



Healthy Child Manitoba Office

Healthy Baby Programs

Participant Risk Factors

October 2010



Table of Contents

	Page
REPORT PURPOSE AND OVERVIEW	4
1. ALL RISK FACTORS	5
2. ALCOHOL USE DURING PREGNANCY	7
3. SMOKING DURING PREGNANCY	8
4. DEPRESSION AND ANXIETY	9
5. PARTNER DISTRESS AND FAMILY VIOLENCE	10
6. CHILD ABUSE AND NEGLECT	11
REFERENCES	13

LIST OF FIGURES

- Figure 1.** Alcohol use during pregnancy by Health Baby Program participants and Manitobans by age group, 2004-2009.
- Figure 2.** Smoking during pregnancy by Health Baby Program participants and Manitobans by age group, 2004-2009.
- Figure 3.** Diagnosis of depression and/or anxiety by age group, 2004-2009.
- Figure 4.** Experience with partner distress and/or violence by participant age group.
- Figure 5.** Risk factors and participant history of child abuse or neglect.

LIST OF TABLES

- Table 1.** Linkage to Families First screening, 2004-2009.

REPORT PURPOSE AND OVERVIEW

In June of 2004, Healthy Child Manitoba Office started collecting information about the Healthy Baby Program and program participants. Data collection includes:

- "We're Glad You are Here" forms
- Attendance Sheets
- Infant Feeding Charts
- Prenatal and Postnatal Participant Surveys
- Session Tracking Sheets

This report provides some highlights of information about participant risk factors as identified through linkage with the provincial Families First screening data. Linkage to this set of data provides information about rates of risk factors for poor child outcomes. Having several risk factors based on responses to the Families First screening form is an important predictor of outcomes for the child. For example, the Manitoba Centre for Health Policy found that those parents receiving income assistance, having a file with local child protection services, mothers who did not finish high school, and living in a one-parent family with no social support were the strongest predictors of children entering the care of Child and Family Services.¹ It is important to have information about what proportion of participants in Healthy Baby programs might be at high risk and ensure that programming and referrals occur to provide participants with optimal support and information.

The Families First screening data were available for all births to December 31, 2009. Of the 18,853 participants who attended Healthy Baby programs between June 1, 2004 and March 31, 2010, we were able to link 11,161 (or 59.2%) the Families First Screening data. Unless otherwise noted, this report includes only the participants for whom Families First screening data were available.

Please direct any questions about this report to Cynthia Carr at epiresearch@shaw.ca

1. ALL RISK FACTORS

- **Table 1** shows the percentage of Healthy Baby program participants who answered "yes" to each screening question compared to all Manitobans who were screened (those living off-reserve only). Also presented are the Healthy Baby program data for Northern sites only (Churchill, Burntwood and NORMAN), Urban sites (Winnipeg and Brandon) and Rural sites (all other sites). The final column in the table titled "Significance" indicates if the Healthy Baby rate is statistically different from the Manitoba rate for each question. The indicators are ordered from highest to lowest based on the Healthy Baby Program rate.
- Women who answer "yes" to three or more of the Families First screening questions are considered to be at higher risk and will have a survey completed and may be eligible to participate in Families First home visiting. Overall, 42.4 per cent of Healthy Baby participants answered yes to three to more questions which is almost double the rate of Manitobans at 21.4 per cent. Participants at the Northern sites had the highest rate at 61.1 per cent of participants.
- Rates of participants with three or more risk factors also differed by age group of participant, whether participant received Income Assistance and whether participant was Aboriginal.

Table 1. Linkage to Families First screening, 2004-2009.

