**Contextual influences experienced by Queensland midwives: A qualitative study
focusing on alcohol and other substance use during pregnancy**

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ABSTRACT

PURPOSE: To understand the experiences and contextual factors that influence the ability of midwives to provide appropriate support to women regarding alcohol and other substance use during pregnancy, in the Queensland context.

DESIGN: Using a qualitative approach underpinned by critical realism, we explored the experiences of eleven midwives using semi-structured interviews. A thematic analysis approach was utilised, which was inductive and deductive, as it aimed to explicate different contextual factors at play, based on the experiences of the current sample of midwives.

MAJOR FINDINGS: Experiences of midwives in the current study were influenced by five overarching contextual factors: (1) patient-level factors (*complexities experienced by women and lack of knowledge regarding maternity care options*); (2) provider/patient-level factors (*importance of midwives building relationships with women and importance of continuity of care*); (3) provider-level factors (*importance of taking a supportive approach, midwife confidence, engagement in AOD screening, variable attitudes and knowledge*); (4) organisational-level factors (*lack of support and training, concerns regarding communication, time constraints and organisations that limited midwife involvement*); (5) broader system-level factors (*lack of effective services and inconsistent messages regarding AOD use during pregnancy*).

CONCLUSIONS: The current study has highlighted a range of practice areas and potential implementation strategies across a number of contextual levels that could be beneficial in the Queensland context to improve maternity care provision for women who are experiencing AOD use challenges during pregnancy.

KEYWORDS: Midwives; Maternity Care; Queensland; Pregnancy; Alcohol; Drug; Substance Use; Implementation; Practice-based Evidence

INTRODUCTION

The use of alcohol and other drugs (AOD; e.g., nicotine, cannabis, methamphetamines) during pregnancy is considered a major public health issue in western countries (Gunn et al., 2016; Popova et al., 2017). Some research suggests an association between AOD use during pregnancy and complex health and wellbeing influences such as interpersonal violence, low socio-economic status, mental health difficulties, criminal justice involvement, and lack of support (Blandthorn et al., 2011; Dunkel Schetter, 2011; May & Gossage, 2011). However, research also highlights the risk of alcohol use during pregnancy among older women with higher education (Peadon et al., 2011), higher income (Callinan & Room, 2012), and in unplanned pregnancies, particularly prior to awareness of conception (Kingsbury et al., 2015; McCormack et al., 2017). This highlights the importance of providing screening and information to women and partners across all socio-economic groups.

AOD use during pregnancy can result in a wide range of adverse health and wellbeing outcomes for women and their babies (Cook et al., 2016; Miles et al., 2010). One potential unintended adverse outcome is fetal alcohol spectrum disorder (FASD), which can involve: cognitive impairments, growth deficiencies, facial anomalies, skeletal deformities, language deficits, motor dysfunction, and learning and behavioural problems (Reid et al., 2015). Regular use of both licit and illicit drugs during pregnancy has also been associated with an array of adverse outcomes extending from infancy into childhood (Fonti et al., 2016; Gamble et al., 2015). Early identification is the first step to providing appropriate support and improving health and wellbeing outcomes for women and their babies (Gamble, et al., 2015; Seib et al., 2012). Midwives play an important role in assessing psychosocial risks such as AOD use during pregnancy, and providing accurate information, advice, support, and referral pathways (Rutman et al., 2014).

Despite routine screening tools being introduced in various antenatal settings, evidence suggests health professionals may be reluctant to ask women about their AOD use (Jones et al., 2011; Seib, et al., 2012). Stigma and fear of judgment around disclosing AOD use, service providers' lack of skills and confidence to effectively discuss AOD use and refer to appropriate services, and lack of systematic screening approaches for all women, as opposed to just high-risk women (Poole et al., 2016) have all been identified as important issues. Other studies have reported that health professionals perceive that women know not to consume alcohol and therefore, do not ask; that other health issues take higher priority during antenatal visits; and a lack of confidence in the current available specialised services (France et al., 2010).

The current literature demonstrates the importance of addressing AOD use in the wider context of other health and wellbeing issues, and the important role midwives play in health and wellbeing promotion. Previous literature demonstrates significant variation among health professionals, including midwives, in their practices regarding AOD use during pregnancy. However, there was a lack of current research focussing on midwives in the Queensland context. Selecting and tailoring effective strategies in line with specific contextual needs increases the likelihood of improving practice (Powell et al., 2017). Notably, this can limit the theoretical mismatch that can occur between implementation strategies (e.g., attempting to use clinician-focused strategies to address organisational barriers) (Bosch et al., 2007; Powell, et al., 2017). Therefore, the aim of the current study was to investigate the experiences and contextual influences for a sample of midwives in Queensland, Australia when supporting women during pregnancy with regard to AOD use.

