

# Socio-demographic and lifestyle factors related to unplanned pregnancies among a large cohort of pregnant women in the Netherlands

A dynamic cohort study

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# Background

- Worldwide approximately 87 million unplanned pregnancies occur each year(1)
- Important to define women at risk by defining prognostic factors
- Focus on these women in preconception health programs  
→ more cost effective
- Associated with, amongst others:
  - unhealthier lifestyle, inadequate prenatal care, deficient folic acid use, smoking, drug abuse, drinking, class III obesity, low birth weight, preterm birth, low level of education, ethnicity, religion (2-19)

# Objective

- The aim of this study was to gain insight into the potential factors related to unplanned pregnancies among a large cohort of low-risk pregnant women in the Netherlands

# Methods: design, participants

- Secondary analysis of data from DELIVER study(27)
  - Prospective dynamic cohort study
  - Multicenter
    - 20 midwifery practices
    - Pregnant women (adjusted response rate was 62%) were asked to fill in up to three questionnaires

# Methods: design, subjects

- In- and exclusion criteria
  - Women who filled in the first questionnaire (of three)
  - Women who answered the question '*Is your pregnancy planned and/or wanted?*'

# Methods, variables

The variables included in this secondary analysis were based on literature.

- Included variables:
  - Demographic characteristics
  - Health related lifestyle variables
  - The variable 'pregnancy intendedness' was dichotomized into planned and unplanned, due to that fact that unwanted rarely occurred.
- Excluded variables:
  - Pregnancy related data
  - Pregnancy outcomes

# Methods, analysis

- Descriptive analysis to gain insight into characteristics of the study population (table 1).
- Univariable regression analysis, single predicting value
- Multivariable backward logistic regression analysis:
  - Modelling the variable of interest with more accuracy
  - Variables from univariable analysis with a p-value < .20 included

# Results

- 6094 (99.8%)
- 17.7% unplanned pregnancies
- The final multivariable model is based on data from 5879 clients
  - 3.5% at least one missing value



# Results

Variable	OR	95% Confidence interval
Age (years)		
<20	11.2	5.2-24.3
20-24.9	2.7	2.1-3.5
25-29.9	1.4	1.1-1.7
30-34.9	1	Reference
≥35	1.1	0.9-1.4
Parity		
0	1.1	0.9-1.3
1	1	Reference
2	2.8	2.2-3.4
3	5.7	4.0-8.2
≥4	23.1	13.1-40.6
Partner		
Partner – cohabiting	1	Reference
Partner – living apart	4.2	2.9-6.3
No	6.6	4.1-10.6
Employment status		
Working	1	Reference
Not working	1.5	1.3-1.9
Student	3.5	2.2-5.5
Other	1.6	1.1-2.3
Region in the Netherlands		
North	1.1	0.8-1.4
East	1.4	1.1-1.7
South	1	Reference
West	1.5	1.1-1.9
Foreign descent		
Indigenous	1	Reference
1 <sup>st</sup> generation western	2.0	1.4-2.8
2 <sup>nd</sup> generation western	1.1	0.7-1.5
1 <sup>st</sup> generation non-western	1.2	0.9-1.6
2 <sup>nd</sup> generation non-western	1.0	0.7-1.5
Religion	1.4	1.2-1.7
Smoking	1.3	1.1-1.6
Using hard drugs	1.5	1.0-2.3 <sup>†</sup>
Variables removed: Paired gravidity and parity, BMI, The impression to have influence on once own health, Education level, Soft drugs, Alcohol.		
† Statistically significant, 1,010 before rounding.		

# Discussion

- Consensus with literature
  - Association with age (10,16,18-21)
  - Being unemployed (20) – low education/income (10,16,19,20)
  - Living alone, being single (18,20,21)
  - Multiparity (10,11,20)
  - Foreign descent (10,16,18,19,21)
    - Western descent vs non-western women (10,11,16,21)
  - Smoking behavior (10)
  - Religion (8,22)

# Discussion

- Secondary data-analysis, questions were not addressed for our specific study question
  - Missing data an possible relevant factors (eg contraceptives, abortion, recurrence of unplanned pregnancy)
- Study limitations
  - Defining pregnancy intendedness
  - Social desirability
- Bias
  - Terminated pregnancies

# Discussion

- Strength
  - Assessment of pregnancy intention occurred during pregnancy
  - Large population
    - Representative for the low-risk pregnant women living in The Netherlands regarding age and parity.
    - Overrepresentation of native Dutch women and high educated(26)

# Recommendations

- Increasing knowledge might prevent unplanned pregnancies(41)
  - Family planning
  - Chances of getting pregnant
  - Risks of unplanned pregnancy
  - Fertility
- Key figures
  - Secondary education
  - General practitioners

More research needs to be done focusing on the follow-up of unplanned pregnancies and the outcomes. These data might help to specify the midwifery care to the needs of unplanned pregnancies.

# Literature

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