
Prenatal health of immigrant women in Norway – an exploratory literature review

REVIEW ARTICLE

SUKHJEET BAINS

E-mail: sukhjeetkb@gmail.com

Norwegian Research Centre for Women's Health

Department of Gynaecology and Obstetrics

Oslo University Hospital, Rikshospitalet

She contributed to the study concept, literature search, design and analysis, compilation and approval of the manuscript.

Sukhjeet Bains, MD and PhD student

The author has completed the ICMJE form and declares no conflicts of interest.

KAROLINA S. MÆLAND

Department of Health and Caring Science

Western Norway University of Applied Sciences

She contributed to the study design and analysis, compilation and approval of the manuscript.

Karolina S. Mæland, midwife and PhD student

The author has completed the ICMJE form and declares no conflicts of interest.

ELINE S. VIK

Department of Health and Caring Science

Western Norway University of Applied Sciences

She contributed to the study design and analysis, compilation and approval of the manuscript.

Eline S. Vik, PhD and midwife

The author has completed the ICMJE form and declares no conflicts of interest.

BACKGROUND

Immigrant women are a vulnerable group within Norwegian prenatal care and have an increased risk of adverse pregnancy outcomes. The purpose of this exploratory literature review was to compile an overview of the available knowledge on the prenatal health of immigrant women in Norway.

EVIDENCE BASE

The literature review covers 44 peer-reviewed articles on the prenatal health of immigrant women in Norway. The articles reflect a variety of study designs and were published in the period 2000–2019. Searches were conducted in MEDLINE, Embase, Cochrane Library, CINAHL, PsycINFO, Maternity & Infant Care Database and SveMed+.

RESULTS

Frequently studied topics included gestational diabetes, obesity, hyperemesis gravidarum, preeclampsia and folate use. We found a considerable variation in the disease risk for different sub-groups of immigrants.

INTERPRETATION

Little research has been conducted on especially vulnerable immigrant groups, such as new arrivals, undocumented immigrants and refugees. We recommend that future studies consider using a qualitative research design that sheds light on the experiences of immigrant families, as well as intervention studies that test the effectiveness of measures for improving prenatal care.

The percentage of pregnant women with an immigrant background is increasing in Norway, and in 2019, 28 % of all new-borns had a mother with an immigrant background [\(1\)](#). The risk of an adverse pregnancy outcome is higher among immigrant women than among the host population [\(2\)](#). A report from the Norwegian Directorate of Health in 2020 describes immigrant women as an especially vulnerable group within prenatal care [\(3\)](#).

An immigrant is defined as a person born outside of Norway with two foreign-born parents and four foreign-born grandparents [\(4\)](#). The term 'country background' refers to a woman's country of birth or her parents'/grandparents' country of birth if the woman was born in Norway [\(4\)](#). In the presentation of the articles, these terms will vary according to the definitions used in the study concerned.

The purpose of this literature review was to identify peer-reviewed articles that studied the prenatal health of immigrant women in Norway. It is intended to provide an overview of the available knowledge and reveal knowledge gaps that are relevant for the planning of future studies.

Evidence base

We conducted searches in the following databases: MEDLINE, Embase, Cochrane Library, CINAHL, PsycINFO, Maternity & Infant Care and SveMed+ (see Appendix 1)

Inclusion criteria were as follows: original articles published in Norwegian or English in the period 2000–2019 that dealt with prenatal health and whose sample population was immigrants living in Norway. Using the Rayyan screening tool, the authors of this literature review independently assessed the relevance of the articles on the basis of the title and summary. All the authors read full-text versions of 120 articles and then selected 44 articles for inclusion in the literature review (Figure 1).

