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"I didn't even know *headspace* had the drug thing until today": A socio-ecological analysis of access to drug and alcohol interventions in integrated youth health care services

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ABSTRACT

Background: With 150 centers Australia-wide, the *headspace* National Youth Mental Health Foundation is an exemplary integrated youth health service. *Headspace* centers provide medical care, mental health interventions, alcohol and other drug (AOD) services, and vocational support to Australian young people (YP) aged 12 to 25 years. Co-located *headspace* salaried youth workers, private health care practitioners (e.g. psychologists, psychiatrists, and medical practitioners) and in-kind community service providers (e.g. AOD clinicians) form coordinated multidisciplinary teams. This article aims to identify the factors influencing the access to AOD interventions for YP, in the Australian rural *headspace* setting; as perceived by YP, their family and friends, and *headspace* staff.

Methods: The study purposively recruited YP ($n = 16$), their family and friends ($n = 9$), and *headspace* staff ($n = 23$) and management ($n = 7$) in four *headspace* centers in rural New South Wales, Australia. Recruited individuals participated in semistructured focus groups about the access to YP AOD interventions in the *headspace* setting. The study team thematically analyzed the data through the lens of the socio-ecological model.

Results: The study identified convergent themes across groups and found several barriers to the access of AOD interventions; 1) YP's personal factors, 2) YP's family and peer attitudes, 3) practitioner skills, 4) organizational processes and 5) societal attitudes were all identified as negatively impacting access to YP AOD interventions. Practitioners' client-centered stance, and the youth-centric *headspace* model were factors that were considered as enablers of engagement of YP with an AOD concern.

Interpretation: While this Australian example of an integrated youth health care model is well placed to provide YP AOD interventions, a mismatch existed between practitioner capability and YP needs. The sampled practitioners described limited AOD knowledge, and low confidence in providing AOD interventions. At the organizational level, multiple AOD intervention supply and utilization issues occurred. Taken together, these problems likely underlie previous findings of poor service utilization and low user satisfaction.

Conclusion: Clear enablers exist for AOD interventions to be better integrated into *headspace* services. Future work should determine how this integration can be achieved and what early intervention means in relation to AOD interventions.

1. Background

Worldwide, alcohol and other drug (AOD) problems are a leading risk factor for injury and disease burden in young people (YP) (World Health Organization, 2017); an issue that is amplified in rural communities across the globe (Rose et al., 2018). When compared to their metropolitan counterparts, rural YP are more likely to engage in risky substance use behaviors, have poorer access to health and social services, and experience a disproportionate level of physical health problems (Tshitangano & Tosin, 2016). These factors exacerbate the poor health outcomes for YP with AOD problems in rural communities, and indicate a need for targeted interventions (Robards et al., 2018).

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Effective health care access is pivotal in ensuring healthy YP, particularly marginalized rural YP (Robards et al., 2018). Two interdependent conditions must be met to ensure YP's adequate health care access, 1) the supply of services is equitable and appropriate and 2) demand exists, as often measured by service seeking and service utilization (Gulliford et al., 2002). Ensuring sufficient health care access requires the identification of need, and accounting for client-level, organizational and social factors in the response to the need (Gulliford et al., 2002). In response to YP's needs, integrated youth health care models have been internationally implemented over the past 20 years, and demonstrate superior outcomes to traditionally fragmented care (Nooteboom et al., 2021). As a premier integrated youth health care model, the *headspace* National Youth Mental Health Foundation (*headspace*) is a national treatment delivery model for Australian YP aged 12 to 25 years, 150 centers have been established across Australia (Headspace National Youth Mental Health Foundation Ltd, 2022; McGorry et al., 2019). By aiming to deliver integrated, early interventions for mental health, AOD, primary health, and vocational concerns, the *headspace* model is ideally placed to provide engaging interventions to YP experiencing an AOD concern, with or without a co-occurring mental health diagnosis (McGorry et al., 2019).

Substance use disorder is the third most common mental illness in Australia (Australian Bureau of Statistics, 2022) and it is estimated that 12.7 % of Australian YP suffer from a substance-related disorder (Australian Institute of Health and Welfare, 2011). Despite AOD interventions being a core remit of *headspace*, only 2 % of YP reported an AOD concern when presenting to *headspace* between 2019 and 2020 (headspace National Youth Mental Health Foundation, 2021). Further, according to the most recent available data, only 1 % of YP attending a *headspace* center received an AOD intervention, half of which were delivered by an external adult-centered AOD consortium partner (Rickwood et al., 2015). *headspace* data typically show high client satisfaction; however, client satisfaction varied depending on the type of presentation. When compared to YP presenting with mental health, behavioral, and/or vocational issues, YP presenting with an AOD concern consistently reported the lowest satisfaction with the care they received (Rickwood et al., 2017). We do not know the reasons for this low service utilization and lower satisfaction with YP AOD interventions in *headspace*.

Although several investigations have occurred into the factors related to YP's access to interventions for mental health concerns, we know little about the factors influencing YP's access to community based AOD interventions, such as those delivered by *headspace*. Research into access to mental health interventions has mostly focused on the YP's personal characteristics that influence service seeking and utilization, such as YP's health literacy (Haavik et al., 2019; Huggins et al., 2016; McAndrew & Warne, 2014; Radez et al., 2021), motivation to change (Rickwood et al., 2007; Rickwood et al., 2015), symptom recognition (Hassett & Isbister, 2017), distress severity (Rickwood et al., 2007), and a preference for self-reliance (Farrand et al., 2006). At the family, peer, and societal levels, stigmatizing beliefs about mental health and service utilization have been cited as influencing low YP's service-seeking and utilization behaviors (Barker et al., 2005; Gulliver et al., 2010; Tharaldsen et al., 2017). Systemic factors impacting YP's mental health service access are not as well documented but include the perceived and actual accessibility to helping professionals—such as extended program wait times (Aguirre Velasco et al., 2020; Haavik et al., 2019), and changing clinicians throughout the course of an intervention (Persson et al., 2017). Additionally, the attitude toward, and quality of relationships with, helping professionals influences mental health service utilization (Wilson et al., 2007). From the YP's perspective, discomfort at disclosure (Doyle et al., 2017; Fleming et al., 2012), lack of confidentiality (Guo et al., 2014; McAndrew & Warne, 2014; Wilson & Deane, 2012), feeling disrespected (Hassett & Isbister, 2017), or judged (Haavik et al., 2019) are service-seeking and utilization barriers to mental health support.

