



# **Epidemiological investigation to define the awareness of women on the hazards of smoking and drinking alcohol before and during pregnancy in Poland (2009)**

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## Background & Aims

- **The detrimental effects of smoking and drinking alcohol during pregnancy on the foetus and mother are well recognised worldwide; both medically and by the public at large. Such behaviours are frequently linked.**
- **The effects of drinking small amounts of alcohol occasionally, are however still debated and the problem of passive smoking is less well known by the general public.**
- **In order to define target areas for an educational campaign to limit such behaviour, this study aims to determine non-awareness areas & levels of at risk women in Poland on these issues.**
- **This is in keeping with the terms of the ‘Warsaw Declaration’ to remove health disparities in the EU countries by identifying suitable targets for action.**



# Warsaw Declaration

**The Polish Minister of Health, (Ms. Eva Kopacz) has twice presided over international scientific conferences on health disparity reduction between countries of Central, E and SE Europe with W Europe; arising from the initiative of International Agency for Research on Cancer (IARC). Two meetings of Health Ministers were held in Warsaw on this issue, (Nov '07 & Jan '09), aimed at negotiating an international agreement between countries concerned and the EC in order to obtain funds for developing a program to close the gap between Eastern & Western Europe.**

**The Declaration signed by the Ministers of Health of 12 former eastern block countries, (26.11.2007) aims to;**

- Increase of knowledge about the risk factors for premature death and, in particular, chronic diseases (cancer, cardiovascular disease, diabetes) in countries of Central and Eastern Europe**
- Development of a system to monitor changes in biomarkers of health and health determinants**
- Undertaking capacity building in many areas of health science in many parts of Europe.**



## Study design & Statistics

- Throughout Poland, 3,380 post-partum women from 840 hospitals were surveyed from obstetrics and gynaecology wards representative of the country's 16 administrative areas.
- Questionnaires were completed during one single 24 hr period and were treated strictly anonymously. The first one was based on the Pregnancy Risk Assessment Monitoring System (PRAMS) as recommended by the CDC (Centres for Disease Control and Prevention).
- An additional questionnaire was completed by doctors including clinical data from the pregnancy and birth record charts on the following: previous pregnancies and/or miscarriages, infant weight, length, sex, birth week, APGAR rating, multiple pregnancy, natural/Caesarian section, congenital problems and complications.
- Data were analysed statistically using the STATISTICA Statsoft system by cross tabulation, (contingency tables), using the chi-squared test of significance ( $P < 0.05$ ) and the strength of any association was assessed by Cramer's V.



# POLAND

## AREA

312 685 km<sup>2</sup>

## POPULATION (2009)

38.5 mln citizens

## ADMINISTRATIVE STRUCTURE

16 voivodships (provinces)

315 powiats (counties)





# Egs. of key questions posed by the questionnaire

## Smoking

- Have you ever smoked - 2 options
- Have you ever smoked within the last 2 years – 2 options
- If yes, how often have you smoked during this time – 5 options
- If yes, how many cigarettes did you smoke then – 5 options

Other questions relate to when the last attempt at stopping smoking was made, how many times was giving up attempted, how long did one actually not smoke and awareness of smoking & passive smoking harm.

## Alcohol consumption;

- Within the last 12 months how frequently did you drink alcoholic beverages - 5 options
- How frequently in the last 12 months did you drink the following/or more amounts of alcohol; 3x 0.5L beer or 600ml wine or 180ml spirits – 5 options
- When did you last drink alcohol – 2 options
- Are you aware of the detrimental effects of the following on your pregnancy and on yourself.

Options; Drinking small quantities of alcohol, Drinking large quantities of alcohol, Smoking cigarettes and Passive smoking



## Overall results for women smoking and pregnancy (in summary)

- Over half women studied smoked sometime in life 50.4%, (n=1653)
- Of which 62% did so in the last 2 years, (n=1024) & out of these 60% (n=615) smoked daily.
- Cigarette consumption in the group smoking for the last 2 years was;

<b>Cigarette packets smoked/month</b>	<b>Nos. women smokers % (n)</b>
> 20	18% (184)
13 - 20	23% (236)
5 - 12	21% (215)
2 - 4	15% (154)
1	24% (246)



## Overall results for women drinking alcohol and pregnancy (summary)

- Every second woman studied claimed that within the last year they drank alcoholic drinks. About 22% of women that consumed alcohol in the last year claimed that they drank more than 20g of pure alcohol at one time.

Alcohol consumption frequency	Nos. women	(%)
Never	1634	50.9
1/month	1265	39.4
2-4/month	265	8.3
2-3/week	44	1.4
>3/week	4	0.12

Amounts of alcohol (g) consumed in last year	Nos. women	(%)
1 - 20	1230	74.7
21 - 40	364	22.1
> 41	53	3.2

- If one takes into account the frequency of drinking; 3 beers (0.5l), 600ml wine or 180ml vodka during the year before birth then around 9% of women declared that they did this less than once a month, whereas 4% said they drank more.
- Around 15% of women admitted to drinking alcohol during the actual pregnancy.