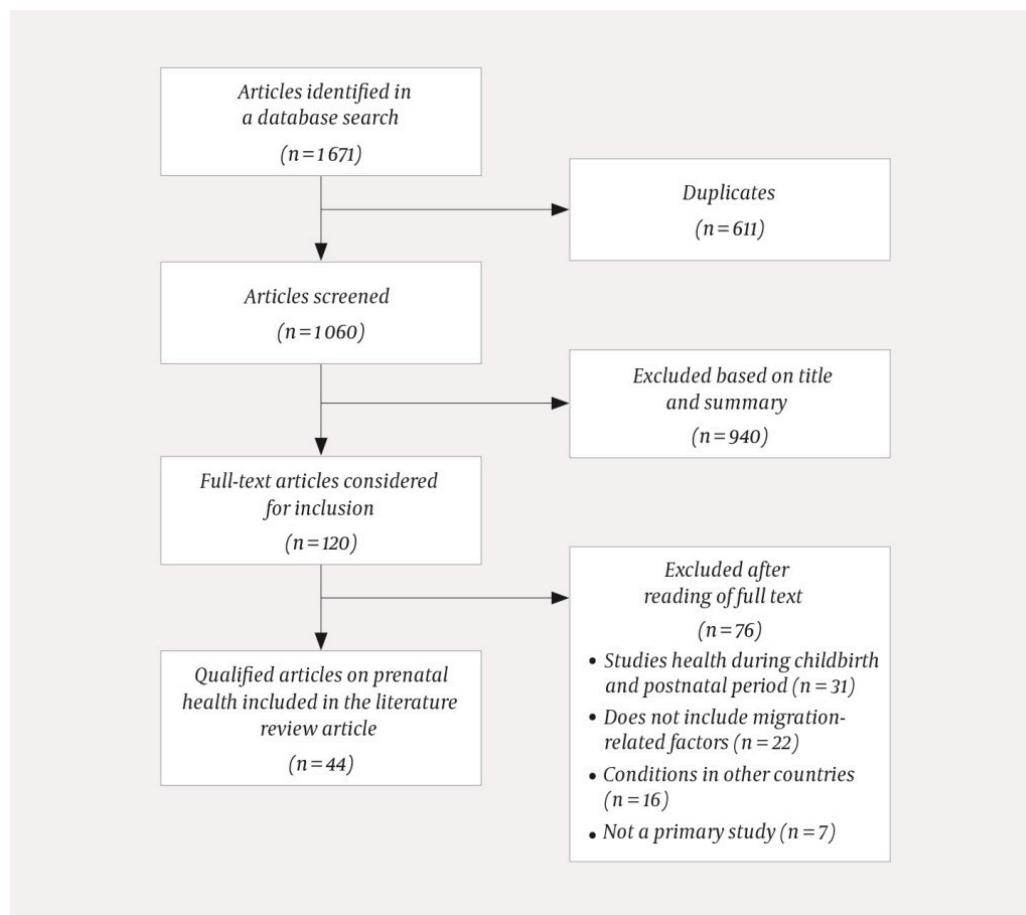


Figure 1 Flow chart of literature search.

Results

The 44 articles (5–48) were divided into eight categories by topic see Appendix 2). A total of 42 articles were published in English and two in Norwegian ((6, 36). Eight studies were qualitative, and the remainder were quantitative. The number of publications increased through the years, and 33 of 44 articles were published after 2010. Twenty articles were based on the same main study (STORK Groruddalen). Eleven studies were national in scope, while 29 studies

included only women from Oslo. Thirty-one of the articles included immigrants and Norwegian-born women with immigrant parents, while the remaining 13 included only immigrants. One article included women with a foreign given name, and another included women whose native language was not Norwegian. The remaining studies were based on the women's country of birth or their parents' country of birth.

Gestational diabetes

Seven articles studied gestational diabetes. The risk of diabetes prior to pregnancy was more than twice as high for immigrant women as for Norwegian-born women [\(5\)](#). The prevalence of gestational diabetes was higher for women born in Asia and Africa than for Norwegian-born women [\(6, 7\)](#). Gestational diabetes accounted for 80 % of the diabetes cases among women born in Asia or Africa and 48 % of the cases among women born in Norway [\(5\)](#). Women from South Asia had insulin resistance and lower beta cell function more often than women from Western Europe [\(7, 8\)](#). Gestational diabetes in women from South Asia was associated with lower fetal weight than in women without gestational diabetes [\(9\)](#). No association was found between gestational diabetes and Vitamin D deficiency [\(10\)](#). Non-native speakers of Norwegian had less knowledge about gestational diabetes than native speakers (odds ratio (OR) 4.5) [\(11\)](#).

