a healthcare provider, the use of cannabis to decompress, relax, and enhance sleep, as well as using it for work-related coping. I think it's important to note here that many of the quotes related to work-related coping did talk about how use had increased during periods of a lot of stress at work.

Specifically, this came up quite a bit in interviews where people talked about their patterns of use over time. Many respondents reported that they used it at the end of the day, which again aligned earlier with our theme that they used it after work only. The next theme was taboo. So the theme taboo reflects the social and professional stigma associated with cannabis use among healthcare professionals.

Participants expressed concerns about judgment and professional repercussions despite legality or medicinal benefits and the use of it off the clock. Participants described that they feared losing their job or licenses due to cannabis use, even in states where it was legal. They also talked about how they were being judged or stigmatized potentially for seeking help in other ways. So on the last slide, for example, how I mentioned that participants discussed coping as a reason for using cannabis or seeking mental health care.

Participants discussed there was a taboo sometimes for seeking help for those conditions and cannabis was something they used in order to address that as well. So to talk overall about integration. So integration and mixed methods research is where you take your quantitative and qualitative findings and you bring them together to expand your understanding and answer of your research questions. So overall, individuals talked about how the majority of their use was after work.

This was something we found in both our quantitative as well as our qualitative responses. Nurses in their qualitative work described it is safer than other substances and this was kind of viewed by our team as a reason supporting why they were choosing to use cannabis to cope. They also used it as a coping strategy and for symptom management was another reason why they were choosing to utilize cannabis.

There was quite a bit of talk specifically about taboo, both of cannabis use but also of seeking help for mental health conditions and other work-related stressors that were decision-making factors in whether nurses were using cannabis or choosing to seek help. Finally, something that came up quite a bit was the role of policy level discussions and testing implications.

So specifically on this topic, nurses especially, we interviewed some travel nurses who talked about how different states across the country had different rules and what that meant for them in their use of cannabis but then also different facilities as well. And then there also was a lot of discussion about how current testing for cannabis isn't entirely there yet as far as being able to tell if someone is, have you used it at a level that is going to inhibit on their patient care or if it is something that they have used in, for example, the last month or something.

So there was a lot of discussion about how there need to be some growth in the different testing modes as well as how those are being used by state boards of nursing and facilities. I would like to discuss some limitations of this study. So this was a cross-sectional survey. And again, we did have the spot in the survey where people reflectively looked back on the last week.

However, that was their recollection of their use during the last week. And all of the survey measures on this study were self-report. And so we had people recalling things that maybe they didn't recall completely accurately, especially when you think about time periods. This is a struggle, though, with any type of cross-sectional survey, but we use them all the time in research because they do provide some really good data.

As far as sampling, we use convenient sampling in order to make it easier for us to get our sample. But also I think something that we did to really kind of combat potential issues related to this was how we did the weighting algorithm. That was our effort to really say that even though our sample may not have been super representative of the larger nursing population, by comparing and weighting our sample, we were able to get at what are the different ways that our sample is related to the general population and overall they were pretty similar.

And finally, cannabis, as I discussed earlier, there are a lot of different kinds of cannabis. There's different modes, different doses. And so cannabis measurement can be difficult in a survey. And so in this survey, like I said, we asked for self-responses about use. And so that's something that could be more accurate in the future. To talk a little bit about what the implications were, nurses in our study reported that they use cannabis at rates similar to the general population.

And this study suggests that the times they were using it was generally after work. So future studies can really look... Again, this study was conducted at kind of the tail end of the pandemic. So it'd be

interesting to look now at what the rates are in comparison to the general population, but then also to look more in depth at this, these other questions surrounding timing of use and how exactly substance use is impacting work performance.

So some other implications to really highlight here, the difficulty to distinguish between someone who is using cannabis and someone who is impaired, it is a 100% true that someone who is using cannabis in a way that affects their patient safety should not be allowed to use it. And so it really is a question of how can state boards of nursing design testing and enforcement in a way that aligns with what is currently done with other substances, but also meets the fact that cannabis is kind of in this gray area in a lot of ways, because it is something that has some medicinal uses as prescribed in some states.

And there are actual nurses associations that have created cannabis nurses. So as we think about what are the therapeutic guidelines that could be used for how nurses and other healthcare professionals should be, if they choose to use cannabis, how should they be using it in a way that is safe for patients?

Cause that ultimately is what's the most important thing here. And part of the things that also came up was we should be teaching nursing students about this, especially as we saw in this study and other studies, nurses are using cannabis. And so instead of in nursing school, just focusing on caring for patients who are using cannabis, are there ways that we can talk to nurses about if they are going to use cannabis, what are the potential impacts of that?

And to combat some of these different things that nurses showed in this study that may not be completely evidence-based as far as their perceptions of cannabis use. Finally, there's a need to address the stigmas and taboos within the nursing profession about seeking care for coping and symptoms of mental health. Like I mentioned, so many of our participants talked about how part of the thing that was motivating their use of cannabis was conditions related to their work.

And then also needing to use cannabis for sleep or stress or different things like that. And so turning to cannabis rather than seeking help was something that I think could be further explored in future studies. And so overall, this study really added to the overall literature on this topic as far as when nurses are using cannabis, but then also what are areas for regulators to think about and to establish guidelines on and education on in the future.

I would like to acknowledge the National Council of State Boards of Nursing for funding this study, as well as our participants and my team. If you have a desire to look at the references and these papers have already been published, you can scan this QR code here and it'll take you to a Google Doc with all my references. I'm really excited to have a good conversation during the live Q&A. So please put any questions you have there.

Otherwise, you can always email me about the study. Thank you so much.

- [Jen] Hi, Jessica. Thank you for joining us today.

- Yeah, it's so nice to be here.