	HB Program North	HB Program Rural	HB Program Urban	HB Program Total	Manitoba	Significance (HB Program Total compared to Manitoba)
Answered yes to 3 or more screening questions	61.1% (333)	27.7% (1,212)	51.1% (3,177)	42.4% (4,727)	21.4%	Higher
Income assistance or financial difficulties	51.0% (275)	20.2% (879)	47.2% (2,885)	36.7% (4,042)	17.1%	Higher
Mother has less than grade 12 education	48.5% (263)	20.9% (908)	37.0% (2,251)	31.2% (3,425)	20.7%	Higher
Smoking during pregnancy	50.5% (273)	17.5% (761)	33.0% (2,029)	27.8% (3,070)	20.2%	Higher
Single parent	35.7% (194)	12.4% (543)	36.1% (2,221)	26.7% (2,960)	12.5%	Higher
Depression / anxiety of mother	18.7%(102)	19.9% (873)	25.8% (1,603)	23.1% (2,581)	14.3%	Higher
Alcohol use during pregnancy	32.7% (176)	19.7% (858)	23.2% (1,417)	22.3% (2,459)	13.5%	Higher
Baby was HBW (>4000 grams)	21.5% (117)	19.3% (845)	16.7% (1,031)	17.9% (1,995)	14.3%	Higher
Mother's own history of child abuse or neglect	21.6% (116)	10.2% (439)	17.3% (1,010)	14.6% (1,566)	7.3%	Higher
Relation distress or violence	24.6% (134)	8.8% (385)	16.4% (1,021)	13.8% (1,541)	5.5%	Higher
Social isolation	6.5% (35)	9.3% (407)	10.5% (641)	9.8% (1,084)	5.2%	Higher
Drug use during pregnancy	16.0% (86)	3.9% (169)	12.8% (782)	9.4% (1,039)	4.3%	Higher
Mother is less than 18 years old	18.3% (99)	4.4% (192)	12.0% (739)	9.3% (1,031)	5.1%	Higher

- 80 per cent (1,216) of participants under the age of 20 had three or more risk factors.
- 76 per cent (2,533) of participants who receive Income Assistance had three or more risk factors compared to 27 per cent of participants who do not receive Income Assistance.
- 76 per cent (2,624) of Aboriginal participants had three or more risk factors compared to 26 per cent (1,885) of non-Aboriginal participants.
- The most common risk factor for Healthy Baby program participants was "Receiving Income Assistance or encountering financial difficulties". Overall, 36.7 per cent (just over one in three) of participants answered yes to this question; in the North, just over one half (51.5%) of participants said yes to this question.
- Women continue to smoke during pregnancy and 28.5 per cent of participants indicated that they had smoked compared to 20.2 per cent of Manitobans. In the north, the rate is much higher at approximately one half of participants.
- One area where risk factors were slightly lower among program participants than the Manitoban rate is low birth weight (LBW) infants. The rate among participants was 4.8 per cent which is lower than the provincial average of 5.3 percent. Rates of multiple births are also lower at 2.0 per cent compared to the provincial average of 2.9 per cent.

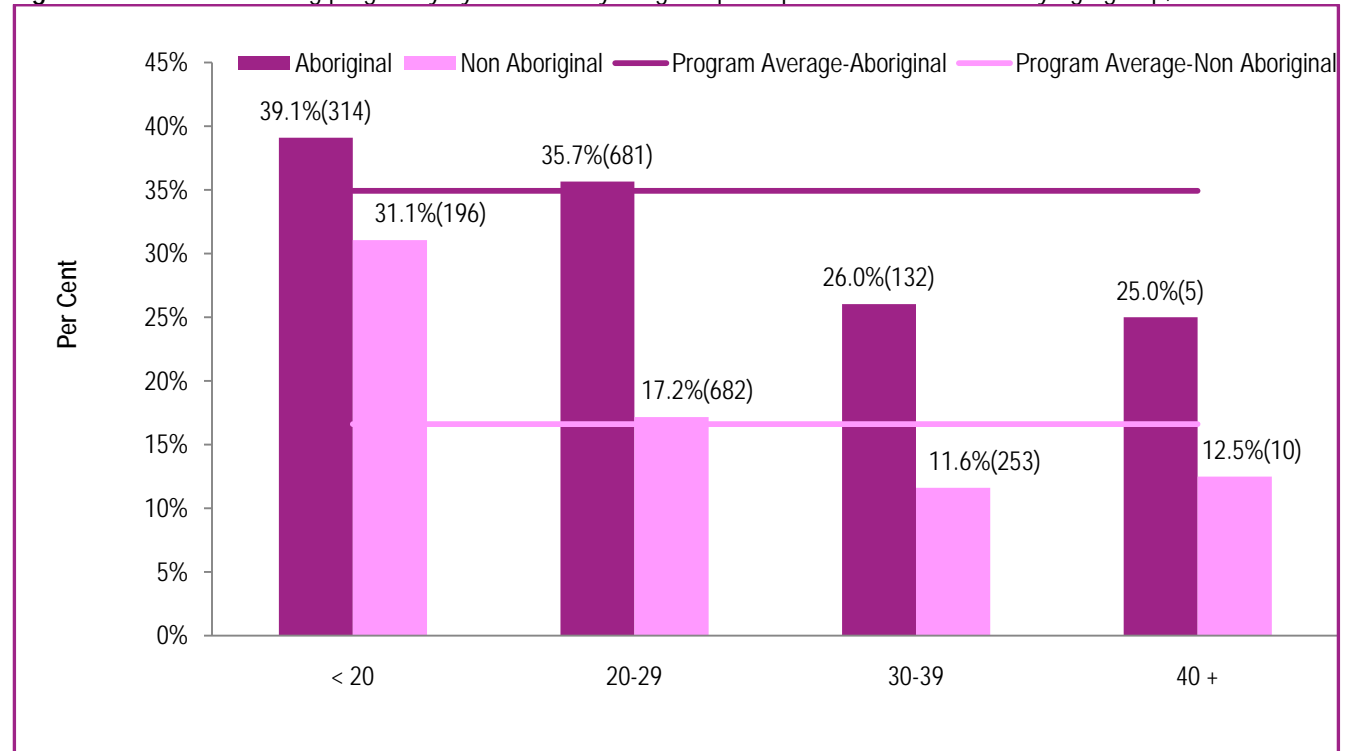
Table 1. Linkage to Families First screening, 2004-2009 (continued).

