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REVIEW ARTICLE

# Learning that cannot come from a book: An evaluation of an undergraduate alcohol and other drugs subject co-produced with experts by experience

***Mark Goodhew,[1] Jo River,[1] Yvonne Samuel,[2] Chris Gough,[3] Kevin Street,[2] Candice Gilford,[2] Natalie Cutler[1] and Fiona Orr[1]***

*[1]The University of Technology, Sydney, [2]Uniting Medically Supervised Injecting Centre, Potts Point, New South Wales, and [3]Canberra Alliance for Harm Minimisation & Advocacy, Belconnen, Australian Capital Territory, Australia*

**ABSTRACT:** *Alcohol and other drugs (AOD) use is a significant public health issue and is associated with high mortality and morbidity rates. Despite this, people who use drugs are often reluctant to seek care due to the lack of trauma-informed treatment and harm reduction treatment options, as well as experiences of stigma and discrimination in health services. Arguably, AOD education that is co-produced with people who use alcohol and drugs can enhance future health professionals' ability to practice in ways that support the needs of this population. This paper reports on a qualitative co-evaluation of a co-produced undergraduate nursing AOD subject. The AOD subject was co-planned, co-designed, co-delivered, and co-evaluated with experts by experience, who have a lived experience of substance dependence and work as advocates and peer workers. Following the delivery of the subject in 2021 and 2022, focus groups were undertaken with 12 nursing students. Focus group data indicate that the co-produced subject supported participants to understand and appreciate how stigma impacts on nursing care and how to recognize and undertake 'good' nursing care that was oriented to the needs of service users. Student participants noted that being co-taught by people who use drugs was particularly powerful for shifting their nursing perspectives on AOD use and nursing care and took learning beyond what could be understood from a book. Findings indicate that co-produced AOD education can shift nursing students' perceptions of AOD use by providing access to tacit knowledge and embodied equitable and collaborative relationships with people who use drugs.*

**Correspondence:** Mark Goodhew, University of Technology, PO Box 123, Broadway, NSW 2007, Australia.
Email: mark.goodhew@uts.edu.au

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Mark Goodhew, PhD.
Jo River, PhD.
Yvonne Samuel, BSocSc, GradDipOrgDev.
Chris Gough, BS.
Kevin Street.
Candice Gilford.
Natalie Cutler, PhD.
Fiona Orr, PhD.

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**KEY WORDS:** *consumer participation, co-production, education, evaluation research, health occupations, qualitative research, students, substance use.*

## INTRODUCTION

In their undergraduate education, nurses and other health professionals often receive little training about the needs of people who use drugs (PWUD). In this paper, we use PWUD to mean individuals who use alcohol, illicit drugs and prescribed and non-prescribed psychoactive medications and who are substance dependent. Health professionals can hold stigmatizing views towards PWUD (Van Boekel *et al*. 2013) and have little understanding of the healthcare needs of this population. These stigmatizing views can lead to discrimination in the form of a lack of access to equitable healthcare options (AIVL 2015). Co-produced curricula may support healthcare trainee learning and has been used successfully in undergraduate mental health curricula to support healthcare trainees to understand practices that promote personal recovery and challenge stigmatizing views about people who experience mental distress (Happell *et al*. 2019a,b; Horgan *et al*. 2018). This paper describes a qualitative research co-evaluation of an elective undergraduate Alcohol and other Drugs (AOD) nursing subject, which was co-produced by nurse educators, senior AOD nurse clinicians, and experts by experience (EBE) in the context of teaching and learning. In this paper, EBE refers to people who have a lived experience of substance dependence and accessing AOD treatment services, who are peer workers and advocates, and are employed to co-design and co-teach health curricula due to their expertise in the lived experience of PWUD, as well as in trauma-informed principle and harm reduction principle and practice. The subject aimed to build the knowledge, skills, and capacity of undergraduate nurses to provide high-quality and dignified care to PWUD. This paper, which is co-authored with four EBE, describes the research co-evaluation of the AOD nursing subject.

## BACKGROUND

Each year, over 2% of the world's population are diagnosed with substance dependence (Ritchie 2019). Substance dependence refers to a physiological, psychological, and cognitive reliance to the extent that substance use is prioritized over other activities that were previously valued by a person (World Health Organization 2020). The use of AOD is increasing. In 2021 around 275 million people used substances, an increase of 22% since 2010 (UNODC 2021). By 2030, it is predicted that substance use will rise by 11% (UNODC 2021). Substance dependence can lead to significant harm. Annually, there are 11.8 million AOD-related deaths worldwide, and an estimated 97% of these people die prematurely (Ritchie 2019). In 2019, high death rates were largely attributed to opioid overdoses related to medications like OxyContin (slow-released opioid tablet), which were assertively marketed for chronic pain in the late 1990s and early 2000s (Jones *et al*. 2018). Substance dependence is also associated with hospitalization, injuries, liver-related disease, mental distress, and social issues such as homelessness (Australian Institute of Health and Welfare 2019).