Thank you so much for having me.

- So as you mentioned in your study, you used perceived impact on substance use on patient care. Was there any actual impact on patient care that your studies found?

- So we asked specifically quantitatively about timing of use. And so that would be related to when they used cannabis in relation to their patient care shift. And so like we said, the majority of use was after work. We did have qualitative questions both on the survey itself, as well as in the interviews where we asked about the impact on patient care.

And nurses said that they did not feel that there was an impact on patient care. And so again, that's something that we can further explore in the future. But on our study, nurses were not saying that there was an impact, but there was a portion that were using not after work.

- Thank you. And so one of your key findings was that cannabis use was relatively common among nurses, but mostly reported use occurred after work rather than before or during patient care.

What do you think nurse regulators should take away from that?

- So I think there's a couple different things. So one of the things that nurses talked about quite a bit in the qualitative part that also in the mixed methods findings we looked more into is the fact that there's a difference between use and impairment. So nurses in the qualitative portion of our study talked quite a bit about they may use cannabis, again, in the qualitative portion for the interviews.

We only interviewed people who did use cannabis. So they said that they used cannabis, however, they said they weren't impaired. And cannabis use, I mean, as a researcher, it's really interesting because we don't really have great measures, because there's such a variety of different modes that people can use, different products they can use, different routes they can use, different dosages they can use.

And so it's really hard from a regulatory standpoint to think about how are you going to make rules about all this. I think overall, I mean, we do not want people at work when they're impaired. That's not safe at all. And the thing that we kept hearing from participants was, is there a middle ground or somewhere where people can use cannabis in a way, especially when it is medically prescribed, for example, in a way that is potentially helpful to them, however, that doesn't interfere with patient outcomes.

And that's really what we were looking at in this study. So I think it's really interesting to think about, you know, how can we be encouraging nurses to seek out coping mechanisms that are positive, especially when they're using cannabis as a response to work, which we heard quite a bit as far as they use cannabis to de-stress after work or to cope, or use it to sleep because they have a really hard time sleeping after a shift.

Are there other things that nurses could be using to do this in a way that isn't like cannabis, where there is so much variation in the different modes and different types and the response that people have?

- And then to clarify, are there boards of nursing that prohibit any and all cannabis use?

- I don't know, actually. I think some of it honestly would be related to what state you're in as well. So I'm not familiar with the boards of nursing regulations in every single state. Again, I know there are universal regulations against impairment at work. But as far as use, I think it would potentially vary.

And I think where it gets mucky specifically with cannabis use versus something like alcohol use is that in some states, cannabis use is legal for medicinal purposes. And so then I think it might be a little bit mucky, but that's something I don't know specifically about, what every single state's regulations are.

- And then it's not uncommon for a new grad to lose their job at the pre-employment drug screening stage. Are there perceptions that because it is legal in many places, it would not be a part of that employment screening?

- As far as is this a belief that new grad, well, I guess I'm interpreting the question to be that. So we didn't ask specifically in our study about, you know, new grad nurses and what their thoughts are on screening or testing. So I can't speak to that from study results as far as what leads to failing the drug screening or what they go into those thinking.

- And so another question from our audience is, what is your opinion about the claim that cannabis is safer than other substances? With the lack of regulation and the inability to conduct research due to its former classification as a Schedule 1 controlled substance, it seemed that there is not enough evidence to support the claim.

- Yeah, I agree. I think we don't know enough, honestly. I think that we definitely need more research in this area in general about cannabis use, whether it's used for patients or use as nurses. I think that some of the things that participants said in the interviews, my co-investigator is a mental health nurse practitioner, and he specifically treats people with substance use conditions.

And, you know, I remember him doing these interviews and coming out of the being like, "Some of the things they said, just, like, were not true." And so I think, but that's true in general, right? There is widespread misinformation about cannabis and there's a lot we don't know. So I don't think it's specific to nurses. So I don't personally at this point feel like we've gotten to a place where we know for sure. However, that was a theme we saw in our data was that nurses kept saying, especially nurses who use, saying it's safer than other substances.

And one of the things they often did was compare it specifically to alcohol or other things that we, it's a little clearer on at this point, what the consequences are. And like I said earlier, one of the difficult things about cannabis research, in addition to like the question pointed out, the fact that we haven't done research on it is also the fact that cannabis as a product, there are so many different products within the family of cannabis routes and dosages.

It's really hard to know, you know, when someone says, yes, I use cannabis. There's a lot of follow-up questions that need to be asked about, well, what does that look like for you? How much are you consuming? What kind of response are you having? And so that's something to think about too is I think we definitely need more research in this area specifically to kind of dispel claims that are made.

But yeah, I definitely don't think we're in a place where we can say that officially.

- Right. So then we have time for one last question. And our audience would like to know if you've considered having nurses with different microdosing milligrams in different hours prior or after work, and then placing that nurse in a sim lab and giving them a task to perform on a mannequin to determine the effects on that nurse. So like a very personal study.

- It seems like it's a really interesting idea. I just think in my mind the logistics of a study like that would be really difficult because again, you're having nurses consume cannabis. And so I'm just thinking about an IRB, you know, because cannabis, like, the regulation around cannabis is very difficult. But like I think we were talking about with the last response, really, I think we need more research in this area.

You know, if someone says microdosing, that can mean a lot of different things. And, you know, I think that we need more research. I don't pretend...personally believe I would do that study at this point in time. But I think that, again, to really get more at, you know, what are the levels where people need to be not working where they are impaired.

I think we need to think about, you know, what would that look like.

- Thank you, Jessica, for your presentation and for your time this morning. This concludes our Q&A session. At this time, please return to the lobby and then select the next session that you'd like to attend.

- Thank you so much. And please feel free to email me if you have any questions.