

# Complications, Healthcare and Psychological Distress in Pregnant Women with a Migrant Background

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## Abstract

Migrant women have a lower level of prenatal healthcare consumption and a higher level of perinatal complications, according to previous studies. To examine whether migrant women differ from native women in terms of pregnancy complications, healthcare consumption, and psychological distress, there are several researchers, who conducted a study in a country with free healthcare access. The short communication includes native women of different regions and women with migrant backgrounds who sought antenatal care in different hospitals. The medical records of pregnant women from different hospitals and published papers were analyzed to determine complications and healthcare consumption. The covariates were adjusted in regression analyses. During this study, women with migrant backgrounds reported higher levels of depression, even after socioeconomic factors were considered. Psychological distress was associated with more hospital admissions during pregnancy. When experiencing depressive symptoms, women with a migrant background had an increased risk to be admitted. Compared to native women, women with migrant backgrounds did not have different pregnancy-related complications, except for diabetes, nor did they consume health care differently. A migrant background, however, is associated with more depressive symptoms, and people who are depressed are more likely to be hospitalized. Providing better healthcare for this population requires further research.

**Keywords:** Psychological distress, Migrant, Healthcare, Pregnancy

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## Introduction

The pregnancy outcomes of migrant women in high-income countries are often worse than those of native women, although some studies have not found this correlation. There may be a reason why migrant women consume less prenatal healthcare, which could be caused by the way healthcare is organized [1]. Secondly, epidemiological studies have shown that migrant women are more likely to experience psychological distress (depressive and/or anxiety symptoms) than their native counterparts, not just during pregnancy when it is often associated with poor outcomes. Discrimination, acculturation, and social support can all have an effect on psychological distress. Psychological distress may moderate the association between migrant background and perinatal complications, however. We know of only two studies that have examined the relationship between migrants' backgrounds and psychological distress or pregnancy outcomes [2, 3].

The aims of this study are: (1) To compare the frequency of perinatal complications and the quantity of healthcare consumption of women with a migrant background to native women; (2) To assess the prevalence of psychological distress (symptoms of depression and anxiety) in pregnant women with a migrant background compared to the native population; and (3) To investigate the effect of migration background on the relation between psychological distress and perinatal complications and healthcare consumption.

Research has shown that women from migrant backgrounds experience more perinatal complications, less healthcare consumption,

and greater psychological distress during pregnancy. The studies found no difference in healthcare consumption or perinatal complications between women from migrant backgrounds and native, except for gestational diabetes. However, depression was more prevalent among women with migrant backgrounds during pregnancy, and their risk of hospitalization was higher [4, 5].

## Measures and Planned Study Design

There are papers online with several studies from different hospitals and one of them by Dr. Heller M Hannah on their study about Amsterdam university hospital and Amsterdam general teaching hospital caught our interest. Both women from both backgrounds were treated in the hospital, either by a midwife or a gynecologist, because of complications in either the current pregnancy or the previous pregnancy, and occasionally on their own request. All women of a gestational age of 5 to 41 weeks who attended one of both hospitals for obstetric care were considered in the study. A pregnant woman had to be 18 years of age, possess sufficient understanding, and be at least 18 years of age to participate [6, 7].

The participants data were collected containing demographic information, general health information, and symptoms of anxiety, depression, and pregnancies. The demographic questions included age, country of birth, country of birth of the respondent's parents, level of education, and employment status [8]. Level of education was classified in three levels (Level 1: Generally, or primary education, job specific training and lower levels of high school education, Level 2: High school



and senior job specific training, Level 3: Higher vocational and university education). Data on health and previous pregnancies included length of gestation at the time of completing the questionnaire, history of pregnancies, smoking behavior during pregnancy, history of previous professional help for psychological problems and use of medication [9].

The authors used a self-reported Edinburgh postnatal depression scale (EPDS) to measure depression symptoms, which has good internal consistency. Other studies have suggested that a cut-off of 10 could be used to indicate possible depression during antenatal development. Symptoms of anxiety were measured with the anxiety subscale of the hospital depression and anxiety scale, which is a reliable scale with good internal consistency [10]. An optimal cut-off of 8 could be used. Normal distributions of the anxiety and depression symptoms were not checked, since sample sizes were large enough to rely on the central limit theorem that makes that the sample means approximately follow normal distributions. For purposes of determining migrant status, Statistics of the respective countries were used. An individual with migrant background is considered to have been born in a country other than the country (Netherlands, USA, UK-first generation) or had at least one parent who was born abroad (second generation). In addition to education, employment was included as a covariate [11].