METHODS

Design

A qualitative approach was identified as best matched to the study aim. Given that we intended to explore experiences of midwives from their perspectives and to create meaning within the context of their unique experiences, this aligned with a critical realist approach (Hesse-Biber & Leavy, 2011). Critical realism aims to understand the processes that influence the phenomena we perceive around us, with a particular interest in the experiences of individuals in particular contexts (Maxwell, 2012). The critical realist approach has been recognised as being particularly suitable to nursing and midwifery research due to its ability to illuminate the complexity of healthcare experiences (Walsh & Evans, 2014). Notably, critical realism encourages researchers to work in an inter-disciplinary fashion to more holistically examine clinical phenomena (Walsh & Evans, 2014). Furthermore, as Walsh & Evans (2014) aptly state “critical realism facilitates the adoption of a critical lens to enquiry so that women’s empowerment and agency can be addressed as part of the research process and outcome” (p.5).

Researcher characteristics

The main researcher was a female provisional psychologist completing her Master of Clinical Psychology Degree. The researcher had an interest in supporting at-risk pregnant women and improving health and wellbeing outcomes for women and their babies. However, the researcher’s knowledge of midwifery practices and maternity care was limited. There were no pre-existing relationships with midwifery services prior to commencing this study.

Sampling and recruitment

A purposive sampling technique was employed whereby maternity services in Queensland were targeted to recruit participants considered representative of the desired population (i.e. midwives working with pregnant women within Queensland). The study was advertised via flyers inviting participants to contact the researcher to express their interest. Flyers were emailed to relevant services, posted online and on social media, or physically provided to

maternity services. A snowballing technique was used to recruit future participants through networks of participants who agreed to participate in the study. Participants were offered a \$10 gift voucher as a thank you for their participation. Participants continued to be recruited until data saturation occurred and no new themes emerged from the interviews. As a result, 11 midwives were recruited in total. Three midwives who contacted the researcher were excluded as they did not meet selection criteria (i.e. midwives currently working in Queensland).

Data collection

Data collection was undertaken by the first author, using a semi-structured interview schedule (see Supplemental Data File 1), developed based on a review of relevant literature, and in consultation with a focus group of experienced midwives working within the recruitment area. The semi-structured nature of the interviews was in line with an essentialist/realist qualitative approach whereby conversations remained focused on the research topic, while allowing participants to expand on this, and provide information relevant to their own experience (Braun & Clarke, 2006). The interview questions were initially framed in terms of women's health and wellbeing messages provided during pregnancy, before funnelling down to more sensitive topics such as AOD use. Interviews were arranged at the convenience of the participants. Six interviews were completed via phone, and five were completed in person. Interviews lasted from 45 to 90 minutes. All interviews were audio recorded with consent, and transcribed verbatim. Participants also completed a short demographic questionnaire at the time of interview.

Data analysis

Transcripts of the interviews were analysed by author RW and discussed with authors NR and FOC throughout the analysis process. Thematic analysis was chosen as it is epistemologically neutral and therefore compatible with a realist approach. The process was

inductive and deductive, as it aimed to explicate different contextual influences based on the experiences of the current sample of midwives. A six-step protocol guided by Braun & Clarke (2006) was employed to analyse the transcripts. Step 1: Each interview transcript was read several times to obtain familiarity with the data. Step 2: Extracts were generated into initial codes based on salient features using the software program, NVivo 11. This process continued until all data extracts from the transcripts were coded. Step 3: The initial codes were then categorised, re-categorised and condensed to identify major themes based on patterns. Step 4: The codes and themes were reviewed, refined, and cross-checked by other members of the research team to ensure agreement with interpretation. Step 5: Themes were named and defined. Step 6: The significance of the patterns of themes found in the data were analysed and theorised in relation to the research question and previous literature, and a report of the analysis was produced. To aid reflexivity and reduce bias, the first author maintained a research journal throughout the analysis process to identify the researcher's values, assumptions and subjective opinions that may have influenced the interpretation of the results.