Weight, diet and physical activity

Seven articles studied weight, diet and physical activity during pregnancy. Women from Africa and Asia reported that the dietary advice they received was general and incongruent with their own food culture [\(12\)](#). Women from non-European countries had a higher risk of having unhealthy eating habits than European women, and the risk was highest for women from the Middle East and Africa (OR 21.5). These differences disappeared after adjustment for socioeconomic factors and level of integration [\(13\)](#). Women born in South Asia were less physically active [\(14, 15\)](#), had more subcutaneous fat [\(16\)](#) and abdominal obesity [\(17\)](#) than women from Western Europe. In the third trimester, weight gain was 2.7 kg and 1.3 kg higher, respectively, for women from Eastern Europe and the Middle East than for women from Western Europe [\(18\)](#).

Hyperemesis gravidarum

Five articles studied hyperemesis gravidarum. Multiple studies showed an increased risk of hyperemesis gravidarum among women with an immigrant background [\(19–21\)](#), especially among women born in South Asia (OR 3.3), sub-Saharan Africa (OR 3.4) and women with a foreign given name (OR 3.4) compared with Norwegian-born women and women with a Norwegian given name. The risk of hyperemesis gravidarum was not associated with length of residence in Norway [\(22\)](#), parental consanguinity [\(20\)](#) or *Helicobacter pylori* infection [\(23\)](#).

Preeclampsia and gestational hypertension

Four articles studied preeclampsia and hypertensive disorders. Immigrant women had a lower risk of preeclampsia than Norwegian-born women (OR 0.8), but the risk increased with increasing length of residence (24–26). The risk varied with the reason for immigration, and refugees had the highest risk (OR 0.8) compared with Norwegian-born women (26). In early pregnancy, women from non-European countries had lower blood pressure than women from Western Europe (27). Women born in South America, the Middle East, Africa and Asia had a lower risk of gestational hypertension (OR 0.5–0.6) than Norwegian-born women (25).

Vitamins, minerals and dietary supplements

Five articles studied vitamins, minerals and dietary supplements. Immigrant women and Norwegian-born women with immigrant parents used folate supplements less frequently than Norwegian-born women (28, 29), but their use increased with the length of residence (30). Adjusting for level of education eliminated the association between use of folate supplements and ethnicity (29). Severe Vitamin D deficiency during pregnancy was found in 45 % of women from South Asia, 40 % from the Middle East and 26 % from sub-Saharan Africa compared with 1.3 % of women from Western Europe (31). Women from South Asia, the Middle East and sub-Saharan Africa had a higher prevalence of anaemia (14 %, 11 % and 7.3 %, respectively) than women from Western Europe (1.8 %) (32).

Fetal weight

Three articles examined fetal weight. Differences in fetal weight, length, abdominal circumference and body fat were found depending on the mother's country of origin (33). However, the clinical value of using a universal standard for fetal weight in a multi-ethnic society was called into question, as only 21 % of the presumably healthy pregnancies met the standard (34). No association was found between Vitamin D status and fetal weight (35).

Experiences with the health service

Six articles discussed the experiences of immigrant women and health professionals with prenatal care. The immigrant women had limited health literacy (36), they requested information about their pregnancy (37), and they balanced their desire to be integrated into their new society with maintaining the traditions of their home country (38).

Health professionals felt that the health services did not adequately address the cultural diversity in Norway (39). Women who had previously experienced intimate partner violence wanted to bring up the topic and said that their fear of the child welfare services, language difficulties and their partner's presence during the consultation were barriers to open communication (40). Health professionals found it difficult to talk about genital mutilation and said they lacked knowledge about the topic (41). Somali women who had undergone FGM felt that the prenatal care they received was suboptimal, and health professionals confirmed this (42).

Other

Six articles explored topics other than the aforementioned. Indian and Pakistani women gave birth to more boys than girls [\(43\)](#), but a study that included recent years found that this trend appears to have reversed [\(44\)](#). There was a decline in consanguinity among Pakistani parents [\(45\)](#). Immigrant women took sick leave more frequently than Norwegian-born women. This was partly attributable to poorer health prior to pregnancy, hyperemesis gravidarum and poor Norwegian language skills [\(46\)](#). The risk of gestational depression was higher for women from the Middle East (OR 2.4) and South Asia (OR 2.3) than for women from Western Europe [\(47\)](#). The prevalence of urinary incontinence during pregnancy was lowest for women from Africa (26 %) and highest for women from Europe and North America (45 %) [\(48\)](#).

