

ALCOHOL CONSUMPTION DURING PREGNANCY AMONG WOMEN IN ISRAEL

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ABSTRACT

Background

Fetal alcohol spectrum disorder (FASD) is a range of disabilities caused by gestational exposure of the fetus to alcohol. Alcohol consumption in Israel has increased dramatically in the last decades. Our previous study revealed limited knowledge among Israeli medical professionals of the risks and potential long-term effects of FASD.

Objectives

To evaluate the awareness and knowledge of women regarding the current recommendations on alcohol consumption during pregnancy, evaluate how many of the women received information regarding alcohol consumption during pregnancy from medical professionals, and their personal drinking habits during pregnancy.

Methods

A cross-sectional sample of new mothers in 3 large hospitals in Israel were asked to complete an ad hoc questionnaire on aspects of alcohol consumption during pregnancy.

Results

A total of 3815 women of mean age 30.4 years participated in the study; 82% were Jewish. Alcohol consumption during pregnancy was reported by 14.1%, including more than 17% of the Jewish women, 11.1% of the Christian women, and none of the Muslim women. Rates were higher among nonsecular and younger women and first-time mothers. 71.6% of the sample claimed that women should not drink alcohol at all during pregnancy, and 21.4% thought that it was permissible if limited to 2 drinks per week. Seventy-five percent had received no formal information from medical professionals regarding alcohol consumption during pregnancy.

Conclusions

Alcohol consumption is frequent among pregnant women in Israel, especially young secular Jewish women with first pregnancies. Improved educational programs on the dangers of FASD are needed for both professionals and the general public.

Key Words: *Fetal alcohol spectrum disorder, fetal alcohol syndrome, pregnancy, alcohol consumption*

Alcohol consumption during pregnancy causes direct damage to various fetal organs and systems.^{1,2} Some of the insults are manifested only later in life, during growth and development. Children may have abnormal organ development and suffer from various problems as: mental retardation, ADHD, learning disorder and behavior problems.³⁻⁵ The cluster of injuries is collectively termed fetal alcohol spectrum disorder (FASD).

Reports from various countries point to an increase in the incidence of FASD in recent years.⁶⁻⁹ Researchers in the US estimate that approximately 1% of all newborns (100 of the 10,600 infants born daily) have varying degrees of the disorder.⁹ Less than 10% of children with full-blown FASD live an independent life, and the remainder need help and support to some extent. The emotional burden of FASD on families is enormous but difficult to measure. The financial burden in the US has been calculated as \$1.4 million per child for life; the overall annual cost of treatment of all children with FASD is approximately \$4 billion.^{10,11}

55% of women of childbearing age in the US tend to drink alcoholic beverages, and 11% of them continue to do so during pregnancy.¹² It is of special concern that many pregnancies among American women are unplanned, so even those who know to stop drinking during pregnancy may not stop drinking before they recognize that they are pregnant.^{13,14} In Australia, almost 80% of women drink alcohol during the 3 months before pregnancy, and 47% of the pregnancies are unplanned.¹⁵ A report of the British Institute of Alcohol Studies concluded that although most women in Europe give up drinking alcohol during pregnancy, a significant number fail to change their drinking habits (25% in Spain, up to 50% in the Netherlands, and an even higher percentage in the UK).¹⁶ Binge drinking poses a risk even without regular alcohol consumption.¹⁷ In the US, 12% of women in the reproductive age group admit to binge drinking.¹⁸

In Israel, 40% of women tend to drink alcohol, and 4% report binge drinking.¹⁹ Although these rates are similar to other countries, rates of the detection or diagnosis of FASD in Israel are negligible.²⁰ This finding has been attributed to a lack of knowledge of FASD among senior medical professionals.²⁰

The purpose of the present study was to evaluate the awareness of mothers to the dangers of drinking alcohol during pregnancy, their personal drinking habits during pregnancy, the relationship of background factors to alcohol consumption during pregnancy, and the information regarding alcohol consumption during pregnancy that they received from medical authorities.