The small number of investigations examining access factors for YP's AOD interventions reveal findings that echo the research on the access to mental health interventions. YP's personal factors of health literacy, symptom recognition, low motivation, co-morbid mental health concerns, and a preference for self-reliance have all been cited as barriers to YP seeking and utilizing services for an AOD concern (Ballon et al., 2004; Harris et al., 2016; McCann et al., 2016). Additionally, YP may be less likely to disclose socially undesirable or sensitive information, such as AOD use (Bradford & Rickwood, 2015). The attitudes of families, (McDonagh et al., 2019), peers, and the broader society toward substance use are all implicated as barriers to accessing an intervention (Bryant et al., 2003). Finally, perceived service availability, approachability, and clinician AOD expertise are important factors to YP accessing professional support for a substance-related concern (Berridge et al., 2018). However, the additional barrier exists associated with AOD intervention access; a fear of punishment due to the criminalization of underage AOD use (Christie et al., 2020; Lubman et al., 2017). While these studies have primarily focused on YP's attitudes to seeking help for an AOD concern, which is crucial knowledge needed to formulate service delivery, we know little about the youth mental health professionals' attitudes toward YP with an AOD concern. Given that the research into mental health practitioners' attitudes and therapeutic commitment to adult clients with coexisting or stand-alone AOD concerns influences client service-seeking (Howard & Holmshaw, 2010; van Boekel et al., 2013), understanding how a preeminent youth mental health service operationalizes AOD interventions is an important factor in remediating any access barriers.

Bronfenbrenner's socio-ecological model provides a framework to understand the factors related to YP AOD intervention supply and utilization in integrated youth health care services such as *headspace* (Bronfenbrenner, 1977). Research has previously used the socio-ecological model to examine the operationalization of physical health interventions in AOD services (Osborne et al., 2021), transition from long-term residential AOD treatment back to community (Manuel et al., 2017), and improving health literacy (McCormack et al., 2017). The socio-ecological model proposes that health interventions occur in complex interrelated systems; systems that exact an influence on the supply and demand of health care services. This interplay occurs at 1) the individual level (e.g. age, sex, knowledge and perceptions of individuals), 2) the interpersonal level (e.g. family, peers and practitioner attitudes), 3) the organizational level (e.g. service co-ordination, service aims and cross sector collaboration), and 4) the policy/society level (e.g. resource allocation, stigma and laws) (Lehman et al., 2017). Given the previous applications of the socio-ecological model to understand the systems in care delivery to people with AOD concerns, it is a functional tool that can be applied to understand the factors associated with the supply and utilization of YP AOD interventions in *headspace* centers.

1.1. Aims

Given the low number of YP AOD presentations and YP AOD occasions of service in *headspace*, the relatively low satisfaction with *headspace* services reported by YP with AOD concerns, and a lack of evidence about the factors inhibiting access to AOD interventions in *headspace*, this study aims to identify the supply and service-seeking/utilization barriers to YP AOD interventions as perceived by YP, YP's family and friends, *headspace* staff, and *headspace* management.

2. Methods

2.1. Ethics

The study obtained ethics approval from the Charles Sturt University Human Research Ethics Committee (Protocol Number: H17200).

2.2. Reflexivity statement

Two female researchers (NS and JA) conducted the data collection and analysis. The facilitators were both qualified social workers with practice experience in AOD management, counseling in rural NSW, and AOD qualitative research. While one of the researchers (NS) had previously been employed in a *headspace* center two years prior, neither researcher (NS and JA) had any existing relationships with the participants. To aid reflexivity during data collection and analysis, one researcher (NS) maintained a journal to record critical reflections (Fook, 1996). Further, the two researchers (NS and JA) met frequently during this phase to discuss underlying assumptions and beliefs (Macbeth, 2001).

2.3. Setting

Founded in 2006, *headspace* employs a mixed funding model and has 150 centers across Australia (Headspace National Youth Mental Health Foundation Ltd, 2022). Each *headspace* center is federally funded and operated through a lead agency selected via a competitive tender process (McGorry et al., 2019). The lead agency oversees the infrastructure and operating costs, and hires administrative, management and clinical staff. These core functions are then supplemented with co-located private health care practitioners eligible for federal government rebates (via the Medicare scheme) and in-kind providers from locally based services (Rickwood et al., 2015). Typically, a *headspace* staff member will conduct screening and assessment of all presenting YP, and then provide care co-ordination and organize any specialist referrals (e.g. AOD practitioners) (headspace National Youth Mental Health Foundation, 2021). Between 2019 and 2020 *headspace* centers across Australia provided 405,139 face-to-face occasions of service (OOS) to 97,257 YP, equating to an average of 4.2 OOS per YP (headspace National Youth Mental Health Foundation, 2021). Of these 97,257 YP, 62 % were female, 36 % were male, and 2 % identified as gender diverse. Further, 31 % of YP were aged 12–14, 31 % were between 15 and 17 years of age, 21 % was 18–20, and 17 % were aged 21–25. Regarding priority groups, 24.1 % identified as LGBTIQA+, 11 % were culturally and linguistically diverse and 9 % were of Aboriginal and/or Torres Strait Islander descent (headspace National Youth Mental Health Foundation, 2021). Thirty-two percent of YP were treated for anxiety concerns, 25 % for depression, 16 % for situational concerns, 10 % for other mental health and behavioral issues, 6 % for anger issues, 4 % for stress, and 2 % for alcohol and other drugs. The remaining 5 % of interventions were for sexual health, and vocational and physical health concerns (headspace National Youth Mental Health Foundation, 2021).

2.4. Sample description

Each center regularly engages volunteer youth reference groups (YRG), as well as family and friends reference groups (FFRG) to inform service delivery. Typically, these groups meet monthly, and the participants consist of past and current clients and interested community members.

2.5. Recruitment

The study used purposive sampling, and one researcher (NS) approached six centers in total. Two centers declined to participate because of high demand for clinical services. The study recruited four *headspace* centers located across rural Australia. Each center was well-established, with more than 2 years of operation and were overseen by different lead agencies. Focus group invites were emailed by the center managers to YRG members, FFRG members, and *headspace* staff, with a pre-arranged date and time for each focus group. For ease of access, the location of each focus group was at the participating centers.

The study recruited participants to either the separate YRG, FFRG, *headspace* staff, or *headspace* management groups at each site. The *headspace* staff focus groups ($n = 23$) consisted of salaried *headspace* clinicians ($n = 16$), salaried *headspace* administrative staff (n = 2), private psychologists ($n = 4$), and general medical practitioners (n = 1). While invited by the participating *headspace* center managers, no in-kind visiting service providers (e.g. AOD practitioners) ($n = 5$) attended any focus groups, with no reason provided. Salaried employees engaged in a supervisory role, such as center managers and clinical leads ($n = 7$), were invited to the *headspace* management focus groups at each site. The study recruited these participants because of their knowledge and experiences engaging, screening, assessing and providing care-coordination of YP using AOD. Similarly, YRG members over the age of 14 years ($n = 16$) and FFRG members ($n = 9$) were invited to participate in focus groups at each site to provide parental/caregiver views of YP AOD interventions, as well as community, societal, and peer viewpoints.