Discussion

Gestational diabetes, hyperemesis gravidarum, preeclampsia, obesity and folate use are frequently studied topics. Some studies showed a lower prevalence of some pregnancy outcomes, but a majority of the studies showed a relatively high risk of disease among immigrant women, including a high prevalence of gestational diabetes. The findings emphasise the need for closer monitoring of immigrant women during pregnancy. Study results have led to changes in professional practice, such as the introduction of screening for gestational diabetes for women of Asian or African ethnicity [\(49\)](#).

An exploratory literature review includes studies regardless of the research study design, and it does not involve a formal quality assessment of the articles selected for inclusion, which distinguishes it from a traditional systematic review article [\(50\)](#). Since the authors did not assess the quality of the articles included in this review, the level of confidence in the results described in those articles cannot be assessed.

Our increased knowledge about the prenatal health of immigrant women can probably be attributed to the fact that a number of studies, such as STORK Groruddalen, specifically include immigrants. In recent years, national registries have also increased the possibility of including variables specific to immigrants [\(51\)](#). In 2010, an international panel recommended the inclusion of a minimum set of variables when conducting research on maternal health among immigrants [\(52\)](#). In descending order, this includes country of birth, length of residence, reason for immigration, language comprehension and ethnicity. In our material, factors other than country of birth and ethnicity were seldom included. Future research should include more migration-related factors that may provide a nuanced and more accurate picture of various risk profiles.

Differences in health outcomes are explained in part by language barriers [\(11, 53\)](#), but we found few studies on the association between language skills, use of interpreters and adverse pregnancy outcomes. We found no quantitative studies that investigated immigrant women's use of prenatal care services or

models for prenatal care especially adapted for immigrant women. International literature underscores the need for more knowledge about particularly vulnerable immigrant women, such as new arrivals, refugees and undocumented immigrants (53). We recommend that future studies do more to include these groups. Intervention studies that explore various measures for improving prenatal care have been conducted in Denmark and other European countries (54, 55) and should also be tested in Norway. Furthermore, we recommend conducting more qualitative studies that shed light on the experiences of health professionals and immigrant families.

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Main finding

Pregnant immigrant women are a heterogeneous group with a complex risk profile. There appears to be a lack of research that includes especially vulnerable immigrant groups such as new arrivals, undocumented immigrants and refugees.

LITERATURE

1. Statistisk sentralbyrå. Statistikkbanken: 12481samlet fruktbarhetstall og antall levendefødte for innvandrerkvinner, etter morens landbakgrunn. <https://www.ssb.no/statbank/table/12481/tableViewLayout1/> Accessed 10.3.2020.
2. Gagnon AJ, Zimbeck M, Zeitlin J et al. Migration to western industrialised countries and perinatal health: a systematic review. *Soc Sci Med* 2009; 69: 934–46. [PubMed][CrossRef]
3. Endring i fødepopulasjon og konsekvenser for bemanning og finansieringssystem. IS-2895. Oslo: Helsedirektoratet, 2020. https://www.helsedirektoratet.no/rapporter/endring-i-fodepopulasjon-og-konsekvenser-for-bemanning-og-finansieringssystem/Rapport%20om%20%C3%B8depopulasjonen.pdf/_/attachment/inline/3435df20-ea13-4d9f-99ed-f711d6ffbef0:51f3f1f4a94cd0893d94f09f3c7663d150ae61b0/Rapport%20om%20%C3%B8depopulasjonen.pdf Accessed 23.9.2020.
4. Statistisk sentralbyrå. Variabeldefinisjon: landbakgrunn. <https://www.ssb.no/a/metadata/conceptvariable/vardok/1919/nb> Accessed 2.3.2020.