Ethical considerations

Ethical approval was obtained from the University Human Research Ethics Committee (HREC: 2017/890). Participants who contacted the researcher were provided with a brief summary of the project and, if they agreed to participate, a time and location for the interview was scheduled. Participants were also advised that the main researcher was completing the research as a requirement of her studies. Written and verbal consent to participate and permission to audio-record the interviews was obtained and re-confirmed prior to the commencement of each interview. Anonymity of the interviews was ensured by assigning a code name to identify recordings and removing any identifying information. Audio-

recordings were erased after transcription, and transcripts were stored in password protected files on the University research storage system.

FINDINGS

Participant characteristics

Midwives who participated in the current study ranged from 34 years to 59 years and were all female. The number of patients seen each week by participants ranged from five to 40, depending on the setting, with more patients per week seen in traditional hospital shift-based care compared to in caseload care settings. See Table 1 for further participant details.

TABLE 1 Demographic characteristics of participants

Variable	<i>n</i> = 11
Type of health care service	
Public hospital	9
Private hospital	1
Both public and private	1
Model of maternity care	
Shift-based care	6
Caseload care/Continuity of care	4
Combination of shift-based and caseload care	1
Point of contact with women	
Antenatal care only	2
Postnatal care only	2
More than one area of care	7
Time in current role	
<2 years	7
2-10 years	4
Years of experience	
<5 years	2
5-20 years	7
>20 years	2

Results of the thematic analysis

Thirteen key themes emerged, which were organized into five overarching contextual influences: (1) patient-level factors; (2) provider/patient-level factors; (3) provider-level factors; (4) organisational-level factors; (5) broader system-level factors. The themes and contextual influences are summarised below and in Table 2.

Patient-level factors. The midwives interviewed identified that women with complex psychosocial issues were less likely to engage in antenatal care and therefore miss the opportunity to address possible AOD issues. Several factors were identified as contributing to this including; issues accessing the hospital; fear of involvement with child protection; fear of the hospital environment; stigma associated with support services, and; stigma in society about topics such as mental health, and AOD use during pregnancy. Midwives in the current study reported a need for more community-based antenatal care services to increase accessibility for women with complex psychosocial issues. Another important point raised by the midwives interviewed was that most women did not know or understand what maternity care models were available. Specifically, that women did not know that continuity of midwifery care was an option. Midwives in the current study communicated that more education in the community was required to help women increase their knowledge regarding their maternity care options.

Provider/patient-level factors. A strong theme that emerged within the data was the importance of midwives' building and maintaining relationships with the women they were providing care to, believing that this facilitated trust in the midwife. Midwives interviewed felt this trust improved their assessment of health and wellbeing issues and was beneficial for providing women with information and support. Women were more likely to disclose sensitive information, seek support, and be receptive to information and advice from a midwife with whom they had a trusting relationship. Midwives in the current study consistently shared that continuity of care models were the most effective for building trusting relationships with women, and consequently improving health and wellbeing outcomes. In addition, they noted that continuity of care models assisted women to engage in antenatal care, particularly women with complex psychosocial issues.

Provider-level factors. The majority of midwives interviewed described how having a non-judgmental and supportive approach, as well as a casual and conversational assessment style, were the most helpful strategies in discussing sensitive information. Midwives in the current study consistently shared the view that feeling confident in their role greatly assisted them in their conversations with women, particularly around sensitive topics such as AOD use. Various factors influenced midwives' level of confidence including: experience and time working as a midwife; age and maturity; and recognising it was important and part of their role to discuss these sensitive topics with women. Finally, being provided with training, having support from team members, and having knowledge about sensitive topics such as AOD use during pregnancy, were major factors reported to influence midwives' confidence.

Most of the midwives who were interviewed reported using screening tools as part of their assessment for sensitive topics (e.g., the handheld record for AOD use, the safe-start tool for domestic violence, and the Edinburgh Depression Scale). They also reported engaging in routine screening of AOD use, particularly at the first appointment; offering referrals to support services when women reported such use; flagging concerns with relevant people within their team and with associated hospital services; and asking women about their use again if they had previously reported using. Most midwives interviewed reported they provided women with education about the effects of AODs during pregnancy, as well as information about support options available. Importantly, several midwives indicated that using a harm minimisation approach was helpful in providing this information.