As frontline workers, nurses have considerable contact with PWUD and are essential in reducing the harms associated with substance dependence (Smothers *et al*. 2018; Tierney *et al*. 2020). Although substance use is increasing and associated with serious health and social problems, nurses and nursing students can hold stigmatizing views of PWUD. These views often reflect community stereotypes about PWUD being 'manipulative', 'criminal', and 'drug seeking' (Copeland 2020; Horner *et al*. 2019; Neville & Roan 2014; Smyth *et al*. 2021). The experience of stigma from health professionals creates a secondary health risk for PWUD, as they may be reluctant to access health services or may discharge themselves from treatment against medical advice due to experiences of stigma and discrimination (Simon *et al*. 2020). This can leave PWUD to struggle alone with withdrawal symptoms, pain or other health issues that are not adequately treated. Poor attitudes among nurses also relate to a lack of undergraduate and postgraduate AOD education, which leaves nurses unprepared to support PWUD (Smyth *et al*. 2021; VAADA 2019). Without adequate preparation, future nurses' stigmatizing views and lack of knowledge mean they are unlikely to be able to meet the complex needs of PWUD.

There is little evidence of the involvement of PWUD in AOD education. Where it exists,

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involvement tends to centre around role plays or the telling of personal stories (Roussy *et al*. 2015; Valenti & Allred 2020). While research indicates that personal stories can shift health professionals' negative views of PWUD (Valenti & Allred 2020), lived experience scholars have noted that personal stores are often a tokenistic 'add on' to training and can invite voyeurism among health professionals and effect little real change to practice (Meehan & Glover 2007). In the context of AOD, subjects that involve PWUD still tend to emphasize abstinence treatments (e.g. Valenti & Allred 2020), which indicates a lack of understanding of the broader treatment needs and goals of PWUD. Indeed, PWUD and EBE are largely united in calling for a focus on education about harm reduction principles and practices and not abstinence treatments alone (Canedo *et al*. 2022), as evidence indicates harm reduction approaches reduce drug-related harms, such as overdose and blood-borne virus transmission (Degenhardt *et al*. 2019). Furthermore, anecdotal reports from across Australia suggests that PWUD want to access services that can be tailored to their individual AOD goals and develop person-centred care plans utilizing integrated service planning from harm reduction to abstinence-centred services depending on individual needs (AIVL 2015).

Arguably, education on AOD use that is developed in collaboration with EBE would ensure their perspectives and needs are better represented (SAMHSA 2014). Studies indicate that education that is co-produced with people from marginalized social groups, such as PWUD, better prepares nurses to become person-centred practitioners who are less likely to stigmatize and can communicate and develop collaborative relationships with people from marginalized groups (Classen *et al*. 2021; O'Connor *et al*. 2021). Being co-taught by people with lived experience of mental distress, for example has been found to better prepare student nurses for contemporary mental health nursing practice, to see beyond diagnostic labels to the inherent strengths of service users, and to appreciate the importance of therapeutic and collaborative relationships for promoting recovery (Happell *et al*. 2019a, b; Horgan *et al*. 2018).

However, to date, co-production has not been evaluated in the context of AOD education. This paper reports on the qualitative co-evaluation of an undergraduate AOD nursing subject. The co-evaluation explored students' experiences of the co-produced content and being co-taught by EBE. Students' understanding of best practice approaches in AOD nursing, and any shifts in their perceptions and attitudes towards PWUD were also explored.

## METHODS

This study uses a co-production framework. Co-production is an approach that emerged from social care and civil rights movements (Cahn 2000; Ostrom & Ostrom 1978) and involves equal partnerships with people experiencing a health issue or circumstance throughout all stages of co-planning, co-design, co-delivery, and co-evaluation (Horner 2016; Roper *et al*. 2018b). Co-planning involves decisions about what has to be solved, who needs to be included and over what time period; co-design is a process of defining the issue to be addressed and developing possible solutions; co-delivery relates to the allocation of tasks for the delivery of a programme or intervention; and co-evaluation is the process of deciding on how outcomes are going to be measured (Roper *et al*. 2018b). Rather than being just a series of stages, co-production is founded on an ethos of prioritizing the perspectives of people with lived experience and challenging entrenched hierarchical power in favour of authentic relationships and equitable decision-making (Bellingham *et al*. 2021; Horner 2016; Roper *et al*. 2018a).

### Co-producing the nursing subject

Following the work of Roper *et al*. (2018a) and others, for example Bellingham *et al*. (2021), a team of nurse educators, EBE and clinical nurses came together to co-produce an undergraduate AOD nursing subject. The co-produced subject focused on types of AOD use, factors leading to dependence, origins and impacts of stigma, humane and collaborative models of care, and evidence-based harm reduction principles and practice (Goodhew *et al*. 2021). Table 1 outline's the AOD nursing subject learning objectives, and Table 2 provides details of the subject content across three modules. More detail about the collaborative process and development of the AOD nursing subject have also been reported elsewhere (see Goodhew *et al*. 2021).

### Qualitative co-evaluation

The co-evaluation drew on a qualitative descriptive design outlined by Sandelowski (2000, 2010). This research method has become popular in nursing educational research as it can allow researchers to investigate new phenomena, and provide detailed and accurate

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**TABLE 1** *Nine learning objectives of the AOD undergraduate nursing subject*

| The AOD subject will enable students to: |
|---|
| i. examine the various social, biological, and genetic theories of AOD dependence including complex trauma; |
| ii. learn how the War on Drugs shapes societal attitudes about drug use and influences AOD care; |
| iii. consider the importance of language and its potential detrimental impact on service users; |
| iv. examine perspectives from experts by experience, ADO nurses, and educators; |
| v. reflect on their attitudes about AOD use; |
| vi. explore AOD treatments and consider both harm reduction and abstinence-based options; |
| vii. consider the physical health needs of service users; |
| viii. develop interpersonal and counselling skills that will enable the creation of therapeutic relationships with service users; |
| ix. become proficient in conducting collaborative AOD assessments and AOD clinical skills. |