	HB Program North	HB Program Rural	HB Program Urban	HB Program Total	Manitoba	Significance (HB Program Total compared to Manitoba)
Baby was premature	8.3% (45)	7.2% (316)	8.3% (510)	7.8% (871)	7.6%	Not different
Baby was LBW (<2500 grams)	4.8% (26)	4.3% (188)	5.2% (320)	4.8% (534)	5.3%	Lower
Family history of a disability	3.5% (19)	4.8% (208)	3.8% (229)	4.2% (456)	2.8%	Higher
No prenatal care before 6th month	5.9% (32)	1.8% (80)	5.6% (343)	4.1% (455)	2.5%	Higher
Multiple births	0.9% (5)	2.2% (98)	1.9% (116)	2.0% (219)	2.9%	Lower
Current substance abuse	5.0% (27)	0.9% (41)	2.3% (140)	1.9% (208)	0.8%	Higher
Long separation (5 days or more)	1.7% (9)	1.2% (52)	2.0% (121)	1.7% (183)	1.2%	Higher
Infection during pregnancy	0.7% (4)	1.5% (66)	1.8% (110)	1.6% (180)	0.8%	Higher
Harsh/inappropriate discipline (includes with other children)	2.2% (10)	1.1% (39)	1.8% (92)	1.6% (141)	0.5%	Higher
Baby has disability or congenital anomaly	3.0% (16)	1.6% (68)	1.3% (79)	1.5% (163)	1.5%	Not different
Mom is mentally disabled/challenged	0.9% (5)	0.9% (39)	1.5% (91)	1.2% (135)	0.3%	Higher
Antisocial behaviour in mom	2.2% (12)	0.6% (28)	1.4% (85)	1.1% (125)	0.5%	Higher
Mom has schizophrenia or bipolar affective disorder	0.4% (1)	0.7% (15)	1.1% (24)	0.9% (40)	0.5%	Higher
Assessed lack of bonding	0.4% (2)	0.4% (16)	0.5% (29)	0.4% (47)	0.4%	Not different

2. ALCOHOL USE DURING PREGNANCY

- Overall, 22.3 per cent of Healthy Baby program participants drank alcohol during pregnancy compared to 13.5 per cent of Manitobans. This rate was much higher among northern participants at 32.7 per cent.
- Alcohol use was also examined by age group and whether or not participants were Aboriginal.
- Rates of alcohol use during pregnancy were higher in every age group for Healthy Baby program participants than for Manitoba women overall.
- Overall, 34.9 per cent of Aboriginal program participants drank alcohol during pregnancy compared to 16.6 per cent of non-Aboriginal participants.
- As **Figure 1** shows, alcohol use was highest among Aboriginal women under the age of 20 (39.1% of participants) followed by Aboriginal women age 20-29 (35.7% of participants). Within each group (Aboriginal and non-Aboriginal), alcohol use was highest among the youngest women (under age 20) and rates of alcohol use decreased with increasing age.