There were mixed findings regarding midwives' opinions, attitudes and knowledge regarding AOD use during pregnancy. Some of the midwives interviewed expressed helpful opinions that facilitated support and better outcomes for pregnant women and their babies. This included acknowledging that AOD use could be associated with a range of complex

issues including AOD use within social networks and by partners; cultural influences; and psychosocial stressors including trauma, stress, and mental health concerns, with AOD use often serving as a coping strategy for such stressors. Most of the midwives also expressed the view that AOD use affected the fetus detrimentally in some way, including affecting growth and causing withdrawal symptoms. More specifically, several midwives expressed that: alcohol use could cause FASD; behavioural difficulties, developmental delays, and facial features were common symptoms of FASD; and FASD tended to become more apparent as the child developed, rather than at birth. However, some midwives interviewed expressed the opinion that women already knew they should not use AODs during pregnancy. Overall, midwives shared a common view that they lacked knowledge about the effects of AODs during pregnancy, about AOD use in general, about FASD, and about evidence-based strategies to support women, such as brief intervention. They felt these deficits in knowledge impacted their ability to effectively support women in their care.

Organisational-level factors. Midwives in the current study reported experiencing a lack of support and training. There was a common view that they were expected to learn through working in their role. Training about AOD use, interviewing women, or about support services and referral options, was usually only gained voluntarily, requiring midwives' own initiative and/or resources to access. These midwives reported they received limited hospital-based and university-based education on AOD use, and limited training on strategies for supporting women using AODs, such as brief intervention. Several midwives also shared that when they needed to seek advice or support for themselves, it was not always available. Additionally, midwives in the current study raised significant issues of concern with communication between staff and team members in their services. This included that important information about the women they cared for was not always flagged with other team members or provided in handover to be followed up, and screening was not always

completed, with some sections of the assessment being left blank. Midwives interviewed felt it was part of their responsibility to flag these issues with relevant people, however, there were doubts expressed about whether everyone followed this process.

Another common experience for midwives in the current study was the time constraints within their services. Midwives often had a significant amount of assessment data to gather for each woman within an allocated timeframe, and consequently other information sometimes took priority over discussing sensitive topics such as AOD use. For example, health promotion materials such as brochures, were only provided to women or their partners, when they identified as requiring it. There was also a shared view that traditional hospital-based care did not allow them to provide full care to the pregnant women they supported. Midwives interviewed identified a discrepancy between private and public models of care, such that private hospital-based care significantly limited the involvement of midwives as most antenatal care was provided by obstetricians. Midwives reported that screening, assessment, health promotion, and follow-up support was significantly limited in private hospital-based care models, and consequently women with AOD use could be missed.

System-level factors. Midwives in the current study reported concerns regarding a lack of referral and support options for women who do have AOD issues, both within and outside of their own organisations. Furthermore, midwives interviewed reported that the services that were available were stretched and that even if they could find a suitable referral option that many times women would not be followed up and provided with the supports that they required regarding their AOD issues. Another significant issue raised by midwives in the current sample was that they felt women often received inconsistent messages about health and wellbeing issues, particularly topics such as AOD use, either in the media, or from other health professionals. Midwives were concerned that this frequently confused women about the risks associated with AOD use during pregnancy. Midwives felt that increased education

across the healthcare system and community regarding sensitive topics such as mental health and AOD use was required.

TABLE 2 Contextual factors and themes

Patient-level factors	
Complexities experienced by women	<i>“Yeah, they won’t engage in the service. Well often it’s not because they don’t want to; they don’t know how to or they’re scared. They’re fearful of a big organization. They’re fearful of coming to a hospital environment.” – P8</i>
Lack of knowledge regarding maternity care options	<i>“The problem at the minute is that women don’t know what they don’t know. So they don’t know that they’re being short changed, they don’t know that they can have a certain model of care.” – P7</i>
Provider/Patient-Level factors	
Importance of midwives building relationships with women	<i>“You know you can bring in all of these different tools. We’ve got lots of assessment tools, but it’s that trusting relationship that really makes the difference.” – P8</i>
Importance of continuity of care models to facilitate relationship building	<i>“The benefit of continuity is that I don’t just have one conversation with a woman. I’ll see her again and keep checking in with her.” – P4</i>
Provider-level factors	
Importance of taking a supportive approach	<i>“Rather than saying, “It’s really important that you don’t do this, it’s really important that you don’t do that”, but more about “Hey let’s talk about that.” – P3 “I’m not there to judge her, I’m really not. In fact I hope I can support her.” – P4</i>
Midwife confidence	<i>“Not having confidence, not knowing the system, all of those things impact on how we give the information and what information we give.” – P1</i>
Engagement in AOD screening and information provision	<i>“If they have identified that they do smoke or drink at their first appointment, then that’s something that we would go through each appointment.” – P2 “I always often say to women, ‘No one knows exactly what amount creates the damage, but you’re better off being safe by not doing it.’” – P10</i>
Variable midwife attitudes and knowledge regarding AOD use	<i>“They’ve got stresses in their life and that just gives them their relief.” – P2 “Most of the women do know already that they shouldn’t be drinking.” – P6</i>