# AWARENESS OF DRINKING SMALL ALCOHOL AMOUNTS & SPECIFIC SMOKING BEHAVIOUR

- Women unaware of small - scale drinking hazards still continued smoking (15%) and didn't limit smoking (51%) compared to those aware about alcohol; 4% & 24% respectively.
- (Cramers  $V = 0.19$  &  $0.25$  respectively)

(A) Awareness of small amounts of alcohol	Hasn't smoked since;			
	Still smokes	Ceased during pregnancy	Ceased before pregnancy	Never smoked
No	15.45%	18.59%	25.13%	40.84%
Yes	4.03%	11.64%	31.12%	53.21%

(B) Awareness of small amounts of alkohol	Smoking reduced if/when		
	Unchanged	Reduced in pregnancy	Reduced before pregnancy
No	50.86%	19.83%	29.31%
Yes	24.14%	22.53%	53.33%



# AWARENESS OF DRINKING LARGE ALCOHOL AMOUNTS & SPECIFIC SMOKING BEHAVIOUR

The more cigarettes smoked (>13 packets/month), the greater (31%) was the unawareness of high alcohol consumption danger compared to women smoking less.

(Cramers V = 0.24)

About 1:3 women smokers unaware of high alcohol consumption effects are also unaware of smoking hazards but conversely only about 1:100 who know about high alcohol dangers are unaware of the perils of smoking. (NB. 54% & 5% of these women respectively were also unaware about passive smoking)

(Cramers V = 0.4)

Awareness of large amounts of alcohol	How many packets currently smoked			
	1	2-4	5-12	13-20
No	16.67%	5.56%	33.33%	30.56%
Yes	18.06%	24.52%	35.48%	12.9%

Awareness of large amounts of alcohol	Awareness of smoking harm	
	No	Yes
No	34.07%	65.93%
Yes	1.38%	98.62%



# AWARENESS OF PASSIVE SMOKING HARM (1)

**7% of women who know smoking is harmful are unaware about passive smoking. Whereas 39% of women who don't know that smoking is harmful are also unaware about passive smoking and 23% continue to smoke.**

**(Cramers  $V = 0.21$  &  $0.23$  respectively)**

Awareness of smoking harm	Awareness of passive smoking harm	
	No	Yes
No	39.22%	60.78%
Yes	6.75%	93.25%

Awareness of passive smoking harm	Hasn't smoked since;			
	Still smokes	Ceased during pregnancy	Ceased before pregnancy	Never smoked
No	22.65%	16.24%	20.94%	40.17%
Yes	4.03%	12.21%	31.15%	52.6%



## AWARENESS OF PASSIVE SMOKING HARM (2)

In contrast to the previous slide those women aware about passive smoking, more frequently limit their smoking (75%; ie. 52.95 + 22.76) compared to those that are unaware (44%; ie. 25.53 + 18.09).

This is consistent with women tending to smoke more if they are also unaware of the dangers of passive smoking.

(Cramers  $V = 0.27$  &  $0.29$  respectively)

Awareness of passive smoking harm	Smoking reduced when		
	Unchanged	Reduced in pregnancy	Reduced before pregnancy
No	56.38%	18.09%	25.53%
Yes	24.29%	22.76%	52.95%

Awareness of passive smoking harm	How many packets currently smoked/month			
	1	2-4	5-12	13-20
No	8.51%	19.15%	25.53%	31.91%
Yes	20.83%	21.53%	38.19%	11.11%



## Awareness of small scale drinking vs when drinking last occurred

Women who declared awareness/unawareness of the harmful effects of drinking small amounts of alcohol more rarely claimed that they drank during pregnancy.

More women aware from this same group however declare that they drink bigger amounts of alcohol (from 21g) compared to women unaware of problems with small scale drinking.

Awareness of small amounts of alcohol	Hasn't drunk since;		
	1 year	Last drank in pregnancy	Last drank before pregnancy
No	60.3%	27.34%	12.36%
Yes	65.45%	14.39%	20.16%

Awareness of small amounts of alcohol	How much alcohol recently		
	1 - 20 g	21 - 40 g	>41 g
No	87.8%	8.13%	4.07%
Yes	77.94%	16.17%	5.89%



# Awareness of amounts drunk causing harm and relation to awareness of harm due to smoking

**20% of women are unaware of the harm of small scale drinking but 80% are aware of large scale drinking (80%).**

**(Cramers V = 0.22)**

Awareness of small amounts of alcohol	Awareness of large amounts of alcohol	
	No	Yes
No	20.05%	79.95%
yes	3.86%	96.14%

**Around 61% and 41% of women who are unaware of the respective harm of smoking and passive smoking in pregnancy also claim that they don't know about the harm of drinking large amounts of alcohol ; (*data not shown*).**

**(Cramers V = 0.4 & 0.39 respectively)**



## Conclusions

- **Areas of awareness and unawareness of smoking and drinking behaviour were highlighted so that a detrimental lifestyle can be targeted for improvement in order to improve quality of life (for both mother & offspring) and also decrease the public health burden.**
- **The benefits of the Warsaw declaration can thus begin to draw EU resources to the target areas.**
- **An educational campaign will be formulated for women & young girls together with training for clinical/healthcare staff to not only raise awareness but encourage and monitor healthy behaviour tailored to the individual (ie. to provide support).**
- **Further studies are planned to assess impact of this educational campaign planned for the future.**