Figure 1. Alcohol use during pregnancy by Health Baby Program participants and Manitobans by age group, 2004-2009.



Note: Data include women living off-reserve only.

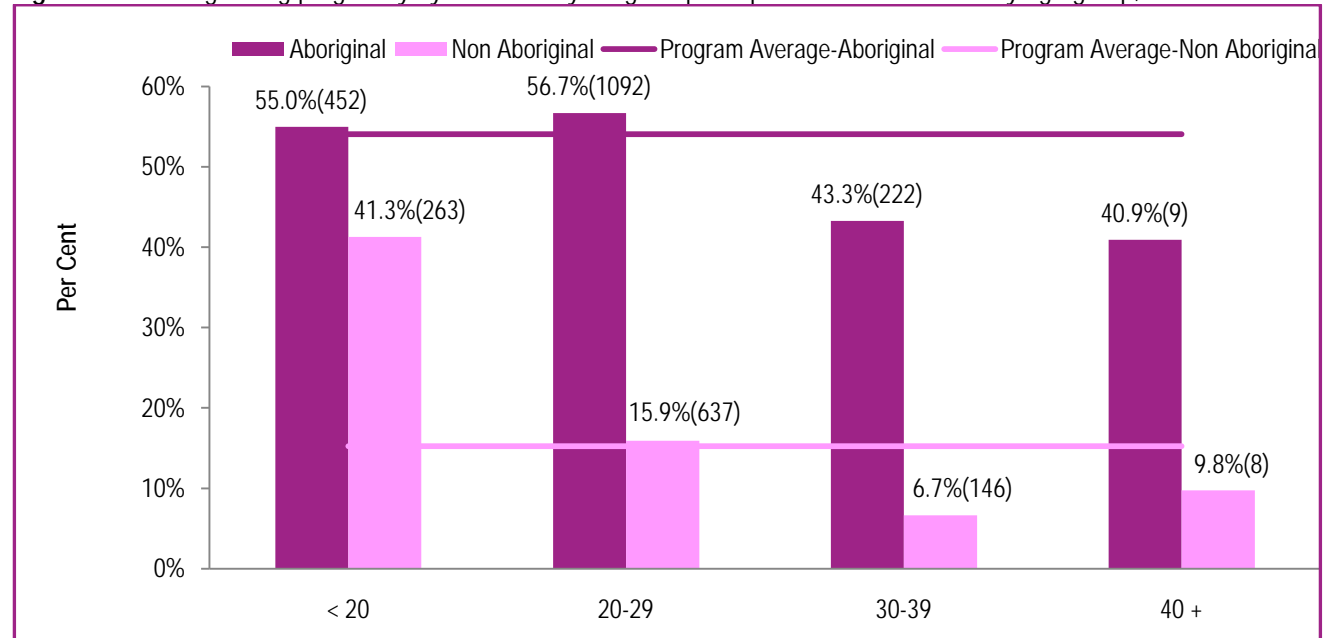
Other risk factors for drinking alcohol during pregnancy:

- Women who used drugs during pregnancy - 4.1 times more likely to use alcohol than those that do not.
- Women who smoked during pregnancy - 1.8 times more likely
- Women who are the lone parent - 1.6 times more likely
- Women diagnosed with depression or anxiety - 1.5 times more likely
- Women with less than grade 12 education - 1.3 times more likely

3. SMOKING DURING PREGNANCY

- Overall, 27.8 per cent of Healthy Baby program participants smoked during pregnancy compared to 20.2 per cent of Manitobans. Smoking rates ranged from 27.8 per cent of rural participants to 33 per cent of urban and 50.5 per cent of northern participants.
- Rates of smoking were highest among program participants under age 20 (48.8%) and were higher than rates among all Manitoba women in every age group with the exception of the under 20 age group where rates were slightly higher (49.5%) for all Manitoba women. Smoking rates decrease significantly with increasing age, dropping to 29.1 per cent of participants age 20-29 and 13.5 per cent of those in the 30 to 39 year old age group.
- Smoking was examined by age group and whether or not participants were Aboriginal (see Figure 2). Overall, 54.1 per cent of Aboriginal participants smoked during pregnancy compared to 15.2 per cent of non-Aboriginal participants.
- Smoking was highest among Aboriginal women between ages 20 and 29 (56.7%) followed by Aboriginal women under age 20 (55% of participants).