**TABLE 2** *Three Modules of the AOD undergraduate nursing subject*

| *Module One* |
|---|
| Concentrates on the various types of AOD use, dependency, and treatments. The module also considers causation theories (e.g. social determinants, trauma, biochemical, and genetic) of drug dependency, and would explain how the war on drugs shaped treatment and care and public health Consequences |
| *Module Two* |
| Concentrates on evidence-based harm reduction interventions such as supervised injecting centres, needle and syringe programmes, community naloxone programmes and pill testing, and how they can be used to reduce the risks associated with drug use. |
| *Module Three* |
| Concentrates on the students learning skills including collaborative comprehensive AOD assessments, monitoring and intervening in AOD withdrawals, dispensing opioid replacement therapy, observing the physical and behavioural signs of AOD intoxication, communication skills and motivational interviewing skills. |

accounts that stay close to the intended meaning of participants (Sandelowski 2000). This method was deemed useful for exploring the experiences and perceptions of students in a novel co-produced AOD nursing subject. Qualitative methods allow in-depth exploration of experiences and perspectives while remaining close to the intended meaning of the participants (Sandelowski 2010; Stebbins 2001). The nursing subject, co-delivered in 2021 and 2022, is an elective for students interested in AOD nursing as a speciality. It entails seven 3-hour workshops and an 80-h AOD clinical placement. Four of the workshops are co-delivered with EBE, and three co-delivered with specialist AOD clinical nurses.

## Data collection and analysis

Following approval from the relevant University Human Research Ethics Committee, undergraduate nursing students who completed the AOD nursing subject were invited to participate in a 90-min focus group. Focus groups ran in 2021 and 2022 following each subject offering and were digitally recorded and transcribed verbatim. Data were de-identified before analysis.

Data were collaboratively analysed by three nurse educators with expertise in qualitative methodologies and three EBE with lived expertise. The analysis was guided by conventional content analysis (Hsieh & Shannon 2005) and a dialogical inquiry process (Wells *et al*. 2021). Conventional content analysis has been described as a 'flexible' method for analysis of textual data (Cavanagh 1997). Dialogical inquiry allows investigators to collectively interpret qualitative data to generate new kinds of knowledge and explore the perspectives of 'co-researchers from diverse social, political and epistemic positions' (Wells *et al*. 2021) and has been used previously in co-produced educational research (Bellingham *et al*. 2021).

The analysis followed Morse and Field's (1995) conventional content analysis strategy. Each researcher first read the focus group transcripts (unit of analysis) line by line to immerse themselves in the data. Next, each researcher re-read the transcript highlighting text and writing key words in the margins that captured their impression of the data on students' experiences of

[Correction added on 16 December after the first publication: The sentence "It entails 734 workshops and an 80-h AOD clinical placement" has been corrected to "It entails seven 3-hour workshops and an 80-h AOD clinical placement]

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the co-produced content and being co-taught by EBE, including any shifts in knowledge, perceptions, and attitudes. A meeting was then arranged for the researcher team to discuss impressions of the data. Detailed notes were taken and used to organize impressions into meaning units, for example words, sentences or paragraphs containing aspects that related to each other and from these preliminary codes were developed. The dialogical inquiry process involved discussion of initial codes, including dialogue and re-coding, and categorizing of codes until agreement was reached. The final three categories, or clusters of codes, are described below.

## FINDINGS

Twelve of 52 students enrolled in the subject participated in two focus groups between 2021 and 2022. The three main categories from the analysis include, how engaging with EBE provided 'Learning that can't come from a book'; how the subject supported students 'Understanding of stigma and the impacts on nursing care'; and helped them in 'Appreciating what good nursing care looks like'.

### Learning that cannot come from a book

Co-production of the AOD nursing subject led to a strategy of co-teaching with EBE that was experienced by student participants as enhancing their learning beyond traditional educational approaches. As one participant put it, EBEs are 'irreplaceable' because their perspective on substance use cannot come from a 'book' or 'academic' but must come from the 'consumer themselves standing there telling you about it – it is a whole different experience'. As one participant stated:

> Every time I listened to a story, I had that moment where I thought, "I never knew enough before", and it was like a door being unlocked every single time. I think I understood, or maybe I understood it from the outside, but when you really hear it from someone that's actually been through it, you can't look at it from just an educational outside, you all of a sudden are feeling the weight of their story. (FG2)

Data indicate that exposure to EBE perspectives was particularly useful to students as EBE embodied the experience they sought to teach about:

> …... most nurses might come to it from a treatment approach and being exposed to people who have lived that experience, but these are the people who are that experience. They're the ones who have used drugs and have been through the works, and it makes them more passionate about it and so they can deliver something different to the teaching. They're very passionate about educating people on how to treat them better, so they have a different interest and a strong motivation. I think that's really good. (FG1)

As this quote above highlights, EBE embodiment of a particular experience and their ability to project a 'passion' in advocating for improved care, was perceived as useful to student learning.

