

This appendix supplements the article and has not been edited by the editorial board.

Appendix 2

Lead author	Year	Study design	Data source	Study population	Location	Main findings
<i>Gestational diabetes</i>						
Vangen (7)	2003	Cross-sectional	Medical Birth Registry-Norway	Immigrant	National	Prevalence of diabetes prior to pregnancy among immigrants was 8.9/1000 births compared with 3.6/1000 for ethnic Norwegians.
Holan (8)	2008	Cross-sectional	Journal data	Immigrant	Oslo	Percentage of pregnant women with diabetes was seven times greater in the group from Asia/Africa (1.8%) than among ethnic Norwegians (0.3%). Among women from Asia/Africa, gestational diabetes accounted for 80% of the cases, type 2 for 13% and type 1 for 5%. The respective figures for ethnic Norwegians were 48%, 5% and 45%.
Jenum (9)	2013	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	High prevalence of gestational diabetes and low level of physical activity among immigrants, especially women from South Asia, compared with Western women.
Morkrid (10)	2012	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Women from East and South Asia were more insulin resistant than Western women.

Sletner (11)	2017	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	The following trend was seen among women from South Asia with gestational diabetes: small fetus (SGA) in mid-pregnancy, then larger (LGA) at birth, compared with women without gestational diabetes.
Eggemoen (12)	2018	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Vitamin D deficiency was associated with gestational diabetes, but this association disappeared after adjustment for ethnicity.
Borgen (13)	2019	Cross-sectional	Questionnaire	Immigrant and Norwegian-born with immigrant parents	Oslo	Women whose native language was not Norwegian were more likely to have limited knowledge about various aspects of gestational diabetes than women whose native language was Norwegian (adjusted odds ratio of 4.5).
<i>Weight, diet and physical activity</i>						
Garnweidner (14)	2013	Qualitative	Individual interview	Immigrant and Norwegian-born with immigrant parents	Oslo	Women with an immigrant background felt that the dietary information they received during pregnancy was general and adapted to Norwegian conditions.
Sommer (15)	2013	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Women with an immigrant background had a greater risk of having an unhealthy diet than European women; this was highest for women from the Middle East and Africa with an odds ratio of 21.5.
Berntsen (16)	2014	Cohort	STORK	Immigrant and Norwegian-born	Oslo	Women with a South Asian background were less physically active during pregnancy than Western women.

				with immigrant parents		
Richardsen (17)	2016	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Only 25% of women followed the physical activity guidelines during pregnancy. Women with an immigrant background had the lowest proportion with 14-16% compared with Western women at 35%.
Sommer (18)	2015	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Women with a South Asian background had more subcutaneous fat in early pregnancy and retained more subcutaneous fat and weight after pregnancy than European women.
Sommer (19)	2014	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Weight gain, increase in total body fat mass and skinfold thickness were associated with gestational diabetes, especially in women with a South Asian background.
Kinnunen (20)	2016	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Multiparous women with an immigrant background had a greater increase in BMI, both from 18 years of age to pre-pregnancy and from 18 years until post-partum, compared with multiparous Western European women.
<i>Hyperemesis gravidarum</i>						
Vilming (21)	2001	Cohort	Journal data	Immigrant and Norwegian-born with immigrant parents	Oslo	Non-Norwegian names were a risk factor for hyperemesis gravidarum with an odds ratio of 3.4.

Grijbovski (22)	2008	Cross-sectional	Medical Birth Registry-Norway	Immigrant	National	Differences in the prevalence of hyperemesis gravidarum among ethnic Norwegians and women born in Pakistan and Turkey were not associated with consanguinity.
Vikanes (23)	2008	Cross-sectional	Medical Birth Registry-Norway	Immigrant	National	Women born in Western Europe had the lowest prevalence of hyperemesis gravidarum (0.8%), and women born in Sri Lanka/India had the highest prevalence (3.2%). The difference remained after adjustment for socioeconomic factors.
Vikanes (24)	2008	Cross-sectional	Medical Birth Registry-Norway	Immigrant	National	For women born in Central and South America, the risk of hyperemesis gravidarum was found to decrease with increasing length of residence in Norway. The opposite trend was found for women born in Iran, North Africa and Turkey.
Vikanes (25)	2013	Case-control study	Questionnaire, blood samples	Immigrant and Norwegian-born with immigrant parents	Oslo	Findings of <i>H. pylori</i> were not associated with hyperemesis gravidarum among immigrant women.
<i>Preeclampsia and gestational hypertensive disorders</i>						
Naimy (26)	2015	Cross-sectional	Medical Birth Registry-Norway	Immigrant	National	Immigrant women had a lower risk of preeclampsia than women born in Norway (2.7% versus 3.7%). The risk for immigrant women increased with increasing length of residence.
Baker (27)	2018	Cohort	Medical Birth Registry-Norway	Immigrant	National	Immigrant women had a lower risk of preeclampsia and gestational hypertension than women born in Norway.