METHODS

Study Design and Population

A cross-sectional survey was conducted among women hospitalized in the maternity ward of 3 hospitals in Israel between September 2009 and March 2010. The hospitals chosen serve large heterogeneous populations of all religions. An ethics approval was obtained for this study by the local Helsinki committee. The exclusion criteria were: Women who are not Israeli citizens, Women who were unable to answer the questionnaire due to their medical condition or due to language barrier, and women who refused to participate. (See *Appendix*)

Data Collection

The women were approached on the ward after delivery and asked to complete an ad hoc questionnaire on alcohol consumption. Items covered the education the patient had received on alcohol consumption during pregnancy from health professionals, the patient's perception of the quality and amount of the education provided, other sources of information on alcohol consumption during pregnancy, their general knowledge regarding alcohol consumption during pregnancy, their attitudes toward women who consume alcohol during pregnancy, and the amount of alcohol they consumed prior to conception and during the last three months of the just-completed pregnancy (none or less than 1 drink/week, 1-3 drinks/week, 4-6 drinks/week, 7-13 drinks/week, more than 13 drinks/week), including binge drinking. We defined a "drink" as one glass of wine, a can or bottle of beer, or a shot of hard liquor (all equal to 0.5oz of alcohol).

"Binge drinking" is consumption of five or more drinks during one occasion.²¹ Additional items covered background data (age, number of previous births, country of birth,

religion/religiosity), clinic attended for follow-up during pregnancy (public, private). We also added 4 indirect questions on alcohol uptake from the Tolerance, Annoyed, Cut-down, and Eye-opener (T-ACE) questionnaire²² which has been found to have 90% sensitivity in detecting women at increased risk of alcohol abuse.

Statistical Analysis

Categorical variables were compared between groups by Pearson chi-square test, and continuous variables by analysis of variance. 95% confidence intervals of proportions were calculated using Fisher's exact test. Variables associated with alcohol consumption during pregnancy were included in a multivariable logistic regression analysis. A second model was built with binge

drinking during pregnancy as a dependent variable. All analyses were conducted using a standard statistical package (SPSS 15.0, Chicago, Illinois).

RESULTS

A total of 4200 mothers were invited to participate in the survey. 3815 agreed a response rate of 90.83%. Their characteristics are shown in Table 1. Ages ranged from 17 to 55 (mean 30.3±5.3 years); 3115 women (81.7%) were Jewish, 623 (16.3%) were Muslim, and 36 (0.9%) were Christian. 3224 (84.5%) of all participants were born in Israel.

TABLE 1 Demographic data of study population (n=3815) surveyed for alcohol consumption during pregnancy

| Parameters | | n |
|---------------------------------------|------------------------------|-----------------------|
| Age | <i>M</i> (\pm <i>SD</i>) | 30.3 y (\pm 5.3 y) |
| No. of children* | None | 922 (24.2%) |
| | 1 | 1131 (29.6%) |
| | 2-3 | 1216 (31.9%) |
| | 4-6 | 315 (8.3%) |
| | 7+ | 58 (1.5%) |
| | No response | 173 (4.5%) |
| Country of Birth | Israel | 3224 (84.5%) |
| | Other | 591 (15.5%) |
| Nationality/religion | Jewish | 3115 (81.7%) |
| | Muslim | 623 (16.3%) |
| | Christian | 36 (0.9%) |
| | No response | 41 (1.1%) |
| | | |
| Degree of religious observance | Secular | 1466 (38.4%) |
| | Traditional | 863 (22.6%) |
| | Orthodox | 410 (10.7%) |
| | Ultraorthodox | 1026 (26.9%) |
| | No response | 50 (1.4%) |

Note: Values given in n(%) unless otherwise indicated; * excluding index pregnancy

Five hundred thirty-nine women (17.1%) reported drinking any alcohol during the just-completed pregnancy (Table 2). The alcohol consumers accounted for 17.1% of the Jewish women and 11.1% of the Christian women; none of the Muslim women reported drinking alcohol. Twenty-three percent of the sample reported personally knowing other pregnant women who

drank alcohol (26% of Jewish the women, 4.8% of the Muslim women, and 27.8% of the Christian women).