Students also indicated that co-teaching, which was another aspect of the co-produced education strategy and involved nurse educators and clinicians teaching alongside EBE, was experienced as powerful for embodying a respectful and collaborative relationship that mirrored what would be possible with PWUD. As two students discussed:

> Student 1: I think even the relationship between all the guest speakers that
> have been here, everyone, it's very equal –
> Student 2: There's genuine affection. They're like friends.
> Student 1: It sounds bad saying it now that I'm saying it out loud, but that they were at the same level. That even though those past experiences, their recovery process didn't stop them from reaching that level, and the nurses are not being like, 'You were a past…' – they didn't stigmatise that. And how everyone was saying how open-minded they were to that. They just didn't judge them.
> Student 2: Yeah, the level of respect (FG2)

One student noted that this 'level of respect' was embodied by the nurse educators from the get-go, with EBE being introduced as educators, who were not only equals but also had a privileged position in the discussion about best practice, and as one student put it, could 'probably teach you the most'. Interestingly, students indicated that, although they were initially surprised to see this level of respect for EBE, it supported them to 'engage more' and created a 'safe place to talk' about AOD use in the community from a non-judgemental position. For students, this was experienced as very 'supportive' and engaging and made them want to learn more.

### Understanding stigma and the impacts on nursing care

Data from this study indicate that the co-produced subject, which focused on deconstructing stigma in co-

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teaching exercises, also challenged participants to reconsider stereotypical depictions of AOD users and consider the link between stigma and poor nursing care.

Data indicates that having EBE in the room challenged participants' stereotypes about PWUD and disrupted the idea that they are, as one student put it, 'shrivelled up, morally corrupt' 'frail looking homeless person' 'with track marks up their arms'. Indeed, the subject appeared to provide students with an alternative and more humanising view of PWUD. As students stated, after being co-taught by EBE, they learned from them that PWUD can be: 'Functional and healthy and looking after themselves even while they're still using'.

Additionally, teaching exercise led by EBE, which involved googling 'healthy person' and 'drug user', supported them in appreciating how discrimination against PWUD are tied to other forms of discrimination. For example, participants noted the use of racist and ableist images to stigmatize PWUD, with healthy images depicting predominately 'white, blonde healthy with straight white teeth, while on the other hand, PWUD were portrayed as 'dark and people without teeth'.

Data indicate that the co-produced subject also supported participants to learn that PWUD are also highly stigmatized in AOD treatment settings, and that drug treatment services can perpetuate, rather than reduce, stigma and lead to discriminatory treatment of PWUD, where they are treated as untrustworthy, for example constant drug urine tests or restricting access to treatment, including methadone, and restricting access to services, including:

> [not allowing PWUD] to park in the public car park, as they didn't want their non-using clients to know that they had drug users as a secondary clientele. They didn't want to mix them so they just absolutely demonised their drug-using clients, and it was pretty bad. (FG1)

Making stigma and discrimination in nursing practice more visible to participants allowed them to reflect on how they had witnessed PWUD receiving poor and discriminatory care on clinical placements. Participants described incidents where nurses berated AOD patients with statements such as 'you don't deserve care', or providing 'inadequate pain relief', and 'just focus(ing) on the medical aspects' of their care. As one student noted, these practices created a 'barrier' between healthcare professionals and compromised opportunities for therapeutic engagement with people who use.

Further to this, participants also reflected on their own stigmatizing attitudes and discriminatory practice on clinical placements. One student reported that prior to taking the AOD nursing subject, they did not realize terms like 'dirty', 'clean', 'addiction', and 'addict' were 'stigmatizing language' and were therefore counterproductive to supporting AOD patients. Data indicate that understanding nursing stigma and discrimination had implications for participants' future nursing practice. As one student stated:

> I feel like we've all been exposed to someone that's had some drug history or is currently on drugs, whether it's on the street or whatnot, and I think the subject helped me not stigmatise it. I think I did have that stigma mindset where I would use those slur terms like, "That's just a drunk". And now I feel like going to a healthcare setting, I'd be able to utilise these techniques that we've learnt and not have that approach where, 'He's just another drug user' and be like, "oh this person has probably sought help multiple times, and they're back because they just want to get help again". (FG2)

In addition to clinical practice, participants discussed how the co-produced subject, which included content on the global 'war on drugs', supported them to realize that AOD treatment is highly politicized. Participants realized that governments and health care systems distort the reality of drug use as they – 'are not being real' or 'honest' and the notion that 'it's a criminal offence, you shouldn't do drugs,' 'perpetuates the stigmatization of PWUD'. In addition, students came to understand the harms of drugs criminalization, which could 'make things worse' for PWUD as they might end up being highly marginalized, isolated, fined or jailed rather than assisted to reduce the potential harms of substance dependence. A participant provided the example of the danger of police drug sniffer dogs being used at music festivals:

> ...at music festivals the reasons people have overdoses is because they see the cops, they see the dogs coming and they take the three tablets that they were supposed to have throughout the entire day or that they were supposed to be giving to three of their friends, and then they have an overdose (FG1)

Interestingly, some participants also described how, after engaging in the subject, they took up advocacy work to decriminalize drug use. For example, in focus group 1, a participant stated:

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> I feel like it's very conservative here in Australia. We looked at Portugal, they decriminalised and moved more towards harm and overcoming the dependence rather than, 'Okay, you're dependent' or, 'You have substances with you, let's put you in a jail. [...] I can stand up and use my voice to advocate for other people to empower them to get the help that they deserve and that they're entitled to. (FG1)

## Appreciating what good nursing care looks like

Beyond understanding what stigma and discriminatory practices participants would like to avoid, student participants also indicated that the co-produced AOD nursing subject supported them to understand nursing practices that supported PWUD to have good health outcomes.

Participants reflected on how qualified nurses struggled to care for patients who were withdrawing from substances, and now realized that this triggered patients to discharge against medical advice.