	<i>"It [alcohol] crosses the placental barrier so... every baby is exposed if the mother is exposed." – P5</i>
Organisational-level factors	
Lack of support and training for midwives	<i>"Most of our learning is done on the job... and then of course, you're at the mercy of whoever you're learning from." – P4</i> <i>"I don't feel that we are that well equipped." – P3</i>
Concerns regarding staff communication	<i>"In the system that we work in, the general consensus is that somebody else is sorting it, somebody else is seeing to it, and there lies the risk that actually everybody thinks everybody else is doing it, and actually the woman is getting no support whatsoever." – P7</i> <i>"So I can get a little bit of information, but I don't have the time to sort of sit and draw all the information out." – P1</i>
Time constraints	<i>"Because of time restraints.... if they're not using, we focus on the other points of education." – P11</i>
Organisations that limited the involvement of midwives	<i>"I work in a private model of care, the antenatal care is delivered by the obstetricians so the only access that we have to pregnant women in a private obstetric model is through education where women book in classes" – P5</i>
System-level factors	
Lack of effective support services for women with AOD issues	<i>"I suppose I'd find what I'm not confident, is saying there's these support services available to you, knowing that my biggest tool is child protection and that tool is stretched. So it would be nice if we had a service specially designed for those women." – P3</i> <i>"Even the services that I refer them to, I feel like they sometimes fall through the gaps." – P4</i>
Inconsistent messages regarding AOD use during pregnancy	<i>"I've actually had a woman who said that the GP said she could have a couple of wines now and again." – P9</i> <i>"They're falling through the gaps ... they get conflicting advice from numerous people, or they don't get the advice at all." – P7</i>

DISCUSSION

The current study aimed to investigate the experiences and contextual influences for a sample of midwives in Queensland when supporting pregnant women with regard to AOD use.

Overall, the results demonstrated that the experiences of these midwives provide important evidence to inform contextual variation in settings with regard to patient, provider,

organisation and system level factors, which can serve as barriers or facilitators to improving AOD use during pregnancy.

At the patient level, midwives described how a range of psychosocial factors could impact on the ability of women to access appropriate antenatal care, in the context of AOD use. This included issues such as stigma associated with AOD use, fear of involvement with child protection services, and difficulties with accessing the hospital (e.g., due to financial challenges). The experiences of the midwives in the current study are consistent with numerous previous studies that have documented that women with AOD use are more likely to receive late, limited or no prenatal care and in conjunction with AOD use, women experience multiple risk factors, which impact on service utilization (Milligan et al., 2002; Roberts & Pies, 2011). For example, a previous study from the United States that undertook interviews with 30 recently pregnant women who had AOD use during pregnancy found that punitive policies regarding AOD use, and in some cases poor treatment from medical professionals, had discouraged women from accessing prenatal care or being honest with their care providers (Stone, 2015). One suggestion provided by midwives in the current study to improve prenatal care access for women with AOD use was increased availability of community-based programs. This is also supported by previous research, which has documented that integrated, community-based, primary care maternity programs for pregnant women with AOD issues are potentially effective approaches (e.g., Marcellus et al., 2015).

Notably, previous research has documented that engagement in comprehensive, integrated services for pregnant women with AOD challenges is facilitated by caring relationships with health professionals (Kramlich & Kronk, 2015). This was also highlighted by the findings of the current study, as midwives consistently agreed that the relationship between the midwife and pregnant women was an important facilitator of positive outcomes. Furthermore, midwives interviewed endorsed continuity of care as the most effective model

for building a relationship with pregnant women, as well as increasing engagement in antenatal care, especially for women with complex psychosocial difficulties. This is supported by previous research, which demonstrates that continuity of care facilitates better assessment, support, and outcomes regarding sensitive topics as it provides the opportunity to develop a trusting relationship with a midwife and to tailor health and wellbeing interventions for the woman (Allen et al., 2016; Reid et al., 2018). However, research indicates that continuity of care is not being widely implemented in Australia, despite the documented benefits for women and babies across a range of outcomes (Dawson et al., 2016; Homer, 2016). Midwives in the currently study felt that some women they cared for had a lack of knowledge regarding the different maternity care options that were available to them. Consequently, increasing education and awareness for women of childbearing age regarding different models of midwifery care, could empower women to have more input and choice regarding their preferences in relation to models of maternity care.