2.6. Data collection

A total of fourteen focus groups ($N = 55$) were conducted face-to-face in 2019, across the four sites. Focus groups ran for approximately two hours, with between 2 and 8 participants in each group. All focus groups were audio recorded and one researcher (NS) maintained field notes.

At the commencement of the focus groups, the facilitators (NS and JA) explained that the project is attempting to understand how AOD interventions can be best delivered for YP. Following informed consent, the facilitators (NS and JA) used a previously piloted semi-structured focus group guide.

From a constructionist perspective (Braun & Clarke, 2006), the facilitators asked the participants about two key topic areas, 1) service seeking and utilization of YP with an AOD concern, and 2) organizational/practitioner processes for AOD interventions. To encourage discussion, facilitators asked open-ended questions, such as, *"How does a YP with an AOD problem get help?" "What gets in the way of YP getting help?" "What encourages them to get help?* and *"Tell us about what happens at headspace when a YP has a drug problem?"* Reflections, and paraphrasing were utilized to encourage participants to talk freely about their thoughts and experiences (Corbin & Strauss, 2008). Upon invoice, the study reimbursed unsalaried practitioners for their time. YRG and FFRG's participants were reimbursed with a $50 supermarket gift voucher.

2.7. Data analysis

We audio recorded focus groups and professionally transcribed them. After each focus group, one researcher (NS), checked the accuracy of the transcription, uploaded data into NVIVO12, and inductively assigned preliminary codes through the lens of the research questions (Braun & Clarke, 2006). Data collection was finalized when no new themes were found in the data (Corbin & Strauss, 2008). Two researchers (NS and JA) had weekly project meetings for the duration of the study. During the data analysis phase, the meetings focused on coding and construction of themes including comparing coded sections of transcripts for consistency. During repeated viewing of the preliminary coding, the study team identified that the socio-ecological model clarified the preliminary themes, and we generated an adapted socio-ecological thematic framework (see Fig. 1) (Bronfenbrenner, 1977). During third and fourth full dataset passes, one researcher (NS) read the transcripts again in full through the interpretive lens of the socio-ecological model and ensured all relevant material had been coded. A second researcher (JA) again reviewed the thematic coding against the adapted socio-ecological framework (Braun & Clarke, 2006). One researcher (NS) attempted member checking with center managers ($n = 4$), however each individual had since moved on to other employment.

The study coded responses at the individual level when they referred

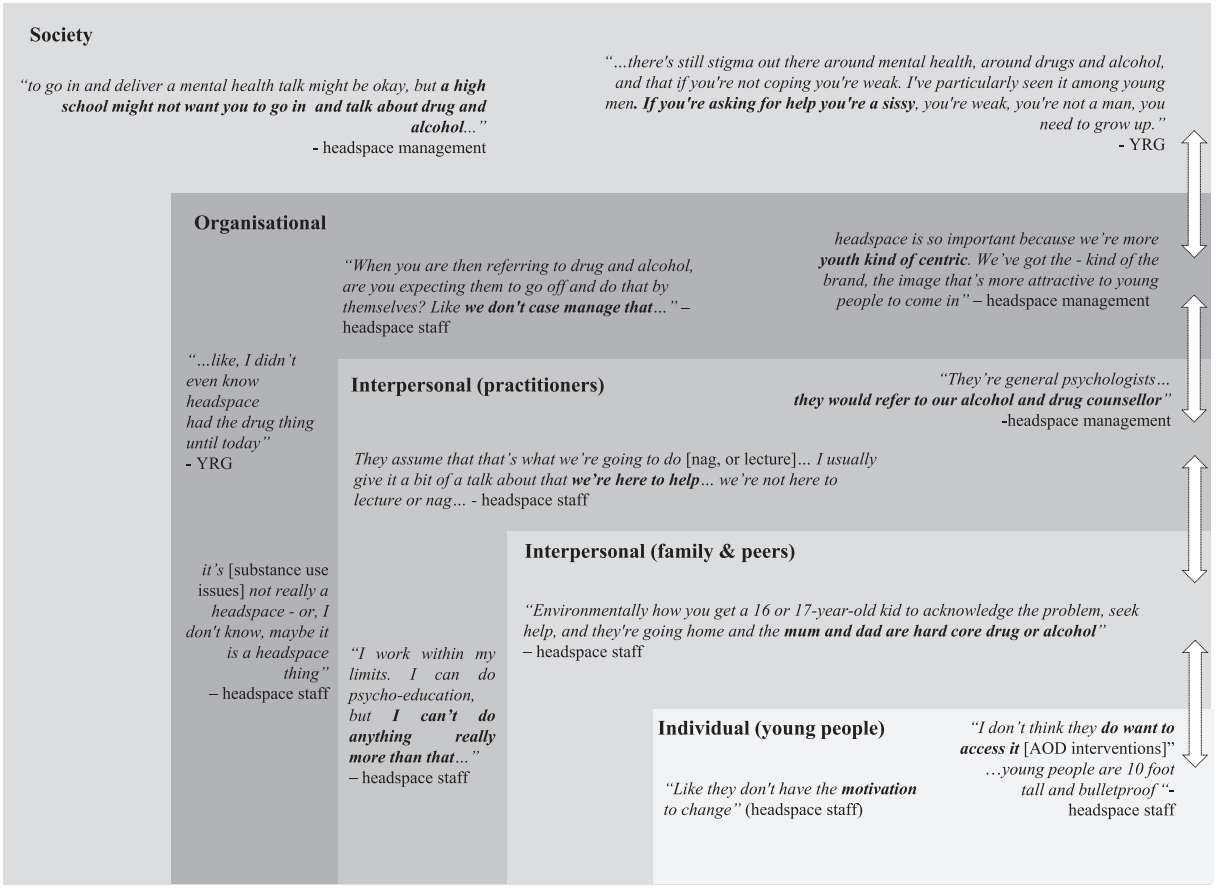

Fig. 1. Socio-ecological analysis framework.

to the personal characteristics of YP influencing access to AOD interventions. Data relating the social groups with which YP immediately interact, and directly impact the YP's access to AOD interventions, were collected under the interpersonal theme; and we further divided them into the sub-themes of family/peers and helping professionals. Data were coded at the organizational level when references to larger social systems were made, such as schools and health services—the social settings, that directly and indirectly impact the YP's access to interventions. We assigned to the society level focus group data that related to overarching cultural attitudes and beliefs that influence YP AOD intervention access. Two researchers (NS and JA) reviewed dually coded statements and discussed them until they reached and recorded a consensus on the most salient semantic meaning of the data items (Braun & Clarke, 2006).