Nilsen (28)	2018	Cross-sectional	Medical Birth Registry-Norway	Immigrant	National	Immigrant women had a lower risk of preeclampsia, but the risk varied with the reason for immigration. Refugees had the highest risk (odds ratio of 0.81) compared with women born in Norway.
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Waage (29)	2016	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Women from non-European countries have lower blood pressure prior to pregnancy but a higher relative increase than women with a European background.
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Vitamins, minerals and dietary supplements

Braekke (30)	2003	Cross-sectional	Questionnaire	Immigrant and Norwegian-born with immigrant parents	Oslo	Folate use during pregnancy was significantly lower among immigrant women than Western women, 19% and 73% respectively.
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Kinnunen (31)	2017	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Folate use was lower among immigrant women. The difference in folate use by immigrant women and Norwegian-born women decreased with an increasing level of education.
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Nilsen (32)	2019	Cross-sectional	Medical Birth Registry-Norway	Immigrant and Norwegian-born with immigrant parents	National	Folate use was low among immigrant women and Norwegian-born women with immigrant parents, 21% and 26% respectively, compared with ethnic Norwegians (29%). Use increased with increasing length of residence, but even after 20 years of residence, the difference did not disappear.
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Eggemoen (33)	2016	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Severe Vitamin D deficiency in the 15 th gestational week was observed in 45% of women from South Asia, 40% from the Middle East, 26% from sub-Saharan Africa and 1.3% from Western Europe. The level of 25(OH)D increased significantly after the women were advised to take a supplement.
Naess-Andresen (34)	2019	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Women with a background from South Asia, the Middle East and sub-Saharan Africa had the highest risk of anaemia and iron deficiency compared with women from Western Europe.
<i>Fetal weight</i>						
Sletner (35)	2015	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Differences in fetal measurements between ethnic groups were found starting in the 24 th gestational week.
Sletner (36)	2018	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Only 21% of pregnancies met the INTERGROWTH-21 st fetal growth standards, and very few European women in particular met them.
Eggemoen (37)	2017	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	No association between Vitamin D measurements and anthropometric measures of fetuses was found.

Experiences with the health service

Egge (38)	2018	Qualitative	Individual interview	Immigrant	Oslo	The women had little knowledge about their own bodies and how the health service functioned, but had positive experiences with the follow-up they received, provided they felt accepted by the health professional and the child's father was included.
Nøttveit (39)	2000	Qualitative	Individual interview	Immigrant	Oslo	Women from Pakistan requested more information during pregnancy and childbirth.
Viken (40)	2015	Qualitative	Individual interview	Immigrant	Unspecified	The women had a strong desire to be integrated into their new society while maintaining the traditions of their home country.
Lyberg (41)	2012	Qualitative	Focus group interview	Immigrant	Tønsberg	The Norwegian model for cultural diversity in prenatal care should be developed. Capacity-building and closer cooperation within the health service are necessary. Services should be adapted to the user.
GarnweidnerHolme (42)	2017	Qualitative	Individual interview	Immigrant and Norwegian-born with immigrant parents	South-East Norway	Women who had previously experienced intimate partner violence wanted to bring up the topic and said that their fear of the child welfare services, their partner's presence during the consultation and language difficulties kept them from talking about the violence.
Vangen (43)	2004	Qualitative	Individual interview	Immigrant	Oslo	Women with FGM received suboptimal care during pregnancy and childbirth. Important to thoroughly plan the birth in order to perform defibulation with good expertise and to alleviate pain.

Johansen (44)	2006	Qualitative	Individual interview	Immigrant and Norwegian-born with immigrant parents	Unspecified	Taboos and limited knowledge about FGM, together with a desire to be culturally sensitive, impede the ability of health professional to provide the best possible assistance to women with FGM.
<i>Other</i>						
Singh (45)	2010	Cross-sectional	Statistics Norway	Immigrant and Norwegian-born with immigrant parents	National	A low girl-boy ratio was found in women with an Indian background who gave birth to their third and fourth child after 1987. Figures from recent years appear to be less skewed.
Tonnessen (46)	2013	Cross-sectional	Statistics Norway	Immigrant	National	Multiparous women born in India gave birth to more girls than boys.
Grijbovski (47)	2009	Cross-sectional	Medical Birth Registry-Norway	Immigrant and Norwegian-born with immigrant parents	National	A decrease in consanguinity was found, both among women born in Pakistan and Norwegian-born women with Pakistani parents.
Brekke (48)	2013	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Pregnant immigrants used their sick leave more often than pregnant ethnic Norwegians.
Shakeel (49)	2015	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Prevalence of gestational depression was higher for immigrant women (19.5% for the Middle East, 17.5% for South Asia) than for women from Western Europe (8.6%).

Bø (50)	2012	Cohort	STORK	Immigrant and Norwegian-born with immigrant parents	Oslo	Prevalence of urinary incontinence during pregnancy varied among different ethnicities, with the highest for women from Europe/North America at 45% and the lowest for women from Africa at 26%.
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