> They don't always know what to do. They go, "Oh yeah, I'll do an alcohol withdrawal scale" and then don't know what to do after that beyond give Valium and thiamine. They don't understand it. (FG1)

Data indicated that content helped student participants to appreciate that person-centred, collaborative relationships and respectful language were the cornerstones of providing good AOD nursing care. Participants reported that they came to understand the importance of collaborative relationships in AOD nursing:

> You have a proper conversation and a therapeutic relationship in place in order to facilitate. So I hadn't really thought about that and how much it had to be patient-led before. (FG1)

For some students, role plays with EBE were particularly important for understanding what collaboration might look like:

> That role play was so eye-opening. You learn how to be welcoming, how to treat people without any judgment because everyone deserves to be taken care of. [...] Rather than being the assessor of the patient or whatever, you get to see it from a different point of view, whereas the language that you use and how you approach a person can really affect their outcome rather than just being, 'Let's do this' and then the patient's like, 'Oh well, doesn't really work for me.' Whereas if you open and give them options it's more therapeutic and you can have a better relationship and help them. (FG2)

Indeed, participants also learned that stereotyping and derogatory language disrupted collaborative relationships and 'vilified the patient', and that successful relationship depended on respect and 'trust' which 'has to go both ways'. One participant stated, following participation in the AOD nursing subject, inspired them to change their nursing practice and:

> Stand up and use my voice to advocate for other people to empower them to get the help they deserve and that they're entitled to. (FG1)

Data indicate that the co-produced subject also taught participants that abstinence treatments could be limiting and recovery from dependence is rarely straightforward, and some people never stop using. Participants specifically reported that EBE reframed their understanding of treatment success, and they came to see that reducing AOD-related harms via harm reduction interventions was an important intervention and on a continuum towards rehabilitation and detox, but that 'abstinence will not work on the first go, and it will probably not work on the second go' and as one participant stated:

> I had always understood that there was that drive towards abstinence – just completely stopping – and I didn't know that actually it could be quite therapeutic to not have to push it all the way to that end degree but rather deal within a manageable space in that harm reduction space. I found that really interesting, and it made me completely rethink my approach. (FG2)

Data indicate that participants also came to understand that while moving towards abstinence can work for some people, many people can find abstinence challenging because of 'mental health and trauma symptoms,' and because they live 'in an environment with PWUD' and abstinence may leave people 'feeling isolated and lonely'. Indeed, for many students, the link between trauma, emotional distress, and substance use was eye-opening:

> I think listening to people's lived experiences and the trauma they went through. I think especially [EBE] story was really – I think that's when I was like it makes sense why you would turn to drugs, especially being abandoned when so young. I just realised how for granted I took my life. (FG2)

> Prior to that [teaching from EBE] I didn't even know that was a place you could be or that you could feel like that. So, I think for health practitioners to understand – to have any kind of understanding of those feelings, it's a really big thing. It's really important for



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> us to grasp that concept, and not just be like, 'Why don't you just pick yourself up and feel better?' or, 'Why can't this therapy just help you?' and you're like, 'Because I can't receive it.' (FG2)

Participants found it particularly meaningful to learn about how harm reduction reduces the risk of disability and death and increases the chance of individuals being able to 'live their life'. This understanding is caught in the following quote:

> I think I thought before if someone is no longer using that is a success story, whereas I've now started to look at okay, well, if I've educated them and they have a better understanding of, for example, how to use Naloxone that's a success story if they have access to clean needles now that's a success story if they've started going into the MSIC [Medically Supervised Injecting Centre] that's a success story and looking at that a bit more as okay safety. (FG1)

Additionally, participants came to understand that PWUD substances were likely to have unmet healthcare needs beyond AOD services due to stereotypes about PWUD being 'drug seeking'. As one student stated:

> Now if I think about it, I'd be more therapeutic and more engaging as to why this happened, or how can we make them more comfortable in this environment when obviously it's not somewhere that they want to be but [where] they want to be seeking help. (FG2)

## DISCUSSION

This qualitative co-evaluation of a co-produced undergraduate AOD nursing subject indicates that the subject enhanced the understanding of nursing students about effective nursing care that is oriented towards the needs of PWUD. While government and key organizations recognize that AOD care should be accessible, ethical, collaborative, and person-centred (NADA 2020; NSW Ministry of Health 2020), PWUD continue to report experiences of discrimination and exclusion in health services as well as poor health outcomes (Van Boekel *et al*. 2013). In order to foster better care and health outcomes, the knowledge and experience of PWUD should be embedded at all levels of policy development, service planning, and programme delivery (AVIL 2003; Department of Health 2013) To date, few studies have explored how co-produced AOD curricula can contribute to this aim, and thus, PWUD have largely been excluded from AOD curricula design and delivery (Goodhew *et al*. 2021). This study found that co-produced undergraduate AOD nursing curricula not only promoted nursing students' understanding of the impact of stigma on PWUD, it also made this visible in relation to nursing practice and supported students to commit to ethical, collaborative, and person-centred approaches to care.

The category, 'Understanding stigma and the impacts on nursing care' indicates that the presence of EBE as co-teachers, which came out of the co-production design and delivery stages, made students' and nurses' stigmatizing beliefs and discriminatory practices more visible to the participants. As participants noted, EBE were able to directly challenge stereotypes that were often associated with AOD use. (Copeland 2020; Horner *et al*. 2019; Neville & Roan 2014). This is consistent with studies that indicate 'contact-based' education can support educators to challenge assumptions and reduce stigma and discrimination towards marginalized groups (Corrigan *et al*. 2013; Knaak *et al*. 2014). Additionally, being taught by EBE allowed students to move away from seeing a person as a 'presenting problem', and towards a more critical perspective of health service delivery, a finding that has been reported previously by Happell *et al*. (2019c, p. 954).

