



Midwifery student's perceptions of caring for substance-using pregnant women ☆, ☆ ☆, ☆ ☆ ☆

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ABSTRACT

Aim: To identify undergraduate and postgraduate student midwives' attitudes towards women using licit and illicit substances during pregnancy.

Background: Literature shows that globally, substance misuse during pregnancy is growing rapidly. Women who use substances during their pregnancy have specific healthcare needs and require midwives to demonstrate positive attitudes to improve appointment compliance and treatment completion.

Methods: A cross-sectional quantitative survey design was used. A total of 42 surveys were retained for full data analysis.

Findings: Of the 42 participants, 22 were undergraduate midwifery students and 20 were postgraduate midwifery students. The results revealed that both undergraduate and postgraduate students had positive attitudes towards women who used substances during pregnancy. Specifically, postgraduate students, with 1–2 years' experience looking after pregnant women, had the most positive attitudes towards substance use in pregnancy.

Conclusion: This study revealed that undergraduate and postgraduate midwifery students have positive attitudes towards women who misuse illicit and licit substances, which is important for providing quality care upon qualification as a registered midwife. It is essential that midwifery students, who will go on to qualify as registered midwives, are non-judgmental and positive to ensure adequate antenatal care and regular antenatal attendance so maternal and fetal wellbeing can be better managed.

1. Introduction

The misuse of illicit and licit substances by women during pregnancy is a serious public health concern that is often associated with physical, psychological and emotional trauma, as well financial costs to the women, their families and the greater community (Cook et al., 2017). Globally, substance use during pregnancy has been growing rapidly over the last fifty years (Chomchai and Chomchai, 2015; Shaw et al., 2016; Thomas and Wolff, 2016) however, a true account of substance misuse during pregnancy is difficult to pinpoint as incidence are often under reported by pregnant women or overlooked by practitioners (Garg et al., 2016). Therefore, drug misuse during pregnancy is a complex and an increasing health concern for midwives who provide frontline maternity services during the antenatal period. Women who

misuse substances have specific needs in pregnancy that are often difficult to identify as they have poor antenatal attendance and often do not present until later in pregnancy due to the fear of stigma, shame and pressure to enrol in maintenance therapy programs (McKeever et al., 2014). This is not only dangerous to pregnant women but has adverse effects on the developing fetus. Drug use during pregnancy filters through the placental blood supply to directly affect the fetus. This can result in sub-optimal growth, poor neuronal development and can cause acute withdrawal symptoms for the neonate at birth (Serino et al., 2018). Intrauterine exposure through maternal drug misuse may also affect placental growth, which can cause spontaneous abortion at any point during pregnancy (Pairman et al., 2015).

Through early assessment and identification of pregnant women who misuse substances, harm reduction interventions can be

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implemented, which reduces the potential for fetal, neonatal and maternal side effects, and results in improved health outcomes (Calhoun et al., 2015; Grant et al., 2014; Patrick et al., 2015). This also contributes to a reduction in the costs and resources associated with pre-term birth and small for date neonates (Janisse et al., 2014). The multifactorial etiology of substance misuse during pregnancy requires sensitive midwifery care and co-ordination of supportive services to facilitate an optimal outcome for women during the antenatal period (Madgula et al., 2011).

Caring for pregnant women who misuse substances can be challenging for midwives but may also be confronting and difficult for midwifery students. Literature suggests that when staff have positive attitudes towards women with substance misuse issues, pregnant women are more likely to keep appointments and continue treatment (Morris et al., 2012). A positive attitude goes beyond surface optimism to exert an open-mindedness towards events or situations in a welcoming sense, a quality often demonstrated by student midwives (Marks and O'Connor, 2015). This behavioural attribute complements sensitive midwifery care, which encompasses the whole person; the body, mind and spirit (Ross et al., 2018). The benefits of both midwifery students and midwives demonstrating a positive attitude and sensitive midwifery care has implications on women's health and their attitudes towards maternity care services, with care providers proving influential to the health outcomes of women and newborns (Geraghty et al., 2018). However, there has been minimal research exploring midwifery student's perceptions of pregnant women who misuse substances, and how this affects midwifery students providing care. A recent study suggested that an unexpected outcome involving different healthcare professionals, revealed that midwifery students had a more positive attitude towards pregnant substance using women than other healthcare professional (Fonti et al., 2016). Establishing supportive relationships between midwives, midwifery students and women with substance misuse issues, is key in gaining the confidence of women and providing future midwives with opportunities to develop the needed therapeutic skills to provide care for pregnant substance using women presenting to maternity services.