5. Vangen S, Stoltenberg C, Holan S et al. Outcome of pregnancy among immigrant women with diabetes. *Diabetes Care* 2003; 26: 327–32. [PubMed] [CrossRef]
6. Holan S, Vangen S, Hanssen K et al. Diabetes hos gravide født i Asia, Afrika og Norge. *Tidsskr Nor Lægeforen* 2008; 128: 1289–92. [PubMed]
7. Jenum AK, Richardsen KR, Berntsen S et al. Gestational diabetes, insulin resistance and physical activity in pregnancy in a multiethnic population-a public health perspective. *Nor Epidemiol* 2013; 23: 45–54. [CrossRef]
8. Mørkrid K, Jenum AK, Sletner L et al. Failure to increase insulin secretory capacity during pregnancy-induced insulin resistance is associated with ethnicity and gestational diabetes. *Eur J Endocrinol* 2012; 167: 579–88. [PubMed][CrossRef]
9. Sletner L, Jenum AK, Yajnik CS et al. Fetal growth trajectories in pregnancies of European and South Asian mothers with and without gestational diabetes, a population-based cohort study. *PLoS One* 2017; 12: e0172946. [PubMed][CrossRef]
10. Eggemoen AR, Waage CW, Sletner L et al. Vitamin D, gestational diabetes, and measures of glucose metabolism in a population-based multiethnic cohort. *J Diabetes Res* 2018; 2018: 8939235. [PubMed][CrossRef]
11. Borgen I, Garnweidner-Holme LM, Jacobsen AF et al. Knowledge of gestational diabetes mellitus at first consultation in a multi-ethnic pregnant population in the Oslo region, Norway - a cross-sectional study. *Ethn Health* 2019; 1–14. [PubMed][CrossRef]
12. Garnweidner LM, Sverre Pettersen K, Mosdøl A. Experiences with nutrition-related information during antenatal care of pregnant women of different ethnic backgrounds residing in the area of Oslo, Norway. *Midwifery* 2013; 29: e130–7. [PubMed][CrossRef]
13. Sommer C, Sletner L, Jenum AK et al. Ethnic differences in maternal dietary patterns are largely explained by socio-economic score and integration score: a population-based study. *Food Nutr Res* 2013; 57: 21164. [PubMed][CrossRef]
14. Berntsen S, Richardsen KR, Mørkrid K et al. Objectively recorded physical activity in early pregnancy: a multiethnic population-based study. *Scand J Med Sci Sports* 2014; 24: 594–601. [PubMed][CrossRef]
15. Richardsen KR, Falk RS, Jenum AK et al. Predicting who fails to meet the physical activity guideline in pregnancy: a prospective study of objectively recorded physical activity in a population-based multi-ethnic cohort. *BMC Pregnancy Childbirth* 2016; 16: 186. [PubMed][CrossRef]
16. Sommer C, Jenum AK, Waage CW et al. Ethnic differences in BMI, subcutaneous fat, and serum leptin levels during and after pregnancy and risk

- of gestational diabetes. *Eur J Endocrinol* 2015; 172: 649–56. [PubMed][CrossRef]
17. Sommer C, Mørkrid K, Jenum AK et al. Weight gain, total fat gain and regional fat gain during pregnancy and the association with gestational diabetes: a population-based cohort study. *Int J Obes* 2014; 38: 76–81. [PubMed][CrossRef]
 18. Kinnunen TI, Waage CW, Sommer C et al. Ethnic differences in gestational weight gain: A population-based cohort study in Norway. *Matern Child Health J* 2016; 20: 1485–96. [PubMed][CrossRef]
 19. Vilming B, Nesheim BI. Hyperemesis gravidarum in a contemporary population in Oslo. *Acta Obstet Gynecol Scand* 2000; 79: 640–3. [PubMed]
 20. Grjibovski AM, Vikanes A, Stoltenberg C et al. Consanguinity and the risk of hyperemesis gravidarum in Norway. *Acta Obstet Gynecol Scand* 2008; 87: 20–5. [PubMed][CrossRef]
 21. Vikanes A, Grjibovski AM, Vangen S et al. Variations in prevalence of hyperemesis gravidarum by country of birth: a study of 900,074 pregnancies in Norway, 1967–2005. *Scand J Public Health* 2008; 36: 135–42. [PubMed][CrossRef]
 22. Vikanes A, Grjibovski AM, Vangen S et al. Length of residence and risk of developing hyperemesis gravidarum among first generation immigrants to Norway. *Eur J Public Health* 2008; 18: 460–5. [PubMed][CrossRef]
 23. Vikanes AV, Støer NC, Gunnes N et al. *Helicobacter pylori* infection and severe hyperemesis gravidarum among immigrant women in Norway: a case-control study. *Eur J Obstet Gynecol Reprod Biol* 2013; 167: 41–6. [PubMed][CrossRef]
 24. Naimy Z, Grytten J, Monkerud L et al. The prevalence of pre-eclampsia in migrant relative to native Norwegian women: a population-based study. *BJOG* 2015; 122: 859–65. [PubMed][CrossRef]
 25. Sole KB, Staff AC, Laine K. The association of maternal country of birth and education with hypertensive disorders of pregnancy: A population-based study of 960 516 deliveries in Norway. *Acta Obstet Gynecol Scand* 2018; 97: 1237–47. [PubMed][CrossRef]
 26. Nilsen RM, Vik ES, Rasmussen SA et al. Preeclampsia by maternal reasons for immigration: a population-based study. *BMC Pregnancy Childbirth* 2018; 18: 423. [PubMed][CrossRef]
 27. Waage CW, Mdala I, Jenum AK et al. Ethnic differences in blood pressure from early pregnancy to postpartum: a Norwegian cohort study. *J Hypertens* 2016; 34: 1151–9. [PubMed][CrossRef]
 28. Braekke K, Staff AC. Periconceptional use of folic acid supplements in Oslo. *Acta Obstet Gynecol Scand* 2003; 82: 620–7. [PubMed][CrossRef]

