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Risk Factors and Health Profiles of Recent Migrant Women Who Experienced Violence Associated with Pregnancy

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Abstract

Background: Violence associated with pregnancy is a major public health concern, but little is known about it in recent migrant women. This study looked at (1) risk factors for violence associated with pregnancy among newly arrived migrant women in Canada and (2) if those who experienced violence associated with pregnancy had a different health profile or use of healthcare services for themselves or their infants during pregnancy and up to 4 months postpartum compared to other childbearing migrant women.
Methods: Pregnant migrant women in Canada <5 years were recruited in 12 hospitals in 3 large cities between 2006 and 2009 and followed to 4 months postpartum. Data were collected on maternal background, migration history, violence associated with pregnancy, maternal and infant physical and mental health, and services used.
Results: Of a total of 774 pregnant migrant women, 59 (7.6%) women reported violence associated with pregnancy. Migrant women who experienced violence, compared to those who did not, were at increased risk of violence if they lived without a partner, were asylum seekers, migrated <2 years ago, or had less than high school education. Women who reported violence were less likely to have up-to-date vaccinations, take folic acid before pregnancy, more likely to commence prenatal care after 3 months gestation and to not use contraceptives after birth. They were also more likely to have a history of miscarriage and report more postpartum pain and increased bleeding. They were also more likely to have inadequate social support and report more depression, anxiety, somatization, and posttraumatic stress disorder (PTSD) on standardized tests. No differences were found in the health status of the infants of women who experienced violence compared to those who did not.
Conclusions: Clinicians should sensitively ask recent migrant women (asylum seekers, refugees, and nonrefugee immigrants) about violence associated with pregnancy and appropriately assess, treat, and refer them.

Introduction

Physical abuse associated with pregnancy is a major public health concern. Physical abuse associated with pregnancy (violence associated with pregnancy) may lead to pregnancy as a result of forced sex or may occur during the course of pregnancy or after giving birth. North American prevalence estimates for abuse during pregnancy and in the 6 months after giving birth are approximately 6%[1,2] and 3%,[1] respectively, but prevalence figures in some countries may be much higher. Women abused during pregnancy are more likely to experience delayed prenatal care and pregnancy complications, such as bleeding, infections, and birth complications, and to report poor neonatal health.[3] They are also more likely to experience a variety of mental and physical health conditions, including depression, anxiety, suicide attempts, posttraumatic stress disorder (PTSD), dental injuries, fractures, contusions, headaches, sleep disorders, gastrointestinal problems, and chronic pain.[3]

Much less is known about migrant women (refuges, asylum seekers, and nonrefugee women) who have experienced violence associated with pregnancy. Social isolation, language barriers, unfamiliarity with laws and rights, fear of jeopardizing an application (for asylum, permanent residency

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status, or citizenship), financial dependence on the perpetrator (in most cases the intimate partner and father of the baby), and fear of losing child custody or losing status in their community may pose barriers to disclosure of violence associated with pregnancy. However, there is a developing literature about migration and gender-based violence (GBV), that is, "…violence that is likely to result in physical, sexual or psychological harm or suffering to women …"[4] Many women may become migrants because of GBV, and specific circumstances in relation to migration, integration and resettlement processes may contribute to, or exacerbate, GBV. A study from the United Kingdom, for example, found that women with insecure immigration status were more vulnerable to intensified domestic violence.[5] Another study documented a high prevalence of intimate partner violence (IPV) among immigrant Iraqi women in the United States[6] and their poor self-rated health. More research about migrant women who have experienced violence related to pregnancy,[7] particularly in industrialized countries, would advance the knowledge base on GBV in migrants.

International migrants include those who have moved to another country by choice for economic, education, or family reasons (i.e., nonrefugee immigrants) as well as those who were forced to move because of war, civil unrest, or other circumstances that threatened their survival (i.e., refugees).[8,9] Asylum seekers are individuals who make refugee claims at a border or upon arrival in a country and, in many instances, are similar to refugees. Many studies simply classify women as citizens or noncitizens and fail to consider different migrant groups even though many factors that may be associated with violence (and violence related to pregnancy) may differ between migrants.