1.1. Aim

The aim of this study was to identify undergraduate and postgraduate student midwives' attitudes towards women using licit and illicit substances during pregnancy.

1.2. Purpose Statement

To date, there is a paucity of literature exploring midwifery student's attitudes and perceptions of caring for women who misuse substances during the perinatal period. As midwifery students are the future stakeholders of contemporary midwifery care, investing in research that facilitates the care practices of future midwives is critical. This purpose of this study is to provide valuable insight into the perceptions of midwifery students, who are expected to care for the increasing scope of women presenting for care with substance misuse issues as part of clinical experience.

2. Methods

2.1. Setting

This study was conducted in Perth Western Australia and involved midwifery students enrolled in both Undergraduate and Postgraduate midwifery degrees.

2.2. Design

For this study, a cross-sectional quantitative survey design was used.

The surveys were distributed to all postgraduate and undergraduate midwifery students enrolled at one University in Western Australia. There were 90 undergraduate and postgraduate midwifery students enrolled on midwifery courses at the University, all of whom were invited to participate in the study.

2.3. Sample

A purposive sampling method was used to recruit participants for this study, and participants were recruited via an online leaflet posted on a midwifery student community site attached to the University. Those midwifery students who responded were contacted by email and supplied with an invitation letter that introduced the study and the purpose of the study. As this was an anonymous online survey, responses could not be attributed to any participating students, guaranteeing there would be no consequences and no recriminations.

The unit of analysis for this study included undergraduate and postgraduate midwifery students enrolled at a University in Western Australia. This included both full-time and part-time midwifery students enrolled in either a dual degree Bachelor of Science, Nursing and Midwifery, (four-year undergraduate program) or a Masters of Midwifery (two-year post graduate, entry to practice program). This included both full time and part time students. In total 50 midwifery students completed the on-line Qualtrics survey, giving a response rate of 55.6%. Prior to analysis, the data was reviewed for missing values and outliers. Eight students had > 10% of missing responses and due to the risk of nonresponse bias were removed from the data set and all further analysis (Kline, 2015). Variables were reviewed for outliers or extreme values. All responses were considered reasonable within the data. Forty-two surveys were retained for inclusion in the data analysis.

2.4. Data Collection

Data collection occurred between August and September of 2017, using an online self-administered survey, and this approach was implemented as a pilot study, in preparation for a possible larger study involving an interview style approach. The Attitudes of Midwives Towards Women Misusing Illicit and Licit Substances in Pregnancy survey was used for this study. The survey tool was initially designed to assess attitudes of healthcare professionals towards individuals with human immunodeficiency virus (HIV) and has subsequently been adapted for use in other studies assessing attitudes of maternity healthcare workers towards women who use substances in pregnancy (Fonti et al., 2016; Van Boekel et al., 2013). The survey had 20 items and used a 5-point Likert scale with choices ranging from strongly agree to strongly disagree. The tool has previously been validated for the midwifery context using content validity (Fonti et al., 2016).

Prior to administration to the participants, the online survey was submitted for peer review by midwives working in the academic sector. Positive feedback was yielded from peer review of the online survey, and the survey was found to be user friendly and appropriate and no amendments were recommended. The survey questions for assessing attitudes towards women who use substance in pregnancy is presented in Table 1.

2.5. Ethical Considerations

This study was granted ethical approval from the University's Research and Ethics Committee, number 18429. The consideration of confidentiality and anonymity were addressed through written assurance on the information sheet, that survey responses would remain confidential.

2.6. Data Analysis

The data collected through the survey was analysed using SPSS 24®

Table 1
Survey questions.