29. Kinnunen TI, Sletner L, Sommer C et al. Ethnic differences in folic acid supplement use in a population-based cohort of pregnant women in Norway. *BMC Pregnancy Childbirth* 2017; 17: 143. [PubMed][CrossRef]
30. Nilsen RM, Daltveit AK, Iversen MM et al. Preconception folic acid supplement use in immigrant women. *Nutrients* 2019; 11: 2300. [PubMed][CrossRef]
31. Eggemoen ÅR, Falk RS, Knutsen KV et al. Vitamin D deficiency and supplementation in pregnancy in a multiethnic population-based cohort. *BMC Pregnancy Childbirth* 2016; 16: 7. [PubMed][CrossRef]
32. Næss-Andresen ML, Eggemoen AR, Berg JP et al. Serum ferritin, soluble transferrin receptor, and total body iron for the detection of iron deficiency in early pregnancy: a multiethnic population-based study with low use of iron supplements. *Am J Clin Nutr* 2019; 109: 566–75. [PubMed][CrossRef]
33. Sletner L, Rasmussen S, Jenum AK et al. Ethnic differences in fetal size and growth in a multi-ethnic population. *Early Hum Dev* 2015; 91: 547–54. [PubMed][CrossRef]
34. Sletner L, Kiserud T, Vangen S et al. Effects of applying universal fetal growth standards in a Scandinavian multi-ethnic population. *Acta Obstet Gynecol Scand* 2018; 97: 168–79. [PubMed][CrossRef]
35. Eggemoen ÅR, Jenum AK, Mdala I et al. Vitamin D levels during pregnancy and associations with birth weight and body composition of the newborn: a longitudinal multiethnic population-based study. *Br J Nutr* 2017; 117: 985–93. [PubMed][CrossRef]
36. Egge H, Kvellestad K, Glavin K. Innvandrerkvinneres erfaringer med svangerskap, fødsel og barseltid i Norge – en kvalitativ studie. *Nordisk Tidsskrift for Helseforskning* 2018; 14. doi: 10.7557/14.4295. [CrossRef]
37. Nøttveit A. Pregnant in an alien country. *Vard Nord Utveckl Forsk* 2000; 20: 46–51. [CrossRef]
38. Viken B, Lyberg A, Severinsson E. Maternal health coping strategies of migrant women in Norway. *Nurs Res Pract* 2015; 2015: 878040. [PubMed][CrossRef]
39. Lyberg A, Viken B, Haruna M et al. Diversity and challenges in the management of maternity care for migrant women. *J Nurs Manag* 2012; 20: 287–95. [PubMed][CrossRef]
40. Garnweidner-Holme LM, Lukasse M, Solheim M et al. Talking about intimate partner violence in multi-cultural antenatal care: a qualitative study of pregnant women's advice for better communication in South-East Norway. *BMC Pregnancy Childbirth* 2017; 17: 123. [PubMed][CrossRef]
41. Vangen S, Johansen REB, Sundby J et al. Qualitative study of perinatal care experiences among Somali women and local health care professionals in