Binge drinking during the 3 months prior to conception was reported by 1.4% of the women, and during the third trimester of pregnancy, by 0.8%. The breakdown by religion is shown in Table 3.

TABLE 2 Proportion and 95% confidence interval* of self-reported consumption of one or more alcoholic drinks during 3 months prior to pregnancy and during the last trimester of pregnancy, by religion

| | Before pregnancy | <i>P</i> | During pregnancy | <i>P</i> |
|---------------------------------------|------------------------|----------|------------------------|----------|
| Nationality/religion | | <0.001 | | <0.001 |
| Jewish (n=3109) | 35.4% (33.7% to 37.1%) | | 17.1% (15.8% to 18.4%) | |
| Muslim (n=623) | 0% (0.0% to 0.59%) | | 0% (0 to 0.6%) | |
| Christian (n=36) | 41.7% (25.5% to 59.2%) | | 11.1% (3.1% to 26.1%) | |
| Other (n=19) | 68.4% (43.4% to 87.4%) | | 21.1% (7.1% to 43.3%) | |
| No response (n=22) | 40.9% (20.7% to 63.6%) | | 22.7% (7.8% to 45.4%) | |
| Degree of religious observance | | <0.001 | | <0.001 |
| Ultra-orthodox (n=410) | 20.2% (16.5% to 24.5%) | | 13.4% (10.3% to 17.1%) | |
| Religious (n=1026) | 21.2% (18.8% to 23.9%) | | 13.4% (11.3% to 15.6%) | |
| Traditional (n=859) | 28.0% (25.1% to 31.2%) | | 11.8% (9.7% to 14.1%) | |
| Secular (n=1463) | 39.3% (36.8% to 41.9%) | | 46.7% (44.10 to 49.3%) | |
| Other/unknown (n=50) | 40.8% (27.0% to 55.8%) | | 24.0% (13.1% to 38.2%) | |
| No. of children* | | <0.001 | | <0.001 |
| None (n=918) | 39.4% (27.6% to 53.88) | | 14.2% (7.6% to 24.1%) | |
| 1-2 (n=1942) | 30.6% (23.2% to 39.02) | | 16.4% (11.3% to 23.2%) | |
| 3-4 (n=589) | 19.0% (9.4% to 33.17) | | 11.2% (4.8% to 24.3%) | |
| 5-6 (n=120) | 20.0% (13.3% to 28.28) | | 13.3% (7.8% to 20.8%) | |
| 7+ (n=58) | 13.8% (6.2% to 25.38) | | 3.4% (0.4% to 11.9%) | |
| NA (n=173) | 19.1% (13.5% to 25.73) | | 4.7% (2.0% to 8.9%) | |
| Partner drinking alcohol | | <0.001 | | <0.001 |
| No (n=2485) | 24.3% (22.6% to 26.0%) | | 11.9% (10.7% to 13.3%) | |
| Yes (n=1262) | 39.6% (36.9% to 42.4%) | | 18.1% (16.0% to 20.3%) | |
| Unknown (n=11) | 63.6% (30.8% to 89.1%) | | 36.4% (10.9% to 69.2%) | |