Figure 2. Smoking during pregnancy by Health Baby Program participants and Manitobans by age group, 2004-2009.



Note: Data include women living off-reserve only.

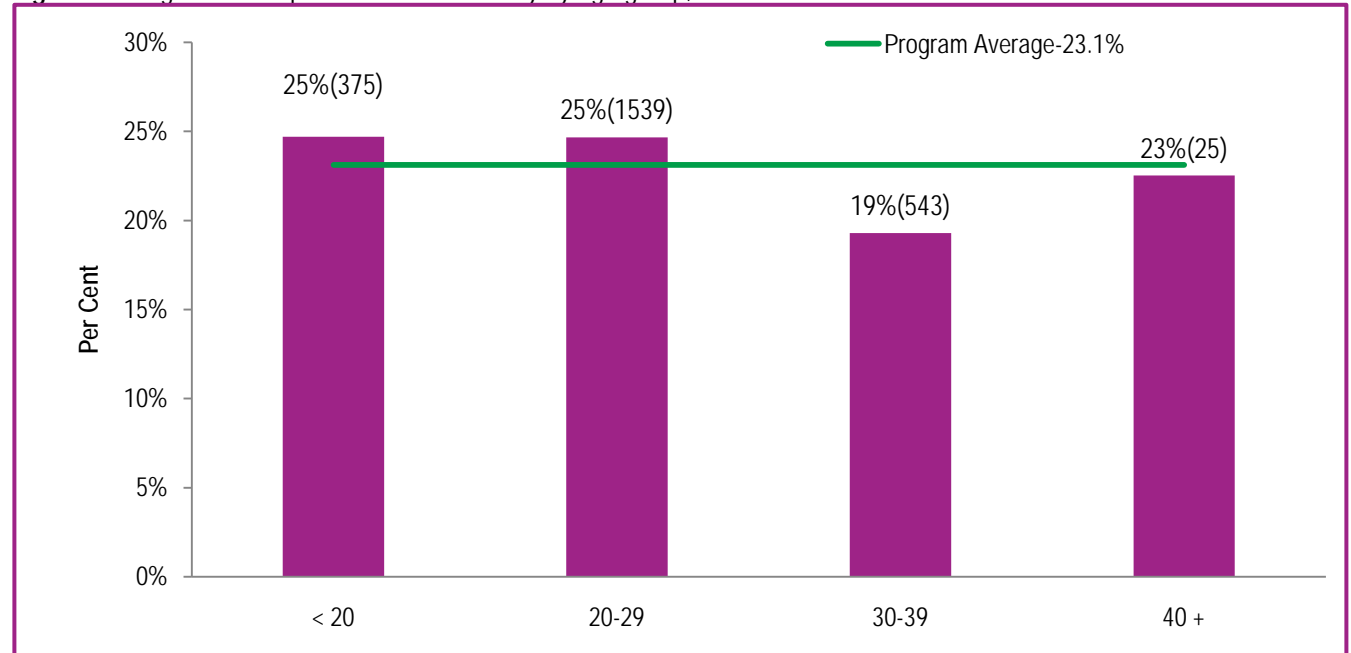
Other risk factors for smoking during pregnancy:

- Women diagnosed with "antisocial behaviour" - 3.4 times more likely to smoke
- Women are current substance abusers - 3.1 times more likely
- Women who used drugs during pregnancy - 2.8 times more likely
- Women with financial difficulty or receiving Income Assistance - 2.8 times more likely
- Women with harsh or inappropriate disciplinary practices - 2.7 times more likely
- Women with less than grade 12 education - 2.6 times more likely
- Women who are the lone parent - 2.0 times more likely
- Women diagnosed with depression or anxiety - 1.9 times more likely
- Women who used alcohol during pregnancy - 1.7 times more likely