In Canada, laws protect women against GBV, but women who have temporary or no status or who have a refugee claim that is dependent on their spouse are at risk of being deported.[10] Healthcare coverage is provided to immigrants with permanent residency status after a 3-month waiting period, whereas refugees and asylum seekers are covered under a specific healthcare scheme that provides access to emergency and essential medical care; but psychotherapy or counseling requires preapproval.[11]

A better understanding of the frequency, risk factors, and effects on maternal and child health related to physical or sexual violence during pregnancy or the early months after birth or of pregnancy resulting from forced sex (violence associated with pregnancy) among newly arrived migrant women could help health care providers to identify potential victims, be aware of the effects of this violence, and provide appropriate care and referral. This study looked at (1) the risk factors for violence associated with pregnancy among newly arrived migrant women in Canada and (2) if newly arrived migrant women who experienced violence associated with pregnancy had a different health profile or use of healthcare services for themselves or their infants during pregnancy and up to 4 months postpartum compared to other childbearing migrant women.

Materials and Methods

Sample

Data from the Childbearing Health and Related Service Needs of Newcomers (CHARSNN)[12] database were used. This was a Canadian Institutes of Health Research-funded, 4-year, 12-hospital (across Montreal, Toronto, Vancouver) cohort study including 1025 pregnant migrant women, in Canada <5 years, who were refugee, asylum seekers, or nonrefugee immigrants and who were followed to 4 months postpartum. To participate, women and infants had to be discharged by day 4 and day 7 postbirth for vaginal and cesarean deliveries, respectively. Details of the CHARSNN study have been described and published elsewhere.[12] Data collected included maternal and infant health, health and social services received, maternal background, and migration history. Ethics approval was obtained from the relevant institutional research review boards.

Measures

A number of measures were used in the CHARSNN study. All protocols and questionnaires were reviewed for cultural appropriateness via focus groups with women from the migrant communities of interest.[13] Questionnaires were also translated and back-translated into 13 languages and pretested with monolingual individuals to assess the clarity of the questions in each language.[14]

Maternal abuse was measured at 4 months postpartum using the Abuse Assessment Screen, a well-known and validated 5-item tool that screens for physical and sexual abuse experienced within the last year (i.e., during pregnancy and since birth)[15]; a question was added about whether the most recent pregnancy was the result of forced sex, and emotional abuse was omitted because of definitional difficulties with the population. Any question answered affirmatively was considered as positive for abuse.[15] Postpartum depression risk at 4 months after birth was measured by the 10-item self-report Edinburgh Postnatal Depression Scale (EPDS).[16] A score of ≥ 10 is considered to be suggestive of postpartum depression in community studies.[16] Symptoms of PTSD were measured by the Harvard Trauma Questionnaire (HTQ),[17] a checklist that asks about trauma events experienced, trauma symptoms based on diagnostic criteria for PTSD, and current functioning. Scores >2.5 are considered to be a concern and likely to indicate PTSD. Symptoms of depression, anxiety, and somatization were measured by the self-report Hopkins Symptom Checklist (HSCL).[18] Scores >1.75 on any subscore are likely to indicate a diagnosis. All three screening tools are effective instruments for use with diverse populations, and the HTQ was specifically developed for use with refugee populations.

Maternal support was measured by the Personal Resource Questionnaire,[19] a 25-item Likert scale that measures the respondent's level of self-perceived social support. Disagreement (somewhat disagree, disagree, or strongly disagree) with either of two items—(1) I have relatives or friends who will help me out even if I can't pay them back. (2) There is someone who loves and cares about me.—was regarded as low/no social support.

Maternal pain was measured by the Pain Visual Analog Scale (VAS),[20] a scale from 0 to 10 in which patients are asked to rate their pain level, where 0 is no pain, 10 is the worst level of pain, and a score of ≥ 4 is considered positive. All other data collected by nurse assessors were made as objective as possible by applying standardized assessment criteria, medical record review, or by questionnaires developed for this study.