	Scale of importance				
	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
I do/would find it difficult to maintain feelings of empathy, concern or helpfulness for mothers who are substance abusers					
I typically feel angry in reaction to a woman who uses drugs during pregnancy					
I do/would become judgmental to a drug using pregnant woman					
I do/would become unknowingly punitive to a drug using pregnant woman					
I feel the care I give to drug using pregnant women can make a real difference to their pregnancy outcomes					
Drug exposed women will have better pregnancy outcomes if cared for by specialist services					
Women who abuse drugs during pregnancy should be prosecuted					
Women who abuse illegal substances during pregnancy should have their newborn taken away from them					
Women who abuse illegal substances during pregnancy should be sent to a rehabilitation centre					
I think it is worthwhile to spend my time and energy in caring for drug-exposed mothers					
Women who use drugs in pregnancy deserve the same quality of antenatal care as women who don't use drugs					
I feel that women who continue to abuse drugs after they are pregnant care little about themselves and their babies					
I generally feel sympathetic towards women who use drugs in pregnancy					
Life circumstances are likely to be responsible for pregnant women's drug use					
I believe working with drug using pregnant women is rewarding					
There is no point in providing specialist care to pregnant drug users as their pregnancy outcomes are always poor					
Individuals are responsible for their problematic drug use in pregnancy					
Pregnancy can provide an opportunity to address drug use and change behaviour					
With the increasing use of drugs in pregnancy my attitude has become more negative towards the mother					
Staff specifically trained in drug use in pregnancy can improve pregnancy outcomes for drug exposed women					

for windows. Prior to the analysis each item of the Likert scale was given a score of 1–5, with lower scores equating to more positive attitude and higher scores showing more negative attitudes (Cronk, 2017). Completed questionnaires were then given an overall score, reflected as a percentage. Scores were divided into categories of low (0–40), moderate (41–69) and high (70–100).

Descriptive statistics were generated using the data collected from the surveys and are presented in terms of numbers and percentages. As the data was not normally distributed, a Mann-Whitney *U* test was used for analysis to identify the difference in responses between the undergraduate and the postgraduate midwifery students.

3. Findings

The respondents comprised of 22 undergraduate midwifery students (52.4%) and 20 postgraduate midwifery students (47.6%). Most of the undergraduate participants were aged in the 18–29-year-old age group (81.8%) in comparison to the postgraduate student respondents that were aged in the 30–49-year-old age group (60%). Many of the undergraduate respondents had a Year 12 certificate (54.5%), whilst most of the postgraduate midwifery students had already completed a bachelor's degree (50%). Respondents were mostly enrolled full time in their courses. Half of the group of undergraduate midwifery students had provided care to a pregnant woman for 1 year or less (50%), whilst many postgraduate student midwives had provided care to women for 1–2 years (60%). The demographics for the participants are presented in Table 2.

Total attitudinal scores ranged from 38% to 67% with a mean of 52%. The majority of participants scored in the low to moderate range, which suggests that they hold positive or neutral views towards women who use substances in pregnancy (Fonti et al., 2016). Mean attitude scores were compared by age, course, education and number of years caring for pregnant women. Overall, the postgraduate midwifery students had a lower mean attitude score towards women with illicit and licit substance abuse disorders compared to the undergraduate midwifery students, specifically those students with a masters or graduate certificate. Indicating that the attitudes of postgraduate student midwives are more positive than the undergraduate student midwives.

Students in the 30–49-year age group, and looking after pregnant women for 1–2 years, had more positive attitude scores towards women with illicit and licit substance abuse disorders.

4. Discussion

This paper explored midwifery student's perceptions of caring for substance-using pregnant women whilst on clinical placement. A comprehensive search of the literature retrieved no research specific to the topic of investigation therefore, the search was broadened to include the term 'complex care,' as substance-use during the antenatal period requires complex midwifery care. This search also retrieved no additional literature. The authors considered this to be an alarming result considering midwifery students require exposure to the practical experience of complex care issues, such as substance misuse, during pregnancy as part of mandatory learning (Nursing and Midwifery Board of Australia, 2018). These experiences contribute to professional documentation as proof of students' preparedness for graduation and provide them with the 'hands on' experience needed to provide holistic care to women with varied health concerns during the antenatal period. Given the paucity of literature on midwifery students perceptions, a cursory search of the literature using the same strategies but including 'nursing students' was conducted. This retrieved one article reporting the attitudes of nursing students towards caring for people with HIV/AIDS (Pickles et al., 2009). Although dated, this was considered a valuable piece of literature as it held the potential to provide insight into the perceptions of students in healthcare professions caring for patients with complex care issues. It has been suggested that although midwives practice a unique healthcare service, the philosophical underpinnings and practice of nursing and allied health show similar values in the philosophy of caring (Fairbrother et al., 2015). With this in mind, the authors considered that student nurses may share similar experiences to midwifery students when caring for women with complex care issues. Therefore, using comparable literature would provide a better understanding of the perceptions of midwifery students when caring for women with substance misuse issues. Pickles et al. (2009) study highlighted education and knowledge, fear, reluctance to care, and stigma as the main themes identified. It is plausible that themes identified from