*excluding index pregnancy

TABLE 3 Proportion and 95% confidence interval of self-reported binge drinking before pregnancy and during the last trimester of pregnancy, by religion

| | Before pregnancy | P | During pregnancy | P |
|---------------------------------------|-------------------------|----------|-------------------------|----------|
| Nationality/religion | | <0.001 | | <0.001 |
| Jewish (n=3105) | 2.9% (2.3% to 3.6%) | | 0.8% (0.5 to 1.18%) | |
| Muslim (n=623) | 0% (0 to 0.6%) | | 0% (0 to 0.6%) | |
| Christian (n=36) | 5.6% (0.7% to 18.7%) | | 2.8% (0.1% to 14.5%) | |
| Other (n=19) | 15.8% (3.4% to 40%) | | 0% (0 to 17.7%) | |
| No response (n=22) | 9.1% (1.1% to 29.2%) | | (0% to 15.4%) 0% | |
| Degree of religious observance | | <0.001 | | <0.001 |
| Ultra-orthodox (n=408) | 0.7% (0.2% to 2.1%) | | 0.2% (0.01 to 1.36) | |
| Religious (n=1023) | 0.5% (0.2% to 1.1%) | | 0.3% (0.06 to 0.85) | |
| Traditional (n=855) | 2.9% (1.9% to 4.3%) | | 0.7% (0.26 to 1.52) | |
| Secular (n=1462) | 4.2% (3.2% to 5.3%) | | 1.1% (0.63 to 1.77) | |
| Other/unknown (n=50) | 4.0% (0.5% to 13.7%) | | 2.0% (0.1% to 10.6%) | |
| No. of children* | | <0.001 | | 0.192 |
| None (n=918) | 5.9% (4.5% to 7.6%) | | 1.0% (0.5% to 1.9%) | |
| 1-2 (n=1944) | 1.7% (1.2% to 2.4%) | | 0.7 (0.4% to 1.2%) | |
| 3-4 (n=591) | 0.7% (0.2% to 1.7%) | | 0.2 (0.0% to 0.9%) | |
| 5-6 (n=119) | 0% (0.0% to 3.1%) | | 0% (0.0% to 3.1%) | |
| 7+ (n=57) | 1.8% (0.04 % to 9.4%) | | 0% (0.0% to 6.3%) | |
| NA (n=168) | 2.9% (1.0% to 6.8%) | | 1.8 (0.4% to 5.1%) | |
| Partner drinking alcohol | | 0.02 | | 0.481 |
| No (n=2485) | 2.1% (1.6% to 2.7%) | | 0.6% (0.3% to 1.0%) | |
| Yes (n=1262) | 4.3% (3.2% to 5.5%) | | 1.0% (0.6% to 1.8%) | |
| Unknown (n=11) | 9.1% (0.2% to 41.3%) | | 0% (0.0% to 28.5%) | |

* excluding index pregnancy

474 (12.4%) of the women were smokers. More than 40% of this subgroup reported drinking alcohol prior to pregnancy compared to 21% of the non-smokers, and 10% reported binge drinking compared with 1% of the non-smokers. An equal percentage of both groups reported drinking during pregnancy (15%). The relationship of other background factors with drinking were analyzed among the Jewish women, including religiosity, number of children, age, and spouse's/partner's drinking habits (Tables 2 and 3). We found that the secular women tended to drink more both before and during pregnancy than the women who defined themselves as traditional, orthodox, or ultraorthodox. Women for whom this was a first pregnancy drank more before pregnancy and did more binge drinking than women who had children at home, though both groups decreased their consumption of alcohol during pregnancy. Women older than 25 years drank more than younger women, with a trend for more binge drinking, before and during pregnancy. There was a direct relationship between the women's drinking habits and those of her spouse/partner before and during pregnancy, including binge drinking.

On the T-ACE test, 26 of the 3815 women in the study (0.68%) were found to be at high risk of hazardous alcohol consumption. Only one of them scored 4 points (on the T, A and C questions). 13 women scored 2 points for answering positively to the first question (Tolerance) and 4 women gave positive answers to the Annoyed and Cut down questions and scored 2 points. 5 women scored 1 point. None of the women answered positively on the Eye-opener question.