After delivery, follow-up data were collected from the electronic medical records on complications during pregnancy and delivery, including preeclampsia, gestational diabetes, preterm birth, small for gestational age (SGA) and all assisted delivery (caesarean section and operative vaginal delivery) [12]. Additionally, a composite score of the occurrence of all perinatal complications was calculated to raise statistical power for complications with a low incidence. The most reliable notated variables of healthcare consumption were hospitalizations during pregnancy and extended hospitalizations after delivery collected from electronic medical records. The health care use composite is derived from this information.

### Sample Size and Statistical Analysis

The study by Dr. Heller, included 627 women, 244 from the teaching hospital and 383 from the university hospital. It was not found that there were any differences between the two hospitals when it came to populations with migrant backgrounds. According to the method section, pregnancy-related outcome variables included all perinatal complications and the composite score of these complications. Using Chi square tests, categorical variables were compared between native women and those with migrant backgrounds. Women from migrant backgrounds and native women were compared with regard to psychological distress scores (measured by the EPDS and HADS-A), with adjustments for clinical and sociodemographic factors. A t-test and linear regression model was used to examine these differences [13, 14].

As well as using logistic regression models to estimate odds ratios, unadjusted and adjusted for common confounders such as socioeconomic status and body mass index (BMI), we were able to estimate differences between native women and women with migrant backgrounds. Data indicating the number of included cases was analyzed without using special techniques to deal with missing data. Version 24 of SPSS was used to analyze the data. A two-sided p value < 0.05 was considered statistically significant [15].

## Results

### Patient sample

The composition of people with migrant backgrounds is reflected by the fact that 51.7% of the women are native and 48.3% are

immigrants. A total of 28.7% and 19.6% were first generation migrants. In comparison to pregnant women from migrant backgrounds, native pregnant women were more likely to have higher maternal ages, be employed, higher educated, have lower BMIs, seek professional treatment for psychological problems, and use psychiatric medication more frequently. The use of mental health care in the past, parity and living with a partner were not found to differ. In neither hospital did the researchers find any differences in affective symptoms, complications, or hospitalization in pregnancy [16-18]. It did not appear that migrant background moderated the effects of extended hospitalization after delivery.

### Association of migrant background with depressive and anxiety symptoms and healthcare

The researchers find no differences between native women and women with a migrant background in terms of pregnancy related complications or pregnancy related healthcare consumption, except for gestational diabetes. Gestational diabetes was more often found in women with migrant background. This association remained significant when adjusting for employment, education, even when they added multiple co-variables like age, past mental history and research site.

Neither depression nor anxiety scores were associated with complications during pregnancy among native Dutch women and migrants, nor with complications separately, nor with the composite of complications. Hospitalization during pregnancy was associated with depression and anxiety. Neither differences in clinical nor sociodemographic background factors accounted for this finding. In comparison to native women, women from migrant backgrounds were admitted to hospital less frequently during pregnancy. Compared with the native women whose admission rate remained unchanged when they reported greater depressive symptoms, the admission rate increased when they reported more depressive symptoms. The relationship between depression and hospital admission for pregnant women from migrant backgrounds is stronger than that for pregnant women from the different regions [2, 19].

## Discussion

Maternal complications among pregnant women with a migrant background in the different regions/countries (Including sample study from Netherlands) were no greater than those among native women, except for gestational diabetes. Furthermore, migrant women expressed more depressive symptoms during pregnancy compared to native Dutch women, and if they suffered more depressive symptoms during pregnancy, they were more likely to be hospitalized. A surprising finding of this study contradicts many previous studies that found that women with migrant backgrounds have more complications during pregnancy [20]. This contradiction has a few explanations. Some countries restrict the access to healthcare for women with migrant backgrounds. Also, even with equal access to healthcare, they tend to hold off on prenatal care and/or pay less at prenatal visits, resulting in obstetric problems not being detected until much later. Finally, different criteria for defining complications may have contributed to the varying results. As part of this study, the researchers included preterm births, SGA, preeclampsia, gestational diabetes, caesarean sections, as well as all assisted deliveries (caesarean section and operative vaginal birth), while in other studies stillbirths and neonatal mortality were also included. However, we found that the incidence of perinatal neonatal mortality was too low to include in the analysis [21]. Women with a migrant background and women with a native background did not demonstrate any significant differences in healthcare utilization, which can either be explained by different healthcare systems by different