Maternal risk factors included maternal demographics—age, income, education, living without a partner (husband/boyfriend), employment in country of origin—migration indicators—region/country of origin as per World Health Organization (WHO), World Bank, and the Gender-Related Development Index, migration status, length of time in Canada—and English/French language ability. English/French language ability was assessed by the woman's self-report of her ability to speak, read or write either language as fluently, well, with difficulty, or not at all. The nurse also asked for language preference for the questionnaire and the interview, the language actually used in the interview, and if an interpreter was required. Based on this information, the woman was assigned to either spoke English/French or limited English/French. Partner characteristics included region/country of origin, English/French language ability, migration status, length of time in Canada, and employment status. Limited healthcare services were measured by prenatal care begun after 3 months gestation, never had a Pap test, no folic acid before pregnancy, vaccinations not up-to-date, and not using contraception (and not wanting to have another baby at 4 months postbirth). Medical history was measured by history of miscarriage, abortion, sexually transmitted disease (STD), group B streptococcus (GBS) positive, and no rubella immunity.

Adverse health profile at birth was measured by medical interventions related to birth, gestational age < 37 weeks, Apgar < 7 at 1 or 5 minutes, birth weight ≤ 2500 g, and admission to neonatal intensive care. Adverse postpartum health included pain (breast engorgement; sore nipples; breastfeeding pain; abdominal, perineal, hemorrhoid, or back pain ≥4 on the VAS at 1 week or 4 months), excessive bleeding (soaking > 3 pads in 24 hours at 1 week), and infant weight < 10tth percentile for age (or decreased 20% at 4 months.).

Statistical analysis

To examine risk factors associated with violence related to pregnancy, we used frequencies, means, chi-square or Fisher's exact test, and analysis of variance (ANOVA) to describe and test the characteristics between groups (abused vs. nonabused). We also conducted logistic regression: three initial models (demographic, migration, and partner characteristics), followed by one large model including significant factors (and confounders) from the previous smaller models. We used bivariate analyses to describe and test for differences in maternal and infant health and health services used between migrants who reported violence associated with pregnancy and those who did not.

Results

Of 774 women completing the Abuse Assessment Screen, 59 (7.6%) migrant women reported abuse associated with pregnancy; 16 of these women (27.1%) reported their pregnancy to be the result of forced sex (or were not sure). Forty-nine of the abused women also responded to questions about the perpetrators of abuse. Most of the women experienced abuse by a partner ($n = 28$, 57.1%), or "someone else" (i.e., other than a family member) ($n = 21$). A small number of women reported abuse by their father ($n = 4$), brother ($n = 4$), brother-in-law ($n = 2$), and mother-in-law ($n = 1$).

Demographics of the sample are presented in Table 1. The total sample included 107 refugees, 290 asylum seekers, and 377 immigrant women. Over one third of the women arrived from Asia (34.6%) and another third from Latin America (34.4%); 21.3% were from Africa and 9.7% from Europe/United States/Australia. Abused women were mostly asylum seekers, and > 85% were from Africa, Latin America, and the Caribbean; top source countries included Nigeria, Mexico, and St. Vincent.

Women were at increased risk of violence associated with pregnancy compared to nonabused women if they lived without a partner (odds ratio [OR] 6.6, 95% confidence interval [CI] 3.39-12.84), were an asylum seeker (OR 3.4, 95% CI 1.55-7.35), lived in Canada for < 2 years (OR 2.8, 95% CI 1.31-5.86), or had less than high school education (OR 2.6, 95% CI 1.36-4.91). Limited or no French or English was associated with a protective effect for violence associated with pregnancy, with a 56% reduction in risk (OR 0.4, 95% CI 0.19-0.98) (Table 2).

Table 3 compares the health and health services use of women who experienced violence associated with pregnancy to those who did not. Compared to nonabused migrant women, abused migrant women reported limited healthcare services, including maternal vaccinations not up-to-date ($p = 0.018$), not taking folic acid before pregnancy ($p = 0.017$), commencing prenatal care after 3 months ($p < 0.000$), and not using contraceptives 4 months after giving birth although not planning to become pregnant ($p = 0.001$). No statistical or clinical difference by group was found for women who did not have a Pap test. In examining their medical history, only one factor differed between the groups; compared to nonabused migrant women, abused migrant women were more likely to have had a history of miscarriage ($p < 0.018$). Also, although not statistically significant, abused women were > 2.5 times less likely to not be rubella immune (3.7% vs. 9.7%, $p = 0.142$). No statistical or clinical difference by group was found for histories of abortion or STI or being GBS positive. Although not statistically significant, abused women were > 2

