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# Euro-scip-III-Survey: An International Comparison of Smoking Prevalence in Pregnant Women

Based on a Pooled Analysis of Data Collected in Six European Countries

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The Euro-scip-III-Survey took place from March 1<sup>st</sup>, 2005 until April 30, 2006 in Belgium, Bulgaria, Germany, Greece, Ireland, and Portugal (six Euro-scip-III Partner Countries). The purpose of the Survey within the Project was to estimate smoking prevalence at different times during pregnancy. Each participating national centre had made a commitment to collect 200 completed standardised questionnaires.

Finally, 1,253 women, either pregnant or in maternity, were recruited for the Survey in the six countries.

Each Partner has published the national results of the Survey individually. This Report attempts to present a synopsis of the pooled international data. All National Status Reports including the national results of Survey may be retrieved from the Project's homepage at [www.bips-uni-bremen.de/euro-scip](http://www.bips-uni-bremen.de/euro-scip).

## 1. Methods

The Group developed a standardised English questionnaire to be used in six countries. The questionnaire was translated and applied by interviewers for face to face interviews. Depending on the country, the interviewers were nurses, midwives, or doctors. The Survey aimed at all pregnant women in their third trimester or after delivery at the maternity, regardless of their smoking status (target group).

Each participating national centre intended to collect 200 completed standardised questionnaires. Response rates cannot be calculated as the questionnaires were handed out by intermediate personnel and the total number of questionnaires handed out to women could not be traced.

All questionnaire data were entered into a MS Access data file and then analysed by country and by a pooled analysis, using Statistical Analysis Software (SAS).

For the present Pooled Report, 1,253 women either in their third trimester of pregnancy or in the days after delivery were asked about their past and present



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behaviour regarding smoking/non-smoking and about their second hand smoking situation at home and at work.

The results are presented in the sequence of questions asked in the Questionnaire.



## 2. Results

The first question checked eligibility. The target women had to be in the third trimester of pregnancy or could have been contacted after delivery at the maternity.

The minimum requirement of 200 women either in their third trimester of pregnancy or immediately after delivery was met by all but one participating countries (Bulgaria: n= 199; Table 1). The striking variance – almost all Belgian cases interviewed at the maternity, while most Bulgarian women gave their interview prior to delivery – reflects the access to women chosen by each Partner.

As we believe the short time lag of the interview (either before delivery or immediately after giving birth) does not have any effect on the outcome of the reported smoking prevalence, it was decided to make women eligible for the study at either point in time.

Table 1:

| Timing of interview (third trimester or after delivery), by country |         |          |         |        |         |          |       |
|---|---------|----------|---------|--------|---------|----------|-------|
|   | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
| Third trimester   | 1       | 194      | 122     | 147    | 128     | 100      | 692   |
| After delivery  | 200     | 5        | 121     | 53     | 72      | 110      | 561   |
| Total   | 201     | 199      | 243     | 200    | 200     | 210      | 1,253 |
| Percent interviewed in third trimester                              | 0.5%    | 97.5%    | 50.2%   | 73.5%  | 64.0%   | 47.6%    | 55.2% |

The second question inquired about the time when the women had discovered her pregnancy. The time of discovery should have an effect on when attempts to quit or to reduce smoking are made. The earlier a smoking woman finds out about her pregnancy, the earlier she might consider reducing her smoking.



Table 2:

| Time when pregnancy was discovered, by country         |              |              |              |              |              |              |              |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|  | Belgium      | Bulgaria     | Germany      | Greece       | Ireland      | Portugal     | Total        |
| Missing information                                    | 0            | 0            | 0            | 1            | 0            | 0            | 1            |
| First trimester (1.-13.week)                           | 196          | 197          | 232          | 194          | 156          | 195          | 1,170        |
| Second trimester (14.-26.week)                         | 4            | 2            | 8            | 2            | 33           | 12           | 61           |
| Third trimester (>26.week)                             | 1            | 0            | 1            | 0            | 11           | 1            | 14           |
| Do not remember  | 0            | 0            | 1            | 0            | 0            | 1            | 2            |
| No answer  | 0            | 0            | 1            | 3            | 0            | 1            | 5            |
| <b>Total</b>   | <b>201</b>   | <b>199</b>   | <b>243</b>   | <b>200</b>   | <b>200</b>   | <b>210</b>   | <b>1,253</b> |
|  |              |              |              |              |              |              |              |
| <b>Percent discovered pregnancy in first trimester</b> | <b>97.5%</b> | <b>99.0%</b> | <b>95.5%</b> | <b>97.0%</b> | <b>78.0%</b> | <b>92.9%</b> | <b>93.4%</b> |

There was a low prevalence of Irish women reporting having discovered pregnancy during the first trimester (78.0%, mean: 93.4%). As the Irish Partner stated, these findings may have to do with the type of hospitals that were approached for the Survey: There may have been an over-sampling of women in the lower socio-economic class in the Irish sample perceiving or actually facing higher obstacles to obtain medical attention.