Interestingly, 71.6% of the sample claimed that women should not drink alcohol at all during pregnancy, and 21.4% thought that it was permissible if limited to 2 drinks per week. The large majority of women (74.9%) did not receive any information regarding alcohol consumption during pregnancy from any medical authority, with no difference between those who attended public (0.6%) or private (14.8%) clinics.

Among those women who did not drink at all during pregnancy, 25% had received education on alcohol consumption and 52% on nutrition. Of the women who did consume alcohol during pregnancy, only 17% had received education on alcohol and 37% on nutrition.

DISCUSSION

Our study was conducted in a representative sample of the female population of reproductive age in Israel. Possible selection bias might rise from the language of the questionnaire – Hebrew only. Comparison with the population census of 2008-2009²³ revealed similar proportions to our sample of Jews (81.7% in this study, 75.8% nationally), Muslims (16.3% and 16.5%, respectively) and Christians (0.9% and 2.1%, respectively). In addition, among the Jewish women, proportions of secular, orthodox, and ultraorthodox were similar to the national rates (50.4%, 31.8%, and 7.6%, respectively).

Our 17.1% rate of alcohol consumption during pregnancy in Israel is close to the 10% reported by the US Centers for Disease Control and Prevention. However, when looking at the patterns of drinking none of the women in our survey reported frequent drinking (7 drinks per week or more), comparing to 1% of the women in the US.²⁴ Binge drinking was less than 1% compared to 2% in the US.

In all religious groups, the percentage of women who reported drinking alcohol (15.5% for Jewish women, 11.1% for Christians, 0 for Muslims), was lower than the percentage who claimed they personally knew someone who drank alcohol during pregnancy (26%, 27.8% and 4.8%, respectively), indicating that the problem may be even more widespread than the data indicate. This is particularly true for secular Jewish women, of whom about one-third reported knowing someone who drank alcohol during pregnancy.

Having a spouse or partner who drinks alcohol increased the chances of a woman drinking alcohol. This was true for binge drinking as well. In addition, women who did not smoke also generally did not drink. It is possible that nonsmokers tend to maintain a healthier lifestyle overall than smokers.

A greater decrease during pregnancy in the number of drinking mothers was among women with children compared to the first-time mothers. This may be attributable to the lesser experience of the first-time mothers. Additionally among orthodox and ultra orthodox communities, who generally have more children, drinking alcohol is discouraged. This finding may also be related to the greater proportion of drinkers in the >25-year

age group compared to the younger group, as women who give birth at a younger age in Israel are usually nonsecular.

Results of the T-ACE test showed that 0.68% (26) of the women in our sample drank at dangerous levels. Using this number, we can deduce the number of children who are at risk of FASD. When our findings are extrapolated to the whole population of Israel, we estimate that at least 1020 children are born each year at high risk of FASD, which is similar to findings in the US. The large majority of women (74.9%) reported that they did not receive any guidance from a qualified professional regarding the damages of alcohol during pregnancy. This confirms our main assumption that Israeli women receive inadequate information about the dangers of alcohol consumption from medical professionals. This finding complements our earlier study showing that senior physicians and medical staff at child development centers and genetic institutes rarely detect or diagnose FASD, a well-known and well-described disorder in the literature.²⁰ Apparently, this lack of knowledge extends to physicians and other medical staff who attend to patients during pregnancy, both in the public and private sector.

CONCLUSIONS

Alcohol consumption during pregnancy is fairly common among women in Israel, with significant differences among ethnic groups. The risk is higher among secular and older women and women with first pregnancies. Only a minority of women receive adequate information regarding alcohol consumption from medical professionals during pregnancy surveillance. This finding combined with the high number of infants at risk of FASD according to our calculations points to an urgent need for better education of both medical professionals and the lay public to increase awareness of FASD in Israel.