At the provider level, confidence was identified as an important factor. Midwives in the current study reported that feeling confident in their role assisted in discussing sensitive issues, and this confidence was influenced by factors such as experience, age, and recognising it as part of their role to discuss sensitive issues with women. Previous research found that confidence was a key factor involved in nurses' and other health professionals' screening of AOD use during pregnancy (France, et al., 2010). Therefore, the current study highlights that confidence also plays a vital role in midwives' ability to assess AOD use during pregnancy, provide support, and subsequently improve outcomes for women and their babies.

Many of the midwives interviewed reported engaging in routine screening of AOD use during pregnancy. However, there was some variability found regarding knowledge and attitudes. For instance, some midwives displayed high levels of knowledge regarding

potential risks of AOD use during pregnancy and highlighted the importance of asking all women throughout their pregnancy. Others, however, felt that most women already knew that they should not be drinking and therefore, it was not important to ask. Previous Australian research nearly 20 years ago also documented this as a barrier to screening for alcohol use during pregnancy (France, et al., 2010). It is concerning that this it is still an assumption that is being made, as this leads to missed opportunities to provide information and support to women regarding alcohol use.

The variability in knowledge and attitudes evidenced at the provider-level, could be directly linked to a lack of training and support at the organisational level that was experienced by midwives in the current study. Midwives described how they received limited on-the-job training or education during their university curriculum regarding AOD use. Notably, midwives highlighted that they knew of evidence-based interventions, such as brief interventions, but they had not received training in how to implement such interventions in practice. Previous research has documented the effectiveness of brief interventions that utilise motivational interviewing techniques for AOD use, particularly in circumstances where women had higher initial levels of alcohol use (Handmaker et al., 1999) and where partners were involved in the treatment (Chang et al., 2005). This is an important area of practice need that could be addressed through organisation-level professional development and university-based courses for midwives in Queensland.

Additionally, midwives identified broader system-level factors that are potentially impacting the provision of supports for women regarding AOD use during pregnancy. Specifically, midwives in the current study felt that there was a lack of effective support services for women with AOD issues, or that when they had referred women to available support services, they were not followed up and provided with the services that they needed. This point also highlights the need for increased community-based, integrated, primary care

maternity programs that have the potential to improve outcomes for pregnant women experiencing AOD challenges while pregnant (Marcellus, et al., 2015). Lastly, midwives in the current study emphasised the impacts regarding inconsistent messages that women were experiencing, from other health professionals, but also from family and friends regarding AOD use during pregnancy. This has also been highlighted by previous studies (e.g., Hocking et al., 2019) and provides additional evidence for the importance of the midwife role in providing accurate information in a non-judgemental manner, and in the context of individualised maternity care that can best support women regarding AOD challenges during pregnancy (Hocking, et al., 2019).

Strengths and Limitations

An important strength of this study is the use of a semi-structured interview schedule, developed in consultation with a focus group of experienced midwives. Further, the research was conducted by a multi-disciplinary team, including psychologists and a midwife. A research journal was also used to track the main researcher's thoughts and feelings associated with the research process, and the codes and themes were extensively discussed with the research team to control for bias in the interpretation of results. Finally, the midwives who participated in the research were from a range of locations, in a range of roles and settings within those hospitals, and there was commonality found in their views, which strengthens the findings. However, the results may be limited by self-selection bias, where midwives with an interest in this area who were more open to disclosing their knowledge, attitudes, and practices, volunteered to participate. Furthermore, most midwives in the current study worked in the public hospital system, with only one from a private hospital, and one in part-time private caseload care. This may have skewed the data with an over-represented view from the public hospital system. Also, the results may be limited by the different data collection methods used, with half of the participants completing phone interviews compared to the

other half participating in face-to-face interviews. Future research should seek to investigate the experiences of midwives across a broader range of contexts, utilising the same data collection method for all participants, whilst also including consideration of how different contexts and experiences may shape their views.

Conclusions

Maternity care settings can vary widely with regard to patient, provider, organisation and system-level factors that can influence the ability of midwives to provide appropriate care to women with AOD challenges while pregnant. The information gathered in the current study from midwives in the Queensland context provides important evidence to inform the selection of future implementation strategies to improve outcomes for women who are experiencing difficulties regarding AOD use during pregnancy.

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