3. Findings

3.1. Demographic characteristics

As Table 1 details, the results of the analysis are reported by socio-demographic context and individual factors across the four sampled locations. Across all focus groups, participants were predominately female ($n = 39$, 71 %) and did not identify as Aboriginal or Torres Strait Islander ($n = 51$, 93 %). The average age of the YRG participants was 17.68 ($SD = 4$) and the average age for the FFRG participants was 43 years ($SD = 13.7$). The average age of *headspace* staff was 34 ($SD = 9.15$) and *headspace* management were slightly older ($M = 40$; $SD = 7.59$).

3.2. The individual – young people

3.2.1. YP have limited AOD health literacy

Across all focus groups the reasons for low YP AOD intervention seeking and utilization were mostly attributable to individual-level factors, such as YP's limited AOD health literacy and an inability to identify their problematic substance use:

> "Not knowing the full side effects and that, so they might not know … how much you need to take to actually cause a serious problem..." (YRG)

This sentiment was supported by the FFG group;

> "I think they probably sometimes don't realize that they've got an issue" (FFG)

The *headspace* staff focus groups extensively discussed provision of substance-related psychoeducation as an appropriate method of intervention:

> "… I might point out that, look, it might not be a dangerous drug in the way that some other things are, but certainly if you're using it over a long period of time it often does make mood issues worse. So a bit of education [is provided]" (headspace staff)

3.2.2. YP's trauma is an underlying factor in AOD use

YP distress and history of trauma were also perceived to create a barrier to YP service utilization:

> "like, you start the substance abuse and then you learn about the past trauma or abuse or whatever it is that might be responsible for it" (YRG)

Table 1
Youth reference groups (YRG) family, friends reference groups (FFRG), *headspace* staff and *headspace* managers demographic characteristics across four locations.

	YRG (n = 16) (n %)	FFRG (n = 9) (n %)	*headspace* staff (*n* = 23) (n%)	*headspace* managers (*n* = 7) (n%)
Gender				
Male	6 (37.5)	4 (44.4)	2 (8.7)	3 (42.9)
Female	9 (56.3)	5 (55.6)	21 (91.3)	4 (57.1)
Intersex/ transgender	1 (6.3)	n/a	n/a	n/a
Mean Age (SD)	17.68 (*SD* = 4)	43 (*SD* = 13.7)	34.08 (*SD* = 9.15)	40 (*SD* = 7.59)
Highest level of education				
Middle school (yr 8) or below[a]	2 (12.5)	n/a	n/a	n/a
High school (Yr 9 to yr 12)[b]	8 (50)	1 (11.1)	n/a	n/a
Completed high school (Yr 12)[c]	3 (18.8)	n/a	n/a	n/a
Completed vocational or tertiary education	3 (18.8)	8 (88.9)	23 (100)	7 (100)
Aboriginal or Torres Strait Islander				
Aboriginal	3 (18.8)	n/a	1 (4.3)	n/a
Torres Strait Islander	n/a	n/a	n/a	n/a
Aboriginal and Torres Strait Islander	n/a	n/a	n/a	n/a
Neither Aboriginal or Torres Strait Islander	13 (81.3)	9 (100)	22 (95.7)	7 (100)
Employment Role				
Salaried administrative staff	n/a	n/a	2 (8.7)	n/a
Salaried headspace clinician	n/a	n/a	16 (69.6)	n/a
Salaried clinical lead or manager	n/a	n/a	n/a	7 (100)
Private practitioner	n/a	n/a	5 (21.7)	n/a

[a] Approximately aged 13 years or less.
[b] Approximately aged 14 to 17 years.
[c] Approximately aged 17 to 18 years.

This was reiterated in the adult focus groups:

> "…they come from a complex trauma history … it's self-medicating. So why would they want to deal with the hard-core stuff …" (headspace staff)

Across all focus groups, participants felt that to treat the AOD concern, any underlying issues must also be addressed:

> "The more you don't know your cause, like, your drug problem might rise and you just start feeling like, "Well, what's the point of the therapy? I'm not getting any better"" (YRG)

3.2.3. YP's fear of punishment

YP's fear of punishment was perceived as a barrier to AOD service utilization:

> "I think kids are just, when they do do it, I think they're also afraid to seek the help because they're afraid that they're - you know, they're going to get judged… (YRG)

The adult focus groups also identified YP's fear of punishment as a factor in help seeking:

> "So that theme really hasn't changed in terms of being really worried about getting into trouble. Like, really worried about getting into trouble" (FFRG)

3.2.4. YP's preference for self-reliance

YP's perceived preference for self-reliance or autonomy was also considered an underlying factor in poor service utilization, particularly in the adult focus groups:

> "young people are 10 foot tall and bulletproof and think, "I can get over it. You know, I can just stop when I want"" (headspace staff)

3.2.5. YP's are perceived has having limited motivation to address their AOD problems

A theme that arose across all focus groups was the perception that YP's low motivation to change limited YP service-seeking and utilization;

> "They [YP with an AOD concern] have to have a certain level of motivation to want to get things done" (YRG)

YP's perceived poor motivation to change was reiterated among the clinical staff, and these focus group discussed motivational interviewing as a preferred approach:

> "I guess I'm trying to do a bit of motivational interviewing to just see – explore a little bit further about – because often they seem – the clients that I'm seeing seem like they're not really at that point where they're wanting to focus on that particularly" (headspace staff)

3.3. Interpersonal – family and peers

3.3.1. YP substance use is normalized in their interpersonal relationships

At the interpersonal (family and peer) level, most focus group participant's perceived that normalized substance use in the YP's family impedes service utilization;

> "I suppose like normalization of consuming drug and alcohol under 18 is probably the most prominent problem" (YRG)

headspace staff also considered that a YP's family environment was an influential factor in service utilization;

> "[substance use] Being cultural with a lot of them, then they're just following on the way that mum and dad and uncle and aunt have self-medicated it for years and years and years. So that's the way we do it in the family" (headspace staff)

Further, participants considered that AOD use was an important element in YP's peer socialization, and accessing AOD help would negatively impact their social networks:

> "it's because they don't want to lose their friends that are all using, and if they stop using, they won't have anyone else to hang out with" (YRG)

Similarly, the adult focus groups also considered that because AOD use supports YP's socializing, it hampers AOD service-seeking:

> "Because it's a social thing that they do often, right. So their friends that they hang out will be using, you know" (headspace management)

3.3.2. Providing family interventions had a mixed response

Providing an intervention at the family level or providing information to parents of YP engaged in AOD use was seen as ideal in each of the adult focus groups:

> "The other thing that really is important is what about parents? How much information and education and support do they get? Because

this is a really big issue for all of them … It needs a whole family approach really (headspace management)

However, family interventions were considered as something that *headspace* staff are not supposed to deliver, as it is not considered early intervention:

"… We don't do a lot [of family work] - we're not supposed to do lots here, but I know that, in some cases, you need to get the family onboard… It's going into the home. It's not early intervention" (headspace management)

However, YRG focus group participants demonstrated a hesitancy for parental involvement in a YP intervention:

Not all parents are the same. No - they don't all parent the same either, so just, like, some parents are really protective and some are really, like, easy-going. Some are scary. Some parents are really scary" (YRG)

3.3.3. YRG participants preferred a peer-based approach

Conversely, a clear preference existed among the YRG members for a peer-based approach instead of intervening with family:

More often than not I think it'd be a family member or a friend who would then refer them to a professional… I would personally go to a friend … I think most people would go to their family… Because telling your parents would be like a bit of a big step (YRG)

3.4. Interpersonal - practitioners

3.4.1. Headspace staff may lack confidence, or have limited knowledge in delivering AOD interventions

The influence of practitioners on YP accessing professional help was more frequently discussed by *headspace* staff than by YRG and FFRG. The sampled *headspace* staff and managers described being confident to deliver AOD psychoeducation; however, they felt limited in their skills to deliver any other AOD intervention:

"They're not - that's [AOD interventions] not an area of their [headspace staff] expertise. They're general psychologists, so if there was a particular problem with that per se, they would refer to our alcohol and drug counsellor" (headspace management)

While practitioners felt confident in their ability to deliver AOD psychoeducation, some *headspace* staff demonstrated a lack of basic knowledge of AOD treatments as well as the physiological effects of substances:

"So an example could be a lot of young people see that alcohol is a depressant, so we know that, but what they don't realize is, you know, several hours after drinking it and the liver starts metabolizing it, it turns into a stimulant, and then you say to them, "How often have you been to a party and then you feel the vibe change and then things starts to get a bit funny? Well, that's when the alcohol is turning into stimulants", and they're like, "Oh, I never knew that"" (headspace staff)

3.4.2. Headspace staff have a strong client-led approach

Conversely, practitioners' client-led approach was evident and perceived as a facilitator of YP accessing AOD interventions, for example,

"I think providing a safe environment to begin with and building that rapport before kind of going in – like. Yeah, I think that safe place and over time being able to open up about those things [substance use]" - (headspace staff)

3.5. Organizational

3.5.1. Headspace engages YP with a youth-centric approach

The youth-centric approach of the *headspace* model was considered a facilitator to engaging YP with an AOD concern:

"headspace is so important because we're more youth kind of centric. We've got the - kind of the brand, the image that's more attractive to young people to come in" (headspace management)

Participants in the YRG group considered *headspace* to be a welcoming environment for all YP:

"Like, it's a professional setting, but it's a comfortable professional setting… this place is perfect. Yeah, it's not clinical. Well, it is. Kind of. Kind of. It's clinical enough, but it's also comfortable enough" (YRG)

3.5.2. Difficulties with in-kind AOD services delivering interventions

In three of the four centers sampled, *headspace* staff and management expressed dissatisfaction with the external AOD services delivering interventions in their centers, but did not identify alternatives to the existing arrangements. The sampled *headspace* staff and management described a process where salaried *headspace* staff conducted assessments with YP, and if they identified an AOD concern, the YP would be referred to an external, typically adult-focused, AOD service, where a pre-existing service agreement had been established. Some senior *headspace* staff discussed how the external, adult-based services were not appropriate for YP:

"So, you need someone [AOD practitioner] who can actually engage with YP, that's probably the first skill. Because we've had experiences where people have not been able to do that very well…" (headspace management)

While the service level agreements indicated that the AOD service would co-locate at the *headspace* service, this was not occurring, and this presented an additional barrier to AOD interventions:

"Are then referring to drug and alcohol, are you expecting them to go off and do that by themselves? Like we don't case manage that. Like it's not like we make an appointment, take them to that appointment, go with them. That's another barrier (headspace staff)

A common theme emerged throughout the *headspace* staff focus groups that YP were reluctant to utilize this service:

"I could probably follow on with an example of a guy who has been using cannabis for many years and [I did] just a bit of psychoeducation on the impact that's having on his anxiety and things. Suggested seeing the drug and alcohol counsellor, but he wasn't interested" (headspace staff)

Pointing to potential AOD intervention supply issues, *headspace* staff and management discussed staff shortages and a difficulty coping with service demands; an issue that was exacerbated by other higher acuity YP health services experiencing similar problems:

"When we get clients that actually we know meet their [high acuity service] criteria, it's sometimes really difficult to pass them over because they're just batting them back. You know, like "You guys are probably as resourced as we are"" (headspace management)

3.5.3. AOD is not a core headspace responsibility

Fundamentally, however, AOD was not viewed as a core *headspace* responsibility or as part of the service delivery model. It was perceived in several of the *headspace* staff and management groups, that given that the *headspace* program was only intended to provide early intervention for "mild-to-moderate" concerns, *headspace* is not fully suited to deliver AOD interventions:

> "This isn't our role. You know, we're a mild to moderate service and when kids are at risk, and often there's multiple risks - particularly when there's mental health issues and psychiatry kind of needed, they've got to be handed over" (headspace management)

Additionally, *headspace* staff and management did not identify any clinical processes surrounding YP presenting with an AOD concern, except for referring them to an external AOD provider:

> "I guess as an overall sort of model it's probably something we're probably lacking, I would say. We don't have much variety" (headspace staff)

3.5.4. AOD interventions were not promoted in any of the sampled headspace centers

In all the study sites, *headspace* staff and management identified that AOD interventions were not promoted to YP:

> "What we probably don't do as well is to promote our alcohol and drug services - I think a lot of the time they don't think that there's anything else out there" (headspace management).

Additionally, the YRG and FFRG focus groups did not consider AOD interventions to be an aspect of the *headspace* model:

> "Like, I don't – even - like, I didn't even know headspace had the drug thing until today" (YRG).

Similarly, YRG group members were unable to identify anywhere that could offer AOD interventions:

> "In my head I can't actually think of somewhere where – like, if somebody came to me and said, "I'm addicted to drugs. I need help," I actually would not know where to send them" (YRG)

3.6. Society level

3.6.1. YP AOD experimentation is normalized

All focus groups identified that the societal normalization of YP AOD experimentation acted as a barrier to service utilization:

> "It's acceptable, it's socially acceptable. It's kind of just a way of life… it's that entry which has just become rite of passage" (FFRG)

3.6.2. Stigmatizing social attitudes

Simultaneously, the study highlighted that societal attitudes toward AOD use and interventions are internalized by YP and act as a barrier to service utilization:

> "I have clients that won't see drug and alcohol support because they're not drug addicts. Yeah, they … Yeah, the stigma and … They just say that people that access drug and alcohol support are drug addicts, and they don't classify their use of drugs or alcohol as something that's needing that" (headspace staff)

Further, indications existed that some of the sampled participants held negative attitudes toward YP with an AOD concern:

> "*You can't control the fact that you have anxiety or depression, whereas you took the drug. You decided on that. So, therefore, it's your fault" (YRG).*