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APPENDIX

This is a questionnaire about the habits of pregnant women. Please answer all the questions and select the most suitable answers. If you do not know, or cannot remember the answer, please indicate “do not know” or “not sure”.

Thank you for your cooperation!

| |
|---|
| 1. Age (in years) _____ |
| 2. Number of previous live births _____ |
| 3. Country of Birth _____ |
| 4. Religion: please indicate <input checked="" type="checkbox"/> <ul style="list-style-type: none"> a. <input type="checkbox"/> Jewish b. <input type="checkbox"/> Muslim c. <input type="checkbox"/> Christian d. Other: _____ |
| 5. I define myself as: <input checked="" type="checkbox"/> <ul style="list-style-type: none"> a. <input type="checkbox"/> Orthodox b. <input type="checkbox"/> Religious c. <input type="checkbox"/> Traditional d. <input type="checkbox"/> Secular e. Other: _____ |

| |
|---|
| <p>6. During my pregnancy, I was followed up by.. (You may indicate more than one answer) <input checked="" type="checkbox"/></p> <p>a. <input type="checkbox"/> A nurse in the family health care b. <input type="checkbox"/> Public health clinic c. <input type="checkbox"/> Private clinic d. Other: _____</p> |
| <p>7. During my pregnancy follow-up, I was updated on the following subjects: <input checked="" type="checkbox"/></p> <p>a. Diet: <input type="checkbox"/>Yes <input type="checkbox"/>No If yes, I talked about it with the <input type="checkbox"/>nurse <input type="checkbox"/>doctor /other: _____</p> <p>b. Vitamins and supplements: <input type="checkbox"/>Yes <input type="checkbox"/>No. If yes, I talked about it with the <input type="checkbox"/>nurse <input type="checkbox"/>doctor /other: _____</p> <p>c. Alcohol consumption: <input type="checkbox"/>Yes <input type="checkbox"/>No If yes, I talked about it with the <input type="checkbox"/>nurse <input type="checkbox"/>doctor /other: _____</p> <p>d. Physical exercise: <input type="checkbox"/>Yes <input type="checkbox"/>No. If yes, I talked about it with the <input type="checkbox"/>nurse <input type="checkbox"/>doctor /other: _____</p> <p>e. Smoking: <input type="checkbox"/>Yes <input type="checkbox"/>No. If yes, I talked about it with the <input type="checkbox"/>nurse <input type="checkbox"/>doctor /other: _____</p> |
| <p>8. In your opinion, which of the following statements is most accurate: <input checked="" type="checkbox"/></p> <p>a. <input type="checkbox"/> During pregnancy, one should not drink alcohol (wine, beer, hard liquor) at all. b. <input type="checkbox"/> During pregnancy, one can drink alcohol as much as before the pregnancy, with no special limitation. c. <input type="checkbox"/> During pregnancy one can drink a small amount of alcohol (up to 2 drinks per week) (<i>a drink is a glass of wine, a bottle of beer, of a shot of hard liquor</i>) d. <input type="checkbox"/> During pregnancy one can drink a medium amount of alcohol (3 to 7 drinks per week) (<i>a drink is a glass of wine, a bottle of beer, of a shot of hard liquor</i>) e. <input type="checkbox"/> During pregnancy one can drink a large amount of alcohol (more then 7 drinks per week) (<i>a drink is a glass of wine, a bottle of beer, of a shot of hard liquor</i>) f. <input type="checkbox"/> Not sure/ Do not know g. <input type="checkbox"/> Other:</p> |
| <p>Regarding smoking (indicate the answer that best describes your situation <input checked="" type="checkbox"/>)</p> <p>9. During the 3 months prior to pregnancy, how many cigarettes did you smoke on an average day?</p> <p>a. _____ cigarettes (_____ packages) b. <input type="checkbox"/> Less than one a day c. <input type="checkbox"/> I did not smoke d. <input type="checkbox"/> I do not know e. <input type="checkbox"/> I decline to answer</p> <p>10. During the last 3 months of pregnancy, how many cigarettes did you smoke on an average day? <input checked="" type="checkbox"/></p> <p>a. _____ cigarettes (_____ packages) b. <input type="checkbox"/> Less than one a day c. <input type="checkbox"/> I did not smoke d. <input type="checkbox"/> I do not know e. <input type="checkbox"/> I decline to answer</p> |