The category, 'Learning that can't come from a book' indicated that being taught by EBE took students' learning beyond what they could learn from a text, nurse educator or clinician, as it allowed them to feel the 'weight' and import of lived experience. This finding is consistent with Byrne *et al*. (2013), who found that comprehension of content and attitudes among healthcare students improves when they are co-taught by EBE. This study adds to and extends on the work of Byrne *et al*. (2013), indicating that co-produced and co-delivered AOD nursing education is compelling as it supports students to connect with the embodied knowledge of EBE. Palmer (1998) has previously noted the value of embodied connectedness in education, where educators not only teach concepts but also teach who they are and their 'embodied connectedness to the knowledge being taught' (Palmer 1998). However, lived experience knowledge extends Palmer's (1998) conception of embodied connectedness, pointing to the unique power of the tacit, embodied, and emotional knowledge of people with lived experience (Bell & Pahl 2017) who *are* the experience being taught (e.g. Bellingham *et al*. 2021). Furthermore, this category also highlighted that the strategy of nurse educators, clinicians, and EBE co-

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teaching also supported embodied connectedness to concepts that were taught about respectful and power-sharing in collaborative relationships.

The category, 'Appreciating what good nursing care looks like' indicates that co-produced curricula in AOD nursing can provide a detailed understanding of care practices that are necessary for effective care for PWUD in health services. In the context of AOD nursing, this is an important finding. Although the Australian registered nurses' standards of practice mandate collaborative care and respectful communication (Nursing and Midwifery Board 2016), research indicates that PWUD are often excluded from decisions about their care (Goodhew *et al*. 2019), and experience disrespectful language (Werder *et al*. 2022). Our co-evaluation shows that co-produced nursing curricula may support healthcare trainees to prioritize respectful collaboration and communication when working with PWUD.

This category indicates that the co-produced AOD subject also inspired participants to commit to harm reduction and trauma-informed frameworks of care. This extends the literature about nursing education involving EBE, as no previous studies have focused on PWUD co-producing curricula and how they can effectively teach nurses about frameworks of care, such as harm reduction and trauma-informed care. Trauma-informed care and harm reduction principle and practices have not only been a long-term request of PWUD (Canedo *et al*. 2022; SAMHSA 2014), but also the practices can support AOD users' access to care and improved health outcomes, as well as their sense of moral worth and deservedness of care (Iammarino & Pauly 2020). As reported previously by Hardill (2019), this study also found that providing knowledge about the social and political context of drug use can support nurses in understanding the associated harms and advocate for the decriminalization of drugs.

### Limitations

The strength of this study is in the co-production approach that informed the co-design and co-evaluation of the undergraduate AOD nursing subject. Participants in this study were undergraduate nursing students from one Australian university, and thus the study findings may not be generalizable to other settings. Nonetheless, qualitative research does not seek to be representative, but rather to explore 'richly textured' understanding of a phenomenon of interest (Sandelowski 1995, p.183). While the inclusion of people with a lived experience in health research has been criticized for introducing bias, powerful arguments have been put forward that this ignores the proven value of lived experience involvement in research as well as obscuring disciplinary bias of conventional health researchers (Bellingham *et al*. 2021). Indeed, EBE who co-produced and co-analysed study data, provided detailed suggestions for future iterations of the subject, including having perspectives of more diverse and marginalized PWUD, particularly people with intersectional experiences who engage in drug use. EBE also suggested that nursing students could gain a more comprehensive and compassionate understanding of diverse lived experience perspectives, including of harm reduction practice, if they were assigned a clinical placement in a specialized harm reduction service.

## CONCLUSIONS

This study provides evidence that co-producing AOD education with EBE effectively challenges nursing students' stigmatizing beliefs towards PWUD. The co-produced subject enhanced students' understanding of origins and impacts of stigma and the value of collaborative, person-centred care that is trauma-informed and focused on harm reduction. Importantly, co-teaching with EBE provided students with an opportunity to connect with the embodied, tacit knowledge of PWUD, and the embodied collaboration between health educators, clinicians, and EBE in the classroom served as a blueprint for collaboration in health professional practice.

## RELEVANCE FOR CLINICAL PRACTICE

With increasing AOD use and related harms, nurses need to be skilled at delivering person-centred, collaborative care that is trauma-informed and focused on harm reduction. This study suggests that co-produced education, prioritizing lived experience perspectives, could be an important way forward. Co-produced education has the potential to shift nursing students' attitudes and pave the way for future AOD nursing care that is focused on the articulated needs of PWUD and has the potential to improve health outcomes for this marginalized population. It is recommended that AOD education be provided for all nurses at both undergraduate and postgraduate levels of education, with co-produced educational design and co-delivery at the core of this approach.

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## REFERENCES

AIVL. (2015). *Stigma and Discrimination as Barriers to Health Service Access for People Who Use Drugs*. [Cited 25 May 2022]. Available from: https://www.efaidnbmnnnibpcajpcglclefindmkaj/https://www.removingbarriers.ashm.org.au/wp-content/uploads/2017/05/ASHM-project-AIVL-Stigma-submission.pdf

Australian Institute of Health and Welfare. (2019). *Alcohol, tobacco & other drugs in Australia*. [Cited 25 May 2022]. Available from: https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/impacts/health-impacts.