3.6.3. Headspace has a role in harm minimization, but promoting AOD interventions may be socially risky

The concept of harm minimization was raised in most groups as a treatment option. For example:

> "I don't think we're the right service to have like a safe injecting room or anything like that. I don't think that's our role because we're mild to moderate, but I do think we have a role around educating about doing things safely and cleanly and all that kind of stuff" (headspace staff)

Further, themes emerged from the *headspace* staff and management focus groups that it would not be deemed acceptable for *headspace* to promote or provide AOD interventions:

> "to go in and deliver a mental health talk might be okay, but a high school might not want you to go in and talk about drug and alcohol and then – you know, you can come and chat to us and it's not about just stopping and this is bad and this is wrong. I can't imagine us delivering that kind of stuff at a school. I think most people like parents, if they're bringing their kids here, they think about us as being counsellors" (headspace management)

4. Discussion

The socio-ecological model provides a sound platform to understand the complexity behind supply and access barriers to YP AOD interventions in integrated youth health care services in rural Australia (Bronfenbrenner, 1977). The perspectives of YRG and FFRG paralleled the perspectives of *headspace* staff and management regarding the perceived utilization barriers. As could be expected, *headspace* staff and management discussed the supply of YP AOD interventions at greater length than the YRG and FFRG.

Barriers to service utilization at the individual-level were extensively discussed and reflected the existing research into the personal factors of low motivation, high distress, self-reliance, fear of punishment and poor health literacy influencing a lack of service utilization (Ballon et al., 2004; Harris et al., 2016; McCann et al., 2016). Also similar to previous research, study participants perceived that family and peer influences impeded AOD intervention help-seeking and service utilization (Christie et al., 2020; Lubman et al., 2017). However, these explanations shifted responsibility onto YP; minimizing, and possibly rationalizing, shortages in the provision of YP AOD interventions.

When considering the role of helping professionals, a mismatch emerged between practitioner capability and YP needs. Previous research into the barriers to YP accessing AOD interventions point to the importance of the perceived expertise of the clinician (Berridge et al., 2018). The sampled practitioners in this study demonstrated a lack of confidence in providing therapy to YP with an AOD concern. Some psychoeducation was reported; however, based on examples provided, the psychoeducation was of questionable quality and provided a rationale as to why the provision of AOD interventions was not promoted. Furthermore, YP may have received inaccurate substance-related psychoeducation in the limited occasions when provided.

At the organizational level, multiple AOD intervention supply issues existed. The sampled *headspace* staff indicated an unclear approach to assessing YP with an AOD concern, except for preferring to refer them to an external, adult-based AOD provider; a process that YP were reluctant to utilize. It appears that when YP did utilize this referral pathway, the services were not adequately engaging, and the process was not fully facilitated by the referring *headspace* clinician. These issues were likely exacerbated by demand typically outstripping supply, especially with the purported early intervention and "mild to moderate" focus of the model (McGorry et al., 2019), and provided a rationale as to why the provision of AOD interventions were not promoted.

Finally, at the societal level and similar to previous findings, all focus groups discussed simultaneous attitudes of normalized YP AOD experimentation as well as AOD stigma (Christie et al., 2020; Lubman et al., 2017). These societal attitudes appeared to be an additional influencing factor in the sampled centers not promoting AOD interventions. Taken together, these findings provide context to the relatively low utilization of AOD interventions in *headspace* services (Rickwood et al., 2015) and YP with an AOD concern reporting poorer satisfaction with the care that they received (Rickwood et al., 2017).

As substance use disorder is the third most common mental health concern in Australia (Australian Bureau of Statistics, 2022), AOD interventions need to be more thoroughly incorporated into *headspace* services, and rather than an add on provided by an external service provider. Future research could be conducted with YP identified as using AOD and AOD practitioners to examine assessment processes to identify if, how, and when AOD assessment questions are asked and what is answered. The *headspace* model is clearly suitable and has the opportunity to address YP AOD, but the services are rarely provided. Both the model and skills of service practitioners need to be addressed to facilitate the provision of AOD services. Further work is required to determine what early intervention means in relation to AOD in *headspace* services, and how AOD interventions could be best facilitated. This work would need to consider how to best address the access and supply issues at the individual, practitioner, organizational and societal levels; including, but limited to, 1) YP's possible limited health literacy, symptom recognition, low motivation, co-morbid mental health concerns, and a preference for self-reliance (Ballon et al., 2004; Harris et al., 2016; McCann et al., 2016); 2) the attitudes and role of families and peers in AOD interventions (Bryant et al., 2003; McDonagh et al., 2019); and 3) service availability, approachability and clinician AOD skill level (Berridge et al., 2018).

5. Limitations

This study included four rural *headspace* centers and therefore the findings may not be generalizable to other integrated youth health care services. However, the study included diverse groups of participants who were consistent in their perceptions about YP and AOD service use and availability through *headspace* centers. The study included YP from the participating centers' youth reference groups. However, few of these participants identified as having experienced substance use problems themselves, although they knew people who had. Some of these representatives likely had first-hand experiences with substance use problems, but they did not wish to disclose in the group environment (Bradford & Rickwood, 2015). Typically, YRG group members are invited to serve on these reference groups due to their lived experience and interest in YP health care. These lived experiences place these representatives in an ideal position to broadly discuss AOD service use, the experiences of their peers, and advocate for YP health care improvements. Further research into the lived experience of young people trying to access support for substance use is required to further deepen our understanding. While in-kind visiting service providers (e.g. AOD practitioners) were invited to participate in the study by the respective center managers, no in-kind providers participated in the focus groups. Therefore, the views of this group are not reflected in the findings. A potential explanation for this lack of participation was the strained relationships between the *headspace* centers and AOD practitioners. A possible source of this relationship strain may be that AOD practitioners consider that *headspace* staff have a responsibility to increase their internal capacity to deliver AOD interventions – and therefore did not wish exacerbate tension by discussing these views. However, given that each *headspace* center assesses, refers and maintains case management and clinical oversight of any YP that is referred to an external AOD provider, and the sampled practitioners had first-hand experiences in delivering these services, the perspectives of *headspace* staff and management provides a rich description of the AOD intervention access and supply issues.

6. Conclusion

Integrated youth health care models are appropriately positioned to provide timely AOD interventions for YP experiencing AOD-related harms (Asarnow et al., 2015). While this Australian example of an integrated youth health care model attempts to overcome the tradition of disjointed care, these findings suggest that systemic gaps remain (Asarnow et al., 2015). Reflecting previous findings from the mental health and AOD sectors, the practitioner and organizational barriers of insufficient clinician AOD expertise (Berridge et al., 2018), disjointed care (Persson et al., 2017), and a lack of AOD intervention promotion indicated service supply issues. High service demands and a negative societal stigma toward AOD use likely influenced these issues. While previous research indicates that YP with an AOD concern are reluctant to utilize professional services for a range of reasons (Ballon et al., 2004; Harris et al., 2016; McCann et al., 2016), these utilization barriers cannot overshadow service supply issues. For YP to access timely, effective, and developmentally appropriate AOD interventions, integrated youth health care models, such as *headspace,* must ensure that organizational systems and practitioner skills are well suited to the needs of this vulnerable population.