Table 2
Participant demographics.

Demographics	Undergraduate (%)	Postgraduate %
Participant age - 18–29	18 (81.8)	6 (30.0)
Participant age - 30–49	4 (18.2)	12 (60.0)
Participant age - 50–64	–	2 (10.0)
Participant age total	22 (100)	20 (100)
Highest level of education – year 12 certificate	12 (54.5)	–
Highest level of education – TAFE certificate	3 (13.6)	–
Highest level of education - bachelor degree	5 (22.7)	10 (50)
Highest level of education - graduate certificate	2 (9.1)	8 (40)
Highest level of education - graduate diploma	–	1 (5)
Highest level of education - master's degree	–	1 (5)
Highest level of education total	22 (100)	20 (100)
Enrolment status- full time	20 (90.9)	17 (85.0)
Enrolment status- part time	2 (9.1)	3 (15.0)
Enrolment status total	22 (100)	20 (100)
Number of years caring for pregnant women - < 1 years	11 (50)	8 (40)
Number of years caring for pregnant women- 1–2 years	6 (27.3)	12 (60)
Number of years caring for pregnant women - 3–4 years	5 (22.7)	–
Number of years in current role total	22 (100)	20 (100)

this study can be considered influential in affecting the perceptions of both midwives and midwifery students, thus awareness of these findings are considered valuable to shed light on future strategies to better support midwifery students experience of caring for pregnant women with substance misuse issues.

Although the current study revealed midwifery students have positive attitudes towards women who misuse licit and illicit substances during pregnancy, the midwifery profession has an obligation to develop supportive strategies and learning opportunities to facilitate midwifery student's confidence and skills in caring for this complex cohort of women. Education and knowledge was the most common occurring theme reported by nursing students caring for patients with HIV/AIDS in the Pickles et al., (2009) study. Although identified as a separate theme, lack of education and knowledge was documented throughout the study to be “one of the major causes of fear, negative attitudes and reluctance to care for people” with complex care needs (Pickles et al., 2009, p. 2265). Considering this and the complex care needs of women who misuse substances in pregnancy, a recommendation for the inclusion of cultural and ethical issues, including biomedical knowledge, can be considered important in continuing to develop midwifery students with professional and non-judgemental behaviour and positive attitudes.

Therefore, it could be recommended that the inclusion of cultural and ethical issues, including biomedical knowledge, is important in supporting professional behaviour, positive attitudes and a non-judgemental approach towards pregnant women with substance misuse issues by midwifery students.

Pregnant women who present for antenatal care with histories of drug misuse, or a disclose of current drug use, often have existing comorbidities that should be managed accordingly (Madgula et al., 2011). Therefore, lower levels of fear and reluctance to provide care may well be associated with increased knowledge and education in complex care issues. Stigma resonates in all social contexts and describes a physical or social trait that causes a negative social reaction in the form of discrimination or social rejection, causing psychological harm (Mora-Ríos et al., 2017). Women who misuse drugs and/or alcohol are considered a population cohort subject to multiple stigma attachments, with society generally targeting women more than men.

The midwifery curricula must consider the impact of the clinical experience of midwifery students in relation to substance misusing women, and guide students through the complex issues surrounding these women's care. In doing so, midwifery students are more likely to display non-judgemental attitudes and continue to have a positive perspective on caring for women with substance misuse issues.