measures. Healthcare utilization in the study was defined as hospital admissions during pregnancy, whereas in other studies it was defined as prenatal care visits.

Depressive symptoms and healthcare utilization were also investigated in this study. Research has shown no conclusive relationship between the two. Grigoriadis found in a review and meta-analysis that maternal depression during pregnancy was associated with preterm birth, but others found only a relationship between anxiety and depression and lower birth length or lower birth weight or found no relationship at all with neonatal outcomes. Also, we failed to find a relationship between neonatal outcomes and this variable. Depressive- and anxiety-symptoms were found to be associated with hospitalization during pregnancy, though the association was small but significant [22-25]. A similar association between depression and lengthened predelivery stays in the obstetric ward was also found in Palladino's study. When depressed, females with a migration background were more likely to be hospitalized than depressive native women, but when not depressed, the risk was lower. There may be differences in coping strategies among pregnant women with migrant backgrounds that may cause a higher risk of hospitalization, possibly caused by somatization, which induces hospitalization [26]. Most studies of non-pregnant migrants with migrant backgrounds have reported high rates of depressive symptoms in pregnant women with migrant backgrounds. The socioeconomic status of women with a migrant background was associated with symptoms of depression and anxiety, but they did not fully explain depression levels [27]. The association may be due to the way socioeconomic variables are defined and measured, or the fact that migrant background and socioeconomic factors are entwined, for instance people with migrant backgrounds have generally lower education levels, and because of that are less likely to be employed. Therefore, adjusting for socioeconomic factors may result in overadjustment.

## Strengths and Limitations

As part of this study, the researchers analyzed the relationship between psychological distress, pregnancy complications, and healthcare use in a country where healthcare is available to all, regardless of insurance or migration. Data on migration backgrounds and pregnancy-related aspects of the study were also gathered directly from medical records, making them more detailed and accurate than registries [28].

Additionally, some limitations exist. We have a limitation in that we selected a relatively small sample population, which therefore limits the generalizability of our findings. The study was conducted in a hospital setting, and women were mainly referred for pregnancy complications, resulting in a higher complication rate than the general population. At different gestational ages, the women were included [29]. It is likely that anxiety and depression will fluctuate throughout pregnancy, even in pregnancies without complications, and in our study, symptoms were likely to vary with the occurrence or subsiding of complications. However, despite the relatively large number of participants, there were not enough differences between the migrant groups to be detected. The risk factors that different migrant groups share in relation to pregnancy complications and healthcare consumption are more important than the differences between them, according to other studies [30, 31]. Finally, speaking about mental health issues is not customary in some migrant cultures, which could result in an underestimation of these problems among migrant women. Nevertheless, the number of women with migrant backgrounds almost equaled the number of native women, indicating that reticence wasn't greater among migrant than native women [32].

## Conclusion

Pregnant women with a migrant background didn't experience more complications, except gestational diabetes, and consumed equal amounts of healthcare, in this study of pregnant women visiting prenatal clinics. As well, pregnant women from migrant backgrounds showed significantly greater depressive symptoms than native women, but not greater anxiety symptoms. Socioeconomic factors such as employment and education could explain the difference in depressive symptoms. Pregnant women with depressive symptoms who come from a migrant background were more likely to end up in hospital than their counterparts who came from a native background. It is important for future research to examine additional factors that contribute to depressive symptoms in pregnant migrant women, such as cultural acculturation, social support, and discrimination, and to understand the reasons for more frequent hospitalizations, such as coping styles. It may be possible to improve personalized care for pregnant women with migrant backgrounds by addressing these factors.

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## Conflict of Interest

None.

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