Table 1. Demographics by Violence Associated with Pregnancy Status

Variables	*Abused (n = 59)*	*Not abused (n = 715)*
Age, mean	26.8	29.8
Education < 12 years, %	47.5	18.7
Income < $10,000 CDN/year, %	45.8	19.0
Not living with a partner, %	74.6	17.9
Migration status		
Nonrefugee immigrant, %	6.8	52.2
Refugee, %	11.9	14.0
Asylum seeker, %	81.4	33.5
Lived in Canada < 2 years, %	78.0	43.4
Limited/no English or French, %	22.0	34.8
Country of origin		
Africa, %	45.8	19.3
Asia, %	11.9	36.5
Latin America, %	40.7	33.8
Europe/US/Australia, %	1.7	10.3
Low-income economy, %	50.8	22.9

CDN, Canadian.

Table 2. Risk Factors for Violence Associated with Pregnancy

	Odds ratio	*95% confidence interval*	p *value*
Intercept	0.007		<0.001
Not living with partner	6.60	3.39-12.84	<0.001
Asylum seeker	3.38	1.55-7.35	0.002
Lived in Canada <2 years	2.77	1.31-5.86	0.008
Education <12 years	2.59	1.36-4.91	0.004
Limited/no English or French	0.44	0.19-0.98	0.044
From low-income economy	1.68	0.84-3.32	0.137

Reduced model after having considered the following in the maximum model: maternal demographics (age, income, employment in country of origin), migration indicators (region/country of origin as per World Health Organizations (WHO) and the Gender-Related Development Index), and partner characteristics (region/country of origin, English/French language ability, migration status, length of time in Canada, and employment status).

times as likely to give birth to low birth weight infants (6.8% vs. 3.2%, $p=0.144$). No differences between abused and nonabused women were found regarding induction, stimulation (augmentation), amniotomy, cesarean section, or medically assisted birth, preterm birth, or Apgar <7 at 5 minutes. However, postpartum, abused migrant women compared to nonabused migrant women were more likely to report more pain for which treatment is usually prescribed for back, perineal, abdominal, or hemorrhoidal pain at 1 week ($p=0.045$) and at 4 months ($p=0.003$) after giving birth and soaking >3 pads in 24 hours at 1 week ($p=0.050$). There was no difference between groups for breast/nipple pain postpartum at either time points. Abused migrant women were also more likely than nonabused women to report a score above the cutoff on the EPDS ($p<0.000$), Harvard Trauma Total Score ($p<0.000$), Harvard Functional Score ($p<0.000$), Harvard PTSD Score ($p<0.000$), Hopkins Somatization Score ($p<0.000$), Hopkins Anxiety Score ($p<0.000$), and Hopkins Depression Score ($p<0.000$).

Table 3. Health and Health Services Use by Violence Associated with Pregnancy Status

Health and health services use	*Reported violence* (n=*59*)	*No reported violence* (n=*715*)	p *value (based on Pearson chi-square test)*
Healthcare service concerns			
Maternal vaccinations not up-to-date, %	80.0	64.4[a]	0.018
Did not take folic acid before pregnancy, %	91.5	78.5	0.017
Commenced prenatal care at >3 months gestation, %	55.9	21.2[b]	0.000
Not planning to become pregnant and not using contraception, %	20.3	6.7	0.001[c]
Medical history			
History of miscarriage, %	29.8[b]	17.2[d]	0.018
Not rubella immune, %	3.7[e]	9.7[f]	0.142
Health at birth			
Low birth weight (<2500 g), %	6.8	3.2[g]	0.144[c]
Health at 1 week postpartum			
Back, perineal, abdominal, or hemorrhoid pain (VAS≥4), %	33.9	22.4[b]	0.045
Soaking >3 pads in 24 hours, %	10.2	4.2[h]	0.050[c]
No one to help at home (PRQ), %	37.3	9.9	0.000
Health at 4 months postpartum			
Back, perineal, abdominal, or hemorrhoid pain (VAS≥4), %	25.4	11.9[i]	0.003
EPDS≥10, %	49.2	16.2	0.000
Harvard Trauma total score≥2.5, %	22.0	2.5	0.000[c]
Harvard Functional≥2.5, %	23.7	2.8	0.000[c]
Harvard PTSD≥2.5, %	22.0	3.2	0.000[c]
Hopkins Somatization total score, ≥1.75, %	49.2	12.2	0.000
Hopkins anxiety≥1.75, %	42.4	8.3	0.000
Hopkins depression≥1.75, %	50.8	12.3	0.000