Pregnancy is a time when many women evaluate their health and

wellbeing for the optimal health outcome of the fetus/neonate. Research has suggested that this also applies to pregnant women who misuse substances (Forray et al., 2015). Perinatal care and outcomes are enhanced by holistic, woman-centred, care involving health care services and practitioners who are experienced (Nel and Geraghty, 2017), therefore, it is essential that midwifery students who will go on to qualify as registered midwives, are non-judgmental and change any negative attitudes/beliefs regarding substance use in pregnancy, to ensure adequate antenatal care and good antenatal attendance by pregnant substance using women.

This is an original study that has aimed at understanding the perceptions of undergraduate and postgraduate midwifery students towards pregnant women who misuse licit and illicit substances. This study identified that both undergraduate and postgraduate midwifery students had positive attitudes towards women who misuse substances during pregnancy. Likewise, Fonti et al. (2016) identified that student midwives had the most positive attitudes towards pregnant women with substance misuse issues than any other group tested, including fully qualified midwives (Fonti et al., 2016). However, in contrast to this McKenna et al. (2011) identified that student midwives had low attitudes towards women presenting with substance misuse, which raised concerns regarding the level of professional maternal care provided.

The present study has built on the previous body of knowledge by identifying midwifery students enrolled in postgraduate midwifery courses, and students who held a masters or graduate certificate, had a more positive attitude to substance using pregnant women, than the undergraduate group. Furthermore, this study identified that midwifery students in the 30–49-year age group, and with 1–2 years of clinical experience, had more positive attitudes towards pregnant women who misuse substances. These results need to be explored in other midwifery student cohorts for clarity and further comparison to take place.

Midwifery students are encouraged during training to establish therapeutic relationships with childbearing women and provide care without discrimination or stigmatization (Chenery-Morris and McLean, 2012). In midwifery curricula, students are educated of the associated risks of substance misuse in pregnancy, together with the benefits of interventions or treatments, and how this should be communicated in a respectful, non-judgemental, respectful and empathic manner (Roberts et al., 2015). Therefore, it is essential that midwifery student's perceptions are identified early within midwifery programs, and experience encouraged whilst in the midwifery student role to be involved in the care of pregnant women who misuse substances.

5. Limitations

A limitation of this study was that purposive sampling was used to distribute the surveys and recruit participants. Purposive sampling is a non-probability method of recruiting that requires participants to volunteer for a study, which can result in problems with response rates. However, a response rate of 55.6% was considered adequate for this study.

Another limitation of this study was that the data was only collected from one University in Western Australia. The study would benefit from being conducted in additional settings to allow for further comparison of attitudes towards women who use illicit and licit substances whilst pregnant between undergraduate and postgraduate midwifery students.

5.1. Implications for Midwifery

This paper provides valuable insight into the perceptions of midwifery students caring for women with substance misuse issues and presents a paucity in literature surrounding this topic. As the number of pregnant women with drug misuse issues continues to rise, it is important midwifery students have detailed knowledge of biomedical, ethical and cultural factors that contribute to drug misuse issues during pregnancy and their effects on maternal and fetal wellbeing. The findings of this new evidence can be used to inform the practice of midwifery students, and their future roles as midwives. To facilitate midwifery students' knowledge and perceptions of caring for this cohort of women, the authors recommend priority for thought on future midwifery curriculum, to address these issues and support midwifery students learning and confidence in managing drug misuse issues in clinical environments. This will ensure midwifery students receive the education and mentorship needed to develop skills that better manage and support women experiencing this complex care issue.

Specific to this study, improved substance misuse education in midwifery curricula, and increased exposure to caring for women with drug misuse issues will continue to nurture the positive experiences expressed by midwifery students, facilitating their capacity as future registered midwives to provide sensitive midwifery care for all women throughout the perinatal period.