4. DEPRESSION AND ANXIETY

- Overall, almost one in four Healthy Baby Program participants (23.1%) had been diagnosed with depression and/or anxiety. This is much higher than the provincial average of 14.3 per cent.
- Women attending urban program sites (Winnipeg and Brandon) were more likely to have been diagnosed with depression and/or anxiety (25.8%) compared to northern participants (18.7%) and rural participants (19.9%).
- **Figure 3** shows diagnosis rates by participant age group. While younger moms had slightly higher rates, almost one in five participants in each age group had been diagnosed with depression and/or anxiety. This shows a need to support participants in every age group.
- Rates of diagnosis of depression and/or anxiety were highest among women who were not in a relationship (31%) compared to those who were in a relationship (21%).
- Women receiving Income Assistance were also more likely to have been diagnosed compared to those who were not (31% compared to 20%).
- One in three (33%) participants who drank alcohol were diagnosed with depression and/or anxiety compared to one in five (20%) of women who did not drink during pregnancy.

Figure 3. Diagnosis of depression and/or anxiety by age group, 2004-2009.



Note: Data include women living off-reserve only.

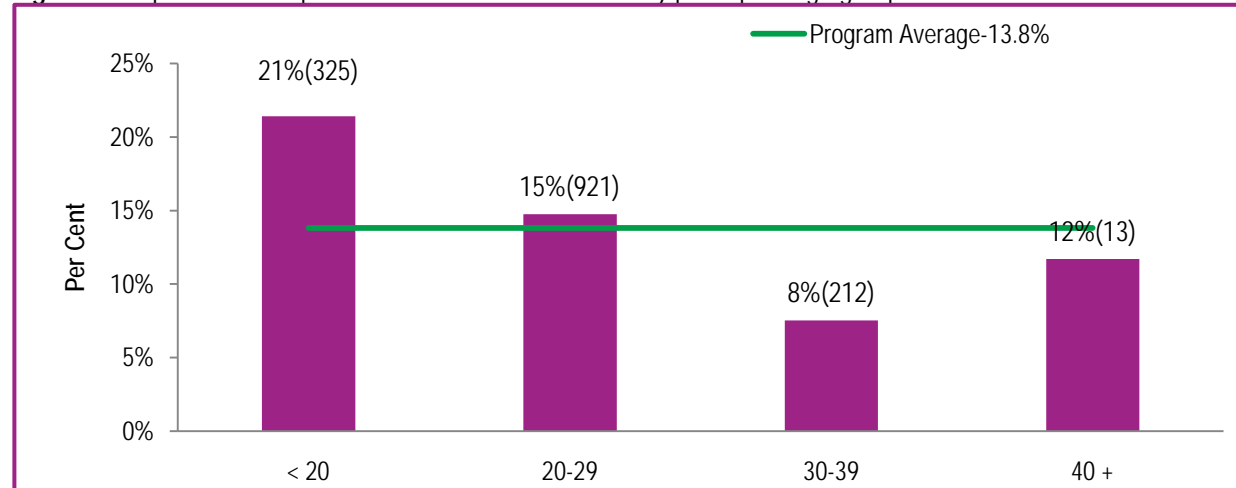
Other risk factors for depression or anxiety in mom:

- Women diagnosed with "schizophrenia" - 7.1 times more likely
- Women assessed as "lacking bonding" with baby - 4.1 times more likely
- Women diagnosed with "antisocial behaviour" - 4.0 times more likely
- Women experiencing relationship distress or violence - 3.5 times more likely
- Women are current substance abusers - 2.9 times more likely
- Women who used drugs during pregnancy - 2.4 times more likely
- Women who smoked during pregnancy - 2.4 times more likely
- Women with financial difficulty or receiving Income Assistance - 2.3 times more likely
- Women who are the lone parent - 2.2 times more likely
- Women who are separated for five or more days from baby - 2.1 times more likely