AVIL. (2003). *National Statement on Ethical Issues for Research Involving Injecting/Illicit Drug Users*. [Cited 25 May 2022]. Available from: https://www.aivl.org.au/aivl-2003-national-statement-on-ethical-issues-for-research-involving-injecting-illicit-drug-users/

Bell, D. M. & Pahl, K. (2017). Co-production: Towards a utopian approach. *International Journal of Social Research Methodology*, *21*, 105–117.

Bellingham, B., Kemp, H., Boydell, K., Isobel, S., Gill, K. & River, J. (2021). Towards epistemic justice doing: Examining the experiences and shifts in knowledge of lived experience researchers over the course of a mental health research training programme. *International Journal of Mental Health Nursing*, *30*, 1588–1598.

Byrne, L., Happell, B., Welch, T. & Moxham, L. J. (2013). 'Things you can't learn from books': Teaching recovery from a lived experience perspective. *International Journal of Mental Health Nursing*, *22*, 195–204.

Cahn, E. (2000). *No More Throw-Away People: The Coproduction Imperative*. Washington, DC: Essential Books.

Canedo, J., Sedgemore, K. O., Ebbert, K. *et al*. (2022). Harm reduction calls to action from young PWUD on the streets of Vancouver and Lisbon. *Harm Reduction Journal*, *19*, 43.

Cavanagh, S. (1997). Content analysis: Concepts, methods and applications. *Nurse Researcher*, *4* (3), 5–16.

Classen, B., Tudor, K., Johnson, F. & Mckenna, B. (2021). Embedding lived experience expertise across the mental health tertiary education sector: An integrative review in the context of Aotearoa New Zealand. *The Journal of Psychiatric and Mental Health Nursing*, *28*(28), 1140–1152.

Copeland, D. (2020). Drug-seeking: A literature review (and an exemplar of stigmatization in nursing). *Nursing Inquiry*, *27*, e12329.

Corrigan, P. W., Vega, E., Larson, J. *et al*. (2013). The California schedule of key ingredients for contact-based antistigma programs. *Psychiatric Rehabilitation Journal*, *36*, 173–179.

Degenhardt, L., Wolfe, D., Hall, W. *et al*. (2019). Strategies to reduce drug-related harm: Responding to the evidence base. *The Lancet*, *394*, 1490–1493.

Department of Health, Victoria. (2013). *Alcohol and other drug treatment priniciples*. [Cited 25 May 2022]. Available from: https://www.health.vic.gov.au/aod-service-standards-guidelines/alcohol-and-other-drug-treatment-principles [Accessed 18th July 2022].

Goodhew, M., Stein-Parbury, J. & Dawson, A. (2019). Consumer participation in drug treatment: A systematic review. *Drugs and Alcohol Today*, *19*, 97–112.

Goodhew, M., Samuel, Y., Gilford, C. & River, J. (2021). Co-producing a drug and alcohol nursing subject with experts by experience. *Australian Journal of Clinical Education*, *8*, 1–12.

Happell, B., Gordon, S., Bocking, J. *et al*. (2019a). "chipping away": Non-consumer researcher perspectives on barriers to collaborating with consumers in mental health research. *Journal of Mental Health*, *28*, 49–55.

Happell, B., Platania-Phung, C., Scholz, B. *et al*. (2019b). Changing attitudes: The impact of expert by experience involvement in mental health nursing education: An international survey study. *International Journal of Mental Health Nursing*, *28*, 480–491.

Happell, B., Waks, S., Bocking, J. *et al*. (2019c). 'There's more to a person than what's in front of you': Nursing students' experiences of consumer taught mental health education. *International Journal of Mental Health Nursing*, *28*, 950–959.

Hardill, K. (2019). That look that makes you not really want to be there: How neoliberalism and the war on drugs compromise nursing Care of People who use Substances. *Witness: The Canadian Journal of Critical Nursing Discourse*, *1*, 13–27.

Horgan, A., Manning, F., Bocking, J. *et al*. (2018). 'To be treated as a human': Using co-production to explore experts by experience involvement in mental health nursing education - the COMMUNE project. *International Journal of Mental Health Nursing*, *27*, 1282–1291.

Horner, L. (2016). *Co-Constructing Research: A Critical Literature Review*. Bristol, UK: Arts and Humanities Research Council. [Cited 25 May 2022]. Available from: https://connectedcommunities.org/index.php/project_resources/co-constructing-research-a-criticalliterature-review

Horner, G., Daddona, J., Burke, D. J., Cullinane, J., Skeer, M. & Wurcel, A. G. (2019). "You're kind of at war with yourself as a nurse": Perspectives of inpatient nurses on



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treating people who present with a comorbid opioid use disorder. *PLoS One*, *14*, e0224335.

Hsieh, H.-F. & Shannon, S. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*, 1277–1288.

Iammarino, C. & Pauly, B. (2020). Harm reduction as an approach to ethical nursing care of people who use illicit substances: An integrative literature review of micro and meso influences. *Drugs: Education, Prevention and Policy*, *28*, 533–546.

Jones, M. R., Viswanath, O., Peck, J., Kaye, A. D., Gill, J. S. & Simopoulos, T. T. (2018). A brief history of the opioid epidemic and strategies for pain medicine. *Pain and therapy*, *7*, 13–21.

Knaak, S., Modgill, G. & Patten, S. B. (2014). Key ingredients of antistigma programs for health care providers: A data synthesis of evaluative studies. *Canadian Journal of Psychiatry*, *59*, 12–26.