[a]Data on 2 subjects missing.
[b]Data on 9 subjects missing.
[c]Values based on Fisher's exact test.
[d]Data on 7 subjects missing.
[e]Data on 5 subjects missing.
[f]Data on 37 subjects missing.
[g]Data on 3 subjects missing.
[h]Data on 4 subjects missing.
[i]Data on 1 subject missing.

EPDS, Edinburgh Postnatal Depression Seale; PRQ, Personal Resource Questionnaire; PTSD, posttraumatic stress disorder; VAS, Visual Analog Scale.

Compared to nonabused migrant women, abused migrant women were more likely to report no one at home to help them at 1 week after birth ($p < 0.000$). Upon further examination of the mental health of the subgroup of abused women by social support status, we found that abused migrant women with social support were less likely to score ≥ 10 on EPDS at 4 months postpartum ($p = 0.03$) than those with low/no social support. Further, although not statistically different, they were one-third to one-half less likely to meet at-risk cutoffs for the Harvard Trauma total (13.5% vs. 36.4%, $p = 0.06$), Functional (16.2% vs. 36.4%, $p = 0.11$), and PTSD (16.2% vs. 31.8%, $p = 0.20$) scores. Social support status did not affect somatization or anxiety in abused women.

Discussion

We found several demographic risk factors associated with physical or sexual violence associated with pregnancy in migrant women, which were not altogether surprising. Migrants who arrived within the last 2 years were more vulnerable to violence, both during the migration process and after arrival. They may lack knowledge of how to access resources in the host country. Having lower levels of education is also likely to be an impediment to locating social or legal resources that may assist in leaving the violent situation. Being single, without the protection of a male partner, leaves women especially vulnerable to abuse in refugee camps, during migration, and in the host country. As 57.1% of women had been abused by their partners, it is likely that some of these single women had left their abusive partners. Other authors have identified asylum-seeking women to be at particular risk of violent experiences, and indeed this may be the reason for their seeking asylum.[21] One unexpected finding was that speaking neither French nor English was associated with a protective effect against violence associated with pregnancy. It may be that those women who spoke French or English felt more comfortable divulging their abuse, whereas women who had to use interpreters were more cautious. Another possible explanation is that these women believed that violence was normal in intimate relationships, a finding reported among African immigrant women in the United States.[22] Clearly, this finding requires further study.

We compared two groups of immigrant women, those with a history of violence associated with pregnancy and those without it. Some of the demographic factors that are risk factors for violence associated with pregnancy may also contribute to a limited use of healthcare services. Lack of up-to-date vaccination status, no prenatal use of folic acid, late entry into prenatal care, and lack of postpartum contraception may all reflect lack of education or not knowing how to access health services, especially among migrants who arrived during pregnancy. It may also be that abusive partners prevented these women from accessing healthcare services or using contraceptives. One study of irregular migrants in Canada found many barriers and unmet needs in healthcare, as well as stress-related physical and mental health conditions.[23] Other researchers have identified poverty, unemployment, lack of social networks, discrimination, and health behaviors as factors in reducing the use of health services by migrants.[24] The lack of healthcare services is especially acute in pregnancy prevention and care, as described by a Swiss study of migrants that found 75% of pregnancies were unintended, 61% of women were unaware of emergency contraception, only 63% had prenatal care in the first trimester, and many were exposed to violence during pregnancy.[25] Similarly, a study of illegal women immigrants to The Netherlands found many unmet needs in sexual and reproductive health.[26]