CRediT authorship contribution statement

N.S. and J.A. designed the research methodology in consultation with A.S. and R.C. N.S. and J.A. gathered the data and conducted the analysis. N.S. prepared the manuscript with contributions and approval from all authors.

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Declaration of competing interest

None.

References

Aguirre Velasco, A., Cruz, I. S. S., Billings, J., Jimenez, M., & Rowe, S. (2020). What are the barriers, facilitators and interventions targeting help-seeking behaviours for common mental health problems in adolescents?A systematic review. *BMC Psychiatry, 20*(1), 293. https://doi.org/10.1186/s12888-020-02659-0

Asarnow, J. R., Rozenman, M., Wiblin, J., & Zeltzer, L. (2015). Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health: A meta-analysis. *JAMA Pediatrics, 169*(10), 929–937. https://doi.org/10.1001/jamapediatrics.2015.1141

Australian Bureau of Statistics. (2022). *National study of mental health and wellbeing 2020 – 2021*. https://www.abs.gov.au/statistics/health/mental-health/national-study-mental-health-and-wellbeing/latest-release#prevalence-of-mental-disorders.

Australian Institute of Health and Welfare. (2011). *Young Australians: Their health and wellbeing (Cat. no. PHE 140)*. https://www.aihw.gov.au/reports/children-youth/young-australians-their-health-and-wellbeing-2011/report-editions.

Ballon, B., Kirst, M., & Smith, P. (2004). Youth help-seeking expectancies and their relation to help-seeking behaviours for substance use problems. *Addiction Research & Theory, 12*(3), 241–260. https://doi.org/10.1080/16066350942000193202

Barker, G., Adepeju, O., & Aggleton, P. (2005). Young people, social support and help-seeking. *International Journal of Adolescent Medicine and Health, 17*(4), 315–336. https://doi.org/10.1515/IJAMH.2005.17.4.315

Berridge, B. J., McCann, T. V., Cheetham, A., & Lubman, D. I. (2018). Perceived barriers and enablers of help-seeking for substance use problems during adolescence. *Health Promotion Practice, 19*(1), 86–93. https://doi.org/10.1177/1524839917691944

Bradford, S., & Rickwood, D. (2015). Acceptability and utility of an electronic psychosocial assessment (myAssessment) to increase self-disclosure in youth mental healthcare: A quasi-experimental study. *BMC Psychiatry, 15*, 305.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*(7), 513–531. https://doi.org/10.1037/0003-066X.32.7.513

Bryant, A. L., Schulenberg, J. E., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (2003). How academic achievement, attitudes, and behaviors relate to the course of substance use during adolescence: A 6-year, multiwave national longitudinal study. *Journal of Research on Adolescence, 13*(3), 361–397. https://doi.org/10.1111/1532-7795.1303005

Christie, G. I. G., Cheetham, A., & Lubman, D. I. (2020). Interventions for alcohol and drug use disorders in young people: 10 key evidence-based approaches to inform service delivery. *Current Addiction Reports, 7*(4), 464–474. https://doi.org/10.1007/s40429-020-00336-6

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Sage Publications.

Doyle, L., Treacy, M. P., & Sheridan, A. (2017). 'It just doesn't feel right': A mixed methods study of help-seeking in Irish schools. *Advances in School Mental Health Promotion, 10*(2), 113–126. https://doi.org/10.1080/1754730X.2017.1285710

Farrand, P., Perry, J., Lee, C., & Parker, M. (2006). Adolescents' preference towards self-help: Implications for service development. Primary care and community psychiatry, 20, 73–79. *Primary Care and Community Psychiatry, 11*, 73–79. https://doi.org/10.1185/135525706X121129

Fleming, T. M., Dixon, R. S., & Merry, S. N. (2012). 'It's mean!' The views of young people alienated from mainstream education on depression, help seeking and computerised therapy. *Advances in Mental Health, 10*(2), 195–203. https://doi.org/10.5172/jamh.2011.10.2.195

Fook, J. (1996). *The reflective researcher: Social workers' theories of practice research.* Allen & Unwin.

Gulliford, M., Figueroa-Munoz, J., Morgan, M., Hughes, D., Gibson, B., Beech, R., & Hudson, M. (2002). What does 'access to health care' mean? *Journal of Health Services Research & Policy, 7*(3), 186–188. https://doi.org/10.1258/135581902760082517

Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry, 10*(1), 113. https://doi.org/10.1186/1471-244X-10-113

Guo, S., Kataoka, S. H., Bear, L., & Lau, A. S. (2014). Differences in school-based referrals for mental health care: Understanding racial/ethnic disparities between Asian American and Latino youth. *School Mental Health, 6*(1), 27–39. https://doi.org/10.1007/s12310-013-9108-2

Haavik, L., Joa, I., Hatloy, K., Stain, H. J., & Langeveld, J. (2019). Help seeking for mental health problems in an adolescent population: The effect of gender. *Journal of Mental Health, 28*(5), 467–474. https://doi.org/10.1080/09638237.2017.1340630

Harris, B. R., Shaw, B. A., Sherman, B. R., & Lawson, H. A. (2016). Screening, brief intervention, and referral to treatment for adolescents: Attitudes, perceptions, and practice of New York school-based health center providers. *Substance Abuse, 37*(1), 161–167. https://doi.org/10.1080/08897077.2015.1015703

Hassett, A., & Isbister, C. (2017). Young men's experiences of accessing and receiving help from child and adolescent mental health services following self-harm. *SAGE Open, 7*(4), Article 2158244017745112. https://doi.org/10.1177/2158244017745112

headspace National Youth Mental Health Foundation. (2021). Year in review 2019–2020. https://headspace.org.au/assets/HSP10755_Year-in-Review-2020_FA05_DIGI.pdf.

Headspace National Youth Mental Health Foundation Ltd. (2022). *Welcome to headspace centres*. headspace. https://headspace.org.au/welcome-to-headspace-centres/.