Regarding alcohol (indicate the answer that best describes your situation)

11. During the 3 months prior to pregnancy, how many drinks did you have per week?

(a drink is a glass of wine, a bottle of beer, of a shot of hard liquor)

- a. I did not drink
- b. Less than once a week
- c. 1-3 drinks per week
- d. 4-6 drinks per week
- e. 7-13 drinks per week
- f. More than 13 drinks per week
- g. I do not know
- h. I decline to answer

12. During the 3 months prior to pregnancy, Did you drink a large amount of alcohol (5 drinks or more) during one evening?

- a. I did not drink
- b. Maybe once
- c. Once or twice
- d. More than twice
- e. I do not remember/ Not sure

13. During the last 3 months of pregnancy, how many drinks did you drink per week?

- a. I did not drink
- b. Less than once a week
- c. 1-3 drinks per week
- d. 4-6 drinks per week
- e. 7-13 drinks per week
- f. More than 13 drinks per week
- g. I do not know
- h. I decline to answer

14. Circle YES or NO regarding the following sentences:

- a. Do you need more than 2 drinks to feel high? YES / NO
- b. Have people annoyed you by criticizing your drinking? YES / NO
- c. Have you ever felt you ought to **cut down** on your drinking? YES / NO
- d. Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover? YES/ NO

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|---|-------------|
| <p>15. Regarding daily habits: (not only during pregnancy) Circle the sentences that are true for you</p> | |
| a. I watch television | True/ False |
| b. I use the internet | True/ False |
| c. I listen to the radio | True/ False |
| d. My spouse drinks alcohol at home | True/ False |
| e. I go to the gynecologist every 1-2 years for a checkup. | True/ False |
| f. I go to the gynecologist only when I need to | True/ False |
| g. When I go out with friends we drink alcohol | True/ False |
| h. I go to my family doctor every 1-2 years for a checkup. | True/ False |
| i. I go to my family doctor only when I need to | True/ False |
| <p>16. Regarding your general knowledge: In Israel, how many pregnant women drink alcohol? <input checked="" type="checkbox"/></p> <p>a. <input type="checkbox"/> Most of the women don't drink alcohol at all. b. <input type="checkbox"/> The minority of the women drink alcohol from time to time c. <input type="checkbox"/> About half of the women drink alcohol from time to time d. <input type="checkbox"/> Most of the women drink alcohol from time to time e. <input type="checkbox"/> I'm not sure/I do not know</p> | |
| <p>17. Do you personally know a pregnant woman who drinks alcohol?</p> <p>YES / NO</p> | |
| <p>18. Do you personally know a pregnant woman who had 5 drinks or more on one evening?</p> <p>YES /NO</p> | |

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| <p>19. While you were pregnant, did you have an evening when you drank a large amount of alcohol (5 drinks or more)?</p> <p><i>(a drink is a glass of wine, a bottle of beer, of a shot of hard liquor)</i></p> <p>a. <input type="checkbox"/> I did not drink</p> <p>b. <input type="checkbox"/> Maybe once</p> <p>c. <input type="checkbox"/> Once or twice</p> <p>d. <input type="checkbox"/> More than twice</p> <p>e. <input type="checkbox"/> I do not remember/ Not sure</p> |
| <p>20. Birth weight (gr) _____</p> |
| <p>21. gestational age _____</p> |
| <p>22. Head circumflex (cm) _____</p> |
| <p>23. APGAR score (1 min) _____</p> |
| <p>24. APGAR score (5 min) _____</p> |