Miscarriage of pregnancy associated with violence in nonmigrant women has been known for many years,[27] especially if the abdomen is traumatized. Accordingly, it is not surprising that migrant women who suffered from violence associated with pregnancy would also have a historically higher prevalence of miscarriage compared to nonabused migrant women. Pain is a common sequela to violence and exposure to traumatic experiences in several studies of pregnant and nonpregnant populations. Vietnamese women who suffered from IPV were found to have a 4-fold higher prevalence of pain, discomfort, and depression compared to nonabused women.[28] Similarly, WHO's multicountry study on domestic violence found increased rates of self-reported poor physical and mental health, pain, and vaginal discharge in abused compared to nonabused women.[29] Back pain, in particular, was found to be increased in abused women in a recent study from Spain.[30]

The lack of social support reported by the abused migrant women is likely a critical factor in their health and well-being. Our subanalysis of the mental health profile among migrant women who experienced violence associated with pregnancy does suggest this, particularly with regard to postpartum depression. A recent Canadian study also found immigrant mothers were less likely to have access to social support and more likely to report high levels of postpartum depression compared to Canadian-born women.[31] Some of these women originated in cultures where traditional postpartum rituals involve enhanced support from family members, which are thought to be protective of mental health. Migrant women separated from their extended families and friends are unable to engage in these rituals and may be more vulnerable to depression, anxiety, and somatization.

The high rates of exposure to violence reported on the HTQ are a concern, but we are unable to ascertain whether these exposures occurred before, during, or after migration. Given these exposures, the high rates of PTSD and impaired functioning are not unexpected. It is known that the loss of one's social structure, culture, attitudes, values, and support networks may cause a grief reaction that is especially acute in the first few years after migration.[21] The higher rates of reported depression, anxiety, PTSD, and somatization in abused compared to nonabused migrant women have also been reported frequently in nonmigrant abused women.[32, 33] However, traumatic experiences, including violence associated with pregnancy, the conditions leading to migration, and the migration experience itself and lack of social support in the receiving country, likely contribute to the very high rates found for all these mental health problems.

Limitations of this study include (1) the study was conducted in Canada, which has universal healthcare and numerous social supports, (2) the study sample may have represented a lower-risk population because of eligibility criteria for participation in the CHARSNN study (i.e., discharge criteria); therefore, women with more severe sequelae due to violence related to pregnancy may have been excluded, (3) the sample of abused women was too small to have sufficient power to identify differences in all measures of mental

health status by social support, (4) there were limited data on perpetrators or the context in which the violence occurred, which could have been informative for understanding the adverse health profiles, and (5) we omitted emotional abuse from the Abuse Assessment Scale because of definitional difficulties with this population, and this may have underestimated the number of women who were abused. In addition, we found asylum seekers to have a 3-fold increase in risk for violence associated with pregnancy, but the sample size was too small to examine specific health events by different migration categories. It is possible that access to health and social resources and mental health results may have had different interpretations among different migrant classes.

In general, healthcare providers should be aware of special health issues for migrant women. The United Kingdom Health Protection Agency has posted an excellent Migrant Health Guide, which provides specific guidance on women's health.[34] In particular, clinicians should be alert to the risk factors associated with violence associated with pregnancy in migrant women (specifically recent arrivals, asylum seekers, limited ability in the host country language—which we did not find—limited education, and no partner) and sensitively inquire about any abuse experience. If the violence is recent, follow-up questions should address safety issues, and information or referral should be provided about local social and legal resources. The need for ongoing physical and mental health services should also be assessed and appropriate referrals made. As recently arrived new mothers may have difficulty in locating referral consultations, it may be helpful to arrange for a knowledgeable adult to accompany them to appointments.

Particular attention should be paid to addressing possible gaps in healthcare services, such as maternal vaccination, prenatal folic acid, early prenatal care, and contraception after giving birth. Migrant women with a history of violence associated with pregnancy should be asked about physical and mental health symptoms, including chronic pain, and appropriate treatment or referral should be instituted. Migrant women with poor social supports may benefit from referral to local services that can give (or provide the opportunity to develop) social support. As we have previously found that migrants from a range of countries in general experience a greater number of professionally identified concerns after giving birth and are less likely than Canadian-born women to have those concerns addressed,[35] it is particularly important that migrant women are sensitively asked about violence related to pregnancy and appropriately assessed, treated, and referred to improve their health and safety.

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Disclosure Statement

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