Meehan, T. & Glover, H. (2007). Telling our story: Consumer perceptions of their role in mental health education. *Psychiatric Rehabilitation Journal*, *31* (2), 152–153.

NADA. (2020). *Workforce Capability Framework: Core Capabilities for the NSW Non-Government Alcohol and Other Drug Sector*. Sydney: Network of Alcohol and Other Drugs Agencies [NADA].

Neville, K. & Roan, N. (2014). Challenges in nursing practice: Nurses' perceptions in caring for hospitalized medical-surgical patients with substance abuse/ dependence. *The Journal of Nursing Administration*, *44*, 339–346.

NSW Ministry of Health. (2020). *Clinical Care Standards: Alcohol and Other Drug Treatment*. NSW Ministry of Health: St Leonards.

Nursing and Midwifery Board. (2016). *Registered Nurse Standards for Practice*. [Cited 25 May 2022]. Available from: https://www.nursingmidwiferyboard.gov.au/codes-guidelines-statements/professional-standards/registered-nurse-standards-for-practice.aspx.

O'Connor, S., Zhang, M., Trout, K. K. & Snibsoer, A. K. (2021). Co-production in nursing and midwifery education: A systematic review of the literature. *Nurse Education Today*, *102*, 104900.

Ostrom, V. & Ostrom, E. (1978). Public goods and public choices. In: E. Savas (Ed). *Alternatives for Delivering Public Services: Toward Improved Performance*. New York, NY: Westview Press.

Palmer, P. (1998). *The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life*. San Francisco: Josey-Bass.

Ritchie, H. (2019). *'Drug Use' OurWorldInData.org*. [Cited 25 May 2022]. Available from: https://ourworldindata.org/drug-use [Accessed 7th November 2021].

Roper, C., Grey, F. & Cadogan, E. (2018a). *Co-production: Putting principles into practice in mental health contexts*. Melbourne: Melbourne University. [Cited 25 May 2022]. Available from: http://www.efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fhealthsciences.unimelb.edu.au%2F__data%2Fassets%2Fpdf_file%2F0007%2F3392215%2FCoproduction_putting-principles-into-practice.pdf [Accessed 7th December 2021]

Roper, C., Grey, F. & Cadogan, E. (2018b). *Co-production: Putting principles into practice in mental health contexts*. Melbourne: University of Melbourne. [Cited 25 May 2022]. Available from: https://recoverylibrary.unimelb.edu.au/__data/assets/pdf_file/0010/2659969/Coproduction_putting-principles-into-practice.pdf [Accessed 16th October 2018]

Roussy, V., Thomacos, N., Rudd, A. & Crockett, B. (2015). Enhancing health-care workers' understanding and thinking about people living with co-occurring mental health and substance use issues through consumer-led training. *Health Expectations*, *18*, 1567–1581.

SAMHSA. (2014). *SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach*. Rockville, MD: SAMHSA Administration., HHS Publication No. (SMA) 14–4884.

Sandelowski, M. (1995). Sample size in qualitative research. *Research in Nursing & Health*, *18*, 179–183.

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, *23* (4), 334–340.

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, *33*, 77–84.

Simon, R., Snow, R. & Wakeman, S. (2020). Understanding why patients with substance use disorders leave the hospital against medical advice: A qualitative study. *Substance Abuse*, *41*, 519–525.

Smothers, Z., Reynolds, V., Mceachern, M., Derouin, A. L., Carter, B. M. & Muzyk, A. (2018). Substance use education in schools of nursing: A systematic review of the literature. *Nurse Educator*, *43*, 136–139.

Smyth, D., Wilson, C. & Searby, A. (2021). Undergraduate nursing student knowledge and attitudes of healthcare consumers with problematic alcohol and other drug use: A scoping review. *International Journal of Mental Health Nursing*, *30* (Suppl 1), 1293–1309.

Stebbins, R. (2001). *Exploratory Research in the Social Sciences: Qualitative Reasearch Methods*. London, UK: Sage.

Tierney, M., Finnell, D. S., Naegle, M., Mitchell, A. M. & Pace, E. M. (2020). The future of nursing: Accelerating gains made to address the continuum of substance use. *Archives of Psychiatric Nursing*, *34*, 297–303.

UNODCU. (2021). *World Drug Report*. [Cited 25 May 2022]. Available from: https://www.unodc.org/unodc/en/data-and-analysis/wdr2021.html [Accessed 7th November 2021].

VAADA. (2019). *Submission to the independent review of nursing preparation in Australia: Educating the Nurse of the Future*. [Accessed 7th November 2021].

Valenti, M. & Allred, K. (2020). Using peer recovery specialists to educate nursing students. *Nurse Educator*, *45*, 179–180.

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Van Boekel, L. C., Brouwers, E. P., Van Weeghel, J. & Garretsen, H. F. (2013). Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence*, *131*, 23–35.

Wells, R., Barker, S., Boydell, K., Buus, N., Rhodes, P. & River, J. (2021). Dialogical inquiry: Multivocality and the interpretation of text. *Qualitative Research*, *21*, 498–514.

Werder, K., Curtis, A., Reynolds, S. & Satterfield, J. (2022). Addressing bias and stigma in the language we use with persons with opioid use disorder: A narrative review. *Journal of the American Psychiatirc Nurses Association*, *28*, 9–22.

World Health Organization. (2020). Management of substance abuse. [Cited 25 May 2022]. Available from: https://www.who.int/substance_abuse/terminology/definition1/en/

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