Norway. *Eur J Obstet Gynecol Reprod Biol* 2004; 112: 29–35. [PubMed]
[CrossRef]

42. Johansen RE. Care for infibulated women giving birth in Norway: an anthropological analysis of health workers' management of a medically and culturally unfamiliar issue. *Med Anthropol Q* 2006; 20: 516–44. [PubMed]
[CrossRef]

43. Singh N, Pripp AH, Brekke T et al. Different sex ratios of children born to Indian and Pakistani immigrants in Norway. *BMC Pregnancy Childbirth* 2010; 10: 40. [PubMed][CrossRef]

44. Tønnessen M, Aalandslid V, Skjerpen T. Changing trend? Sex ratios of children born to Indian immigrants in Norway revisited. *BMC Pregnancy Childbirth* 2013; 13: 170. [PubMed][CrossRef]

45. Grijbovski AM, Magnus P, Stoltenberg C. Decrease in consanguinity among parents of children born in Norway to women of Pakistani origin: a registry-based study. *Scand J Public Health* 2009; 37: 232–8. [PubMed]
[CrossRef]

46. Brekke I, Berg JE, Sletner L et al. Doctor-certified sickness absence in first and second trimesters of pregnancy among native and immigrant women in Norway. *Scand J Public Health* 2013; 41: 166–73. [PubMed][CrossRef]

47. Shakeel N, Eberhard-Gran M, Sletner L et al. A prospective cohort study of depression in pregnancy, prevalence and risk factors in a multi-ethnic population. *BMC Pregnancy Childbirth* 2015; 15: 5. [PubMed][CrossRef]

48. Bø K, Pauck Øglund G, Sletner L et al. The prevalence of urinary incontinence in pregnancy among a multi-ethnic population resident in Norway. *BJOG* 2012; 119: 1354–60. [PubMed][CrossRef]

49. Helsedirektoratet. Retningslinjer om diabetes og svangerskapsdiabetes. <https://www.helsedirektoratet.no/retningslinjer/svangerskapsdiabetes/diagnostikk-og-tiltak-for-a-finne-uoppdaget-diabetes-og-svangerskapsdiabetes#tilby-glukosebelastning-til-gravide-i-uke-24-28-med-en-eller-flere-karakteristika-alder-etnisitet-arvelighet-kroppsmasseindeks-og-hendelser-i-tidligere-svangerskap> Accessed 23.9.2020.

50. Munn Z, Peters MDJ, Stern C et al. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Med Res Methodol* 2018; 18: 143. [PubMed][CrossRef]

51. Folkehelseinstituttet. Helse i innvandrerbefolkningen. <https://www.fhi.no/nettpub/hin/grupper/helse-i-innvandrerbefolkningen/> Accessed 23.9.2020.

52. Gagnon AJ, Zimbeck M, Zeitlin J. Migration and perinatal health surveillance: an international Delphi survey. *Eur J Obstet Gynecol Reprod Biol* 2010; 149: 37–43. [PubMed][CrossRef]

53. Gagnon AJ, Redden KL. Reproductive health research of women migrants to Western countries: A systematic review for refining the clinical lens. *Best Pract Res Clin Obstet Gynaecol* 2016; 32: 3–14. [PubMed][CrossRef]
54. Villadsen SF, Mortensen LH, Andersen AM. Care during pregnancy and childbirth for migrant women: How do we advance? Development of intervention studies—the case of the MAMA ACT intervention in Denmark. *Best Pract Res Clin Obstet Gynaecol* 2016; 32: 100–12. [PubMed][CrossRef]
55. Vivilaki V, Soltani H, van den Muijsenbergh M et al. Approach to Integrated Perinatal Healthcare for Migrant and Refugee Women. *Oramma*, 2017. http://oramma.eu/wp-content/uploads/2018/12/ORAMMA-D4.2-Approach_reviewed.pdf Accessed 23.9.2020.
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