Howard, V., & Holmshaw, J. (2010). Inpatient staff perceptions in providing care to individuals with co-occurring mental health problems and illicit substance use. *Journal of Psychiatric and Mental Health Nursing, 17*(10), 862–872. https://doi.org/10.1111/j.1365-2850.2010.01620.x

Huggins, A., Weist, M. D., McCall, M., Kloos, B., Miller, E., & George, M. W. (2016). Qualitative analysis of key informant interviews about adolescent stigma surrounding use of school mental health services. *International Journal of Mental Health Promotion, 18*(1), 21–32. https://doi.org/10.1080/14623730.2015.1079424

Lehman, B. J., David, D. M., & Gruber, J. A. (2017). Rethinking the biopsychosocial model of health: Understanding health as a dynamic system. *Social and Personality Psychology Compass, 11*(8), Article e12328. https://doi.org/10.1111/spc3.12328

Lubman, D. I., Cheetham, A., Jorm, A. F., Berridge, B. J., Wilson, C., Blee, F., Mckay-Brown, L., Allen, N., & Proimos, J. (2017). Australian adolescents' beliefs and help-seeking intentions towards peers experiencing symptoms of depression and alcohol misuse. *BMC Public Health, 17*(1), 658. https://doi.org/10.1186/s12889-017-4655-3

Macbeth, D. (2001). On "reflexivity" in qualitative research: Two readings, and a third. *Qualitative Inquiry, 7*(1), 35–68. https://doi.org/10.1177/107780040100700103

Manuel, J. I., Yuan, Y., Herman, D. B., Svikis, D. S., Nichols, O., Palmer, E., & Deren, S. (2017). Barriers and facilitators to successful transition from long-term residential substance abuse treatment. *Journal of Substance Abuse Treatment, 74*, 16–22. https://doi.org/10.1016/j.jsat.2016.12.001

McAndrew, S., & Warne, T. (2014). Hearing the voices of young people who self-harm: Implications for service providers. *International Journal of Mental Health Nursing, 23*(6), 570–579. https://doi.org/10.1111/inm.12093

McCann, T. V., Mugavin, J., Renzaho, A., & Lubman, D. I. (2016). Sub-saharan african migrant youths' help-seeking barriers and facilitators for mental health and substance use problems: A qualitative study. *BMC Psychiatry, 16*(1), 275. https://doi.org/10.1186/s12888-016-0984-5

McCormack, L., Thomas, V., Lewis, M. A., & Rudd, R. (2017). Improving low health literacy and patient engagement: A social ecological approach. *Patient Education and Counseling, 100*(1), 8–13. https://doi.org/10.1016/j.pec.2016.07.007

McDonagh, D., Connolly, N., & Devaney, C. (2019). "Bury don't discuss": The help-seeking behaviour of family members affected by substance-use disorders. *Child Care in Practice, 25*(2), 175–188. https://doi.org/10.1080/13575279.2018.1448258

McGorry, P., Trethowan, J., & Rickwood, D. J. (2019). Creating headspace for integrated youth mental health care. *World Psychiatry, 18*(2), 140.

Nooteboom, L. A., Mulder, E. A., Kuiper, C. H., Colins, O. F., & Vermeiren, R. R. (2021). Towards integrated youth care: A systematic review of facilitators and barriers for professionals. *Administration and Policy in Mental Health and Mental Health Services Research, 48*(1), 88–105.

Osborne, B., Kelly, P. J., Robinson, L. D., Ivers, R., Deane, F. P., & Larance, B. (2021). Facilitators and barriers to integrating physical health care during treatment for substance use: A socio-ecological analysis. *Drug and Alcohol Review, 40*(4), 607–616. https://doi.org/10.1111/dar.13197

Persson, S., Hagquist, C., & Michelson, D. (2017). Young voices in mental health care: Exploring children's and adolescents' service experiences and preferences. *Clinical Child Psychology and Psychiatry, 22*(1), 140–151. https://doi.org/10.1177/1359104516656722

Radez, J., Reardon, T., Creswell, C., Lawrence, P. J., Evdoka-Burton, G., & Waite, P. (2021). Why do children and adolescents (not) seek and access professional help for their mental health problems? A systematic review of quantitative and qualitative studies. *European Child & Adolescent Psychiatry, 30*(2), 183–211. https://doi.org/10.1007/s00787-019-01469-4

Rickwood, D., Nicholas, A., Mazzer, K., Telford, N., Parker, A., Tanti, C., & Simmons, M. (2017). Satisfaction with youth mental health services: Further scale development and findings from headspace–Australia's National Youth Mental Health Foundation. *Early Intervention in Psychiatry, 11*(4), 296–305.

Rickwood, D. J., Deane, F. P., & Wilson, C. J. (2007). When and how do young people seek professional help for mental health problems? *Medical Journal of Australia, 187*(S7), S35–S39. https://doi.org/10.5694/j.1326-5377.2007.tb01334.x

Rickwood, D. J., Telford, N. R., Mazzer, K. R., Parker, A. G., Tanti, C. J., & McGorry, P. D. (2015). The services provided to young people through the headspace centres across Australia. *Medical Journal of Australia, 202*(10). https://www.mja.com.au/journal/2015/202/10/services-provided-young-people-through-headspace-centres-across-australia.

Robards, F., Kang, M., Usherwood, T., & Sanci, L. (2018). How marginalized young people access, engage with, and navigate health-care systems in the digital age: Systematic review. *Journal of Adolescent Health, 62*(4), 365–381. https://doi.org/10.1016/j.jadohealth.2017.10.018

Rose, R. A., Evans, C. B. R., Smokowski, P. R., Howard, M. O., & Stalker, K. L. (2018). Polysubstance use among adolescents in a low income, rural community: Latent classes for middle- and high-school students. *The Journal of Rural Health, 34*(3), 227–235. https://doi.org/10.1111/jrh.12268

Tharaldsen, K. B., Stallard, P., Cuijpers, P., Bru, E., & Bjaastad, J. F. (2017). 'It's a bit taboo': A qualitative study of Norwegian adolescents' perceptions of mental healthcare services. *Emotional and Behavioural Difficulties, 22*(2), 111–126. https://doi.org/10.1080/13632752.2016.1248692

Tshitangano, T. G., & Tosin, O. H. (2016). Substance use amongst secondary school students in a rural setting in South Africa: Prevalence and possible contributing factors. *African Journal of Primary Health Care & Family Medicine, 8*(2), 1–6.

van Boekel, L. C., Brouwers, E. P. M., van Weeghel, J., & Garretsen, H. F. L. (2013). Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence, 131*(1), 23–35. https://doi.org/10.1016/j.drugalcdep.2013.02.018

Wilson, C. J., & Deane, F. P. (2012). Brief report: Need for autonomy and other perceived barriers relating to adolescents' intentions to seek professional mental health care. *Journal of Adolescence, 35*(1), 233–237. https://doi.org/10.1016/j.adolescence.2010.06.011

Wilson, C. J., Rickwood, D., & Deane, F. P. (2007). Depressive symptoms and help-seeking intentions in young people. *Clinical Psychologist, 11*(3), 98–107. https://doi.org/10.1080/13284200701870954

World Health Organization. (2017). Global accelerated action for the health of adolescents (AA-HA!): Guidance to support country implementation. https://www.who.int/publications/i/item/9789241512343.