6. Conclusion

It is an ethical and professional requirement of midwifery students to gain experience in screening, assessing and assisting with interventions and referrals for women who misuse substances in pregnancy. This study revealed that undergraduate and postgraduate midwifery students have positive attitudes towards women who misuse illicit and licit substances, which is important for providing quality care upon qualification as a registered midwife. Postgraduate midwifery students with 1–2 years of clinical experience, had more positive attitudes towards pregnant women who misuse substances, therefore, more research is required to explore whether clinical experience has an impact upon midwifery student's perceptions of substance misuse of pregnant women. Other factors such as education, fear, stigma and reluctance to care also warrant further investigation, as qualitative literature relating to midwifery students' experience of caring for complex care women is seemingly non-existent. Midwifery students play a crucial role in shaping the care of pregnant women who misuse substances, therefore midwives and midwifery academics must invest in their learning, so future midwives have the confidence to build trusting relationships with women whilst maintaining a non-judgemental approach. Midwifery students, when qualified, will play a crucial role in caring for pregnant women who misuse substances, and therefore must build a trusting relationship whilst maintaining a non-judgemental approach.

References

- Calhoun, S., Conner, E., Miller, M., Messina, N., 2015. Improving the outcomes of children affected by parental substance abuse: a review of randomized controlled trials. *Subst. Abuse Rehabil.* 6, 15. <https://doi.org/10.2147/SAR.S46439>.
- Chenery-Morris, S., McLean, M., 2012. Normal Midwifery Practice: Learning Matters. Chomchai, C., Chomchai, S., 2015. Global patterns of methamphetamine use. *Curr. Opin. Psychiatry* 28 (4), 269–274. <https://doi.org/10.1097/YCO.0000000000000168>.
- Cook, J.L., Green, C.R., de la Ronde, S., Dell, C.A., Graves, L., Ordean, A., ... Wong, S., 2017. Epidemiology and effects of substance use in pregnancy. *J. Obstet. Gynaecol. Can.* 39 (10), 906–915. <https://doi.org/10.1016/j.jogc.2017.07.005>.
- Cronk, B.C., 2017. How to Use SPSS®: A Step-by-Step Guide to Analysis and Interpretation. Routledge.
- Fairbrother, G., Cashin, A., Mekki, T.E., Graham, I., McCormack, B., 2015. Is it possible to bring the emancipatory practice development and evidence-based practice agendas together in nursing and midwifery? *Int. Pract. Dev. J.* 5 (1).
- Fonti, S., Davis, D., Ferguson, S., 2016. The attitudes of healthcare professionals towards women using illicit substances in pregnancy: a cross-sectional study. *Women Birth* 29 (4), 330–335. <https://doi.org/10.1016/j.wombi.2016.01.001>.
- Furray, A., Merry, B., Lin, H., Ruger, J.P., Yonkers, K.A., 2015. Perinatal substance use: a prospective evaluation of abstinence and relapse. *Drug Alcohol Depend.* 150, 147–155. <https://doi.org/10.1016/j.drugalcdep.2015.02.027>.
- Garg, M., Garrison, L., Leeman, L., Hamidovic, A., Borrego, M., Rayburn, W.F., Bakhireva, L., 2016. Validity of self-reported drug use information among pregnant women. *Matern. Child Health J.* 20 (1), 41–47. <https://doi.org/10.1007/s10995-015-1799-6>.
- Geraghty, S., Doleman, G., De Leo, A., 2018. Midwives' attitudes towards pregnant women using substances: informing a care pathway. *Women Birth.* <https://doi.org/10.1016/j.wombi.2018.09.007>.
- Grant, T., Graham, J.C., Ernst, C.C., Peavy, K.M., Brown, N.N., 2014. Improving pregnancy outcomes among high-risk mothers who abuse alcohol and drugs: factors associated with subsequent exposed births. *Child Youth Serv. Rev.* 46, 11–18. <https://doi.org/10.1016/j.childyouth.2014.07.014>.