5. PARTNER DISTRESS AND FAMILY VIOLENCE

- Almost fourteen per cent of Healthy Baby Program participants have experienced relationship distress and/or violence. This is more than double the provincial average of 5.5 per cent.
- Women attending northern program sites were most likely to experience relationship distress and/or violence with 24.6 per cent of participants reporting this during the Families First screening interview. It is important to note that these rates are for women living off-reserve only. Just under 9 per cent of rural women reported this as did 16.4 per cent of women attending programs in urban settings (Brandon and Winnipeg).
- As **Figure 4** shows, younger women are most likely to experience relationship distress and/or violence, with almost one in five participants affected by distress and/or violence in their relationship. This rate is statistically higher than the program average of 13.8 per cent.
- Women who are experiencing financial difficulty are much more likely to experience relationship distress and or violence compared to those who are not (27% compared to 8%).
- Women who have not completed grade 12 are also much more likely to experience relationship distress and/or violence (24% compared to 9%).

Figure 4. Experience with partner distress and/or violence by participant age group.



Note: Data include women living off-reserve only.

Experience of relationship distress and/or violence and risk factors in mom:

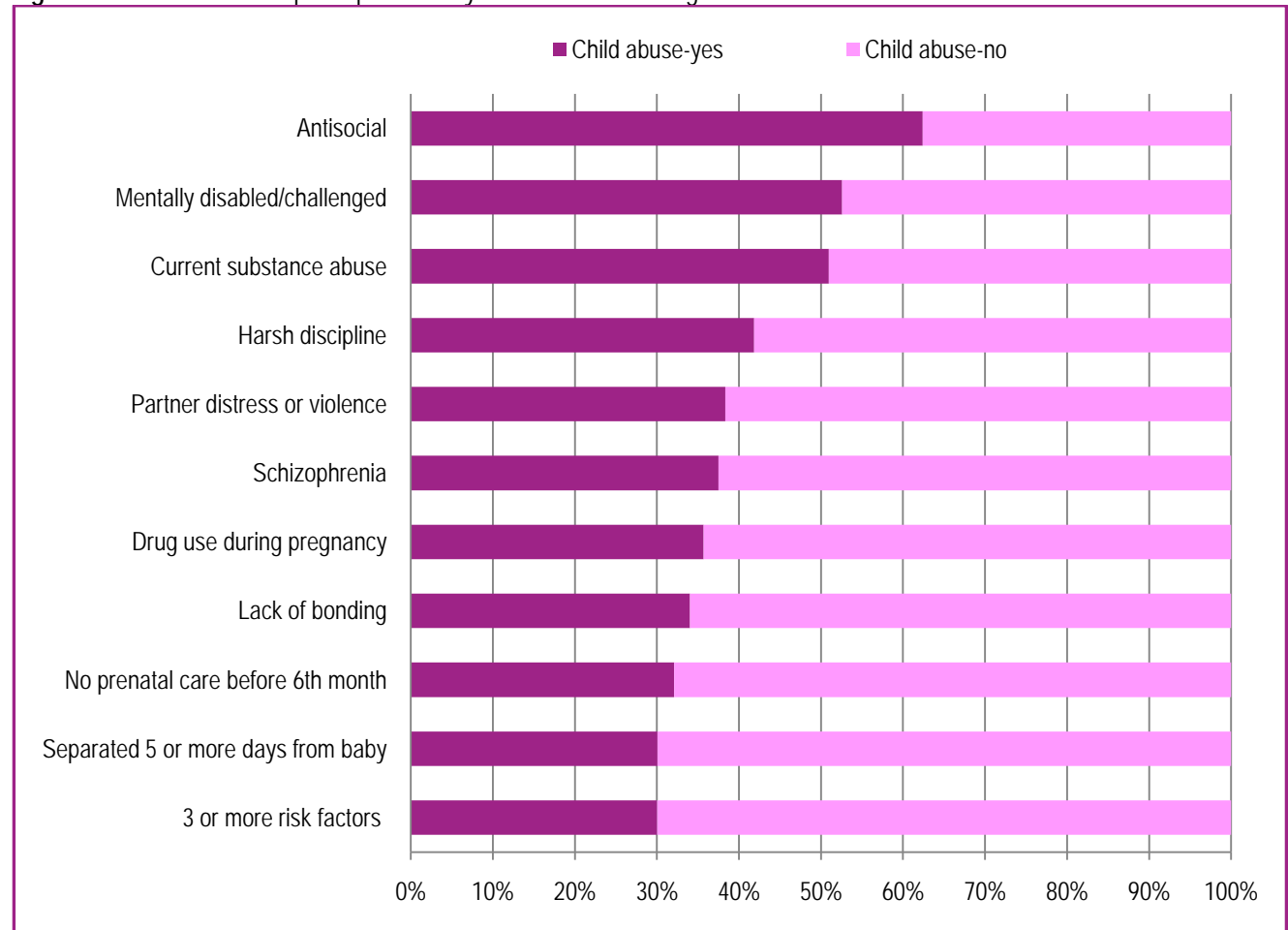
Women who experience relationship distress and/or violence are:

- 12.5 times more likely to be the lone parent compared to those who have not experienced distress or violence.
- 10.5 times more likely to have financial difficulty or be receiving Income Assistance.
- 7.9 times more likely to be diagnosed with "antisocial behaviour".
- 6.1 times more likely to exhibit harsh or inappropriate disciplinary practices with their own children.
- 6.0 times more likely to be current substance abusers.
- 5.6 times more likely to be mentally challenged or disabled.
- 5.5 times more likely to have experienced child abuse or neglect.
- 4.6 times more likely to be assessed as "lacking bonding" with their baby.
- 4.2 times more likely to use drugs during their pregnancy.
- 3.8 times more likely to be isolated.
- 3.7 times more likely to not have completed grade 12.
- 3.5 times more likely to be diagnosed with depression and/or anxiety.

6. CHILD ABUSE AND NEGLECT

- Overall, 14.6 per cent of Healthy Baby program participants indicated that they had experienced child abuse or neglect as a child. This is double the provincial average of 7.3 per cent.
- Just over one in five (21.6%) women attending northern program sites reported experiencing child abuse or neglect compared to 10.2 per cent of rural participants and 17.3 per cent of participants at urban sites.
- Aboriginal participants were much more likely than non-Aboriginal participants to indicate that they had experienced abuse or neglect as a child. Just over one in four (26.4%) Aboriginal participants reported this compared to 9.0 per cent of non-Aboriginal participants.
- **Figure 5** shows the relationship between the participants' history of child abuse or neglect and the leading ten risk factors assessed through the Families First screen. For example, 62.4 per cent (almost two out of three) of participants who had been diagnosed with "antisocial personality disorder" had a history of child abuse or neglect. Just under one-half (47.4%) of participants assessed as mentally disabled or challenged had a history of child abuse or neglect. Overall, 30 per cent of participants who have three or more risk factors had a history of child abuse or neglect.

Figure 5. Risk factors and participant history of child abuse or neglect.



Note: Data include women living off-reserve only.

"Infants and children who are neglected or abused are at higher risk for injuries, a number of behavioural, social and cognitive problems later in life, and death"."

Experience of child abuse or neglect and risk factors in mom:

Women who have experienced child abuse are:

- 10.2 times more likely to be diagnosed with "antisocial behaviour" compared to those who were not abused.
- 6.6 times more likely to be current substance abusers.
- 6.5 times more likely to have financial difficulty or be receiving Income Assistance.
- 5.4 times more likely to experience relationship distress and/or violence.
- 5.0 times more likely to have not completed grade 12.
- 4.4 times more likely to be diagnosed as schizophrenic.
- 4.3 times more likely to exhibit harsh or inappropriate disciplinary practices with their own children.
- 4.2 times more likely to use drugs during their pregnancy.
- 4.1 times more likely to be a lone parent.
- 4.0 times more likely to smoke during their pregnancy.
- 3.8 times more likely to be diagnosed with depression and/or anxiety.
- 3.4 times more likely to be assessed as "lacking bonding" with their baby.
- 3.1 times more likely to NOT have prenatal care in the first six months of pregnancy.

REFERENCES

ⁱ Manitoba Centre for Health Policy, Manitoba's BabyFirst Program: A Way to Reduce Child Maltreatment?, October 2007.

ⁱⁱ Public Health Agency of Canada. <http://www.phac-aspc.gc.ca/ph-sp/determinants/determinants-eng.php#income>. Accessed July 2010.