- Janisse, J.J., Bailey, B.A., Ager, J., Sokol, R.J., 2014. Alcohol, tobacco, cocaine, and marijuana use: relative contributions to preterm delivery and fetal growth restriction. *Subst. Abuse.* 35 (1), 60–67. <https://doi.org/10.1080/0897077.2013.804483>.
- Kline, R.B., 2015. Principles and Practice of Structural Equation Modeling. Guilford publications.
- Madgula, R.M., Groshkova, T., Mayet, S., Gelder, V., Day, Mayet, ... Mayet, 2011. Illicit drug use in pregnancy: effects and management. *Expert Rev Obstet. Gynecol.* 6 (2), 179–192. <https://doi.org/10.1586/eog.10.54>.
- Marks, D., O'Connor, R., 2015. Health professionals' attitudes towards the promotion of breastfeeding. *Br. J. Midwifery* 23 (1), 50–58.
- McKeever, A.E., Spaeth-Brayton, S., Sheerin, S., 2014. The role of nurses in comprehensive care management of pregnant women with drug addiction. *Nurs. Womens Health* 18 (4), 284–293. <https://doi.org/10.1111/1751-486X.12134>.
- McKenna, L., Bogossian, F., Hall, H., Brady, S., Fox-Young, S., Cooper, S., 2011. Is simulation a substitute for real life clinical experience in midwifery? A qualitative examination of perceptions of educational leaders. *Nurse Educ. Today* 31 (7), 682–686.
- Mora-Ríos, J., Ortega-Ortega, M., Medina-Mora, M.E., 2017. Addiction-related stigma and discrimination: a qualitative study in treatment centers in Mexico City. *Subst. Use Misuse* 52 (5), 594–603. <https://doi.org/10.1080/10826084.2016.1245744>.
- Morris, M., Seibold, C., Webber, R., 2012. Drugs and having babies: an exploration of how a specialist clinic meets the needs of chemically dependent pregnant women. *Midwifery* 28 (2), 163–172.
- Nel, S., Geraghty, S., 2017. Amphetamine use in pregnancy: perinatal approaches to improve maternal and neonatal outcomes. *Br. J. Midwifery* 25 (9), 552–555. <https://doi.org/10.12968/bjom.2017.25.9.552>.
- Nursing and Midwifery Board of Australia, N. c. s. f. t. m., 2018. National Competency Standards for the Midwife.
- Pairman, S., Tracy, S.K., Thorogood, C., Pincombe, J., 2015. *Midwifery: Preparation for Practice.* Elsevier Australia.
- Patrick, S.W., Dudley, J., Martin, P.R., Harrell, F.E., Warren, M.D., Hartmann, K.E., ... Cooper, W.O., 2015. Prescription opioid epidemic and infant outcomes. *Pediatrics* 135 (5), 842–850. <https://doi.org/10.1542/peds.2014-3299>.
- Pickles, D., King, L., Belan, L., 2009. Attitudes of nursing students towards caring for people with HIV/AIDS: thematic literature review. *J. Adv. Nurs.* 65 (11), 2262–2273. <https://doi.org/10.1111/j.1365-2648.2009.05128.x>.
- Roberts, J., Fenton, G., Barnard, M., 2015. Developing effective therapeutic relationships with children, young people and their families. *Nurs. Child. Young People* 27 (4), 30–35. <https://doi.org/10.7748/ncyp.27.4.30.e566>.
- Ross, L., McSherry, W., Giske, T., van Leeuwen, R., Schep-Akkerman, A., Koslander, T., ... Jarvis, P., 2018. Nursing and midwifery students' perceptions of spirituality, spiritual care, and spiritual care competency: a prospective, longitudinal, correlational European study. *Nurse Educ. Today* 67, 64–71. <https://doi.org/10.1016/j.nedt.2018.05.002>.
- Serino, D., Peterson, B.S., Rosen, T.S., 2018. Psychological functioning of women taking illicit drugs during pregnancy and the growth and development of their offspring in early childhood. *J. Dual Diagn.* 14 (2), 51–60. <https://doi.org/10.1080/15504263.2018.1468946>.
- Shaw, M.R., Lederhos, C., Haberman, M., Howell, D., Fleming, S., Roll, J., 2016. Nurses' perceptions of caring for childbearing women who misuse opioids. *MCN Am. J. Matern. Child Nurs.* 41 (1), 37–42. <https://doi.org/10.1097/NMC.0000000000000208>.
- Thomas, J., Wolff, K., 2016. Diagnosis of Neonatal Abstinence Syndrome: Substance Use During Pregnancy. *Addiction is a Treatable Disease.* 43.
- Van Boekel, L.C., Brouwers, E.P., Van Weeghel, J., Garretsen, H.F., 2013. Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: systematic review. *Drug Alcohol Depend.* 131 (1), 23–35. <https://doi.org/10.1016/j.drugalcdep.2013.02.018>.