## Smoking prevalence

The questions on smoking prevalence showed Ireland again in a special situation compared with the other countries: 80% of Irish women reported a positive smoking history, while in Portugal or Greece, about one third of the interviewed women reported having ever smoked (Table 4).


**Table 3: Prevalence of smoking at the time when pregnancy was detected, by country**

|  | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
|--|---------|----------|---------|--------|---------|----------|-------|
| Smoking when pregnancy was detected (N)                                    | 45      | 66       | 94      | 60     | 133     | 54       | 452   |
| Prevalence of smoking when pregnancy was detected, percent of total sample | 22.4%   | 33.2%    | 38.7%   | 30.0%  | 66.5%   | 25.7%    | 36.1% |
| Total sample   | 201     | 199      | 243     | 200    | 200     | 210      | 1,253 |

About one third of the women smoked at the time when pregnancy was detected. Smoking prevalence estimates were particularly high in Ireland (66.5%).

**Table 4: Lifetime prevalence of smoking in pregnant women**

| Lifetime prevalence of smoking, by country                            |              |               |              |             |              |               |            |
|---|--------------|---------------|--------------|-------------|--------------|---------------|------------|
| Question "did you ever smoke?"  | Belgium<br>N | Bulgaria<br>N | Germany<br>N | Greece<br>N | Ireland<br>N | Portugal<br>N | Total<br>N |
| Missing   | 1            | 0             | 0            | 1           | 0            | 1             | 3          |
| Yes   | 79           | 108           | 154          | 70          | 160          | 81            | 652        |
| No  | 121          | 91            | 89           | 122         | 40           | 128           | 591        |
| Unsure  | 0            | 0             | 0            | 4           | 0            | 0             | 4          |
| No answer   | 0            | 0             | 0            | 3           | 0            | 0             | 3          |
| Total   | 201          | 199           | 243          | 200         | 200          | 210           | 1253       |
|   |              |               |              |             |              |               |            |
| Lifetime prevalence ever smokers (of total sample excluding missings) | 39.5%        | 54.3%         | 63.4%        | 35.2%       | 80.0%        | 38.8%         | 52.2%      |

Most of the interviewed women (52.2%) had a smoking history (Table 4). Again, there was a striking variance: The lowest lifetime prevalence of smoking was



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measured in Greece (35.2%), while in Ireland the great majority reported having smoked at some time during their lives (80.0%).


**Table 5: Smoking history of pregnant women**
**Question: “Are you an ex-smoker, a present smoker or a never-smoker?”**

| Smoking status at the time of delivery, by country                                 |         |          |         |        |         |          |       |
|--|---------|----------|---------|--------|---------|----------|-------|
|  | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
|  | N       | N        | N       | N      | N       | N        | N     |
| Missing  | 1       | 0        | 1       | 3      | 2       | 0        | 7     |
| Never smoking  | 121     | 91       | 89      | 129    | 40      | 128      | 598   |
| Present smoker   | 32      | 14       | 41      | 23     | 104     | 30       | 244   |
| Ex-smoker  | 47      | 94       | 112     | 45     | 54      | 52       | 404   |
| Total  | 201     | 199      | 243     | 200    | 200     | 210      | 1,253 |
|  |         |          |         |        |         |          |       |
| Prevalence of smoking at the time of delivery (of total sample excluding missings) | 16.0%   | 7.0%     | 16.9%   | 11.7%  | 52.5%   | 14.3%    | 19.6% |

The range of present smokers at the time of the interview (timing: close to delivery) was between 7.0% and 16.9% for five countries, while for Ireland – again – a striking 52.5% point prevalence of present smoking was measured (Table 5).

Most of the ex-smokers had quit smoking before they became pregnant (47.4% in the pooled sample). In Greece, this was not the case; most ex-smokers had quit smoking during the present pregnancy.

**Table 6:**

| Ex-smokers only: “when did you quit smoking?”, by country |         |          |         |        |         |          |       |
|---|---------|----------|---------|--------|---------|----------|-------|
|   | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
| N (ex-smokers only)                                       | 47      | 94       | 112     | 45     | 54      | 52       | 403   |
| Missing   | 0       | 0        | 0       | 1      | 0       | 0        | 1     |
|   |         |          |         |        |         |          |       |
| Before finding out about this pregnancy [%]               | 72.3%   | 44.7%    | 50.9%   | 15.6%  | 46.3%   | 51.9%    | 47.4% |
| At the time finding out about this pregnancy [%]          | 14.9%   | 46.8%    | 32.1%   | 31.1%  | 31.5%   | 38.5%    | 34.2% |
| During this pregnancy [%]                                 | 12.8%   | 8.5%     | 15.2%   | 51.1%  | 22.2%   | 7.7%     | 17.4% |



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|                            |        |        |        |        |        |        |        |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|
| <b>Do not remember [%]</b> | 0.0%   | 0.0%   | 0.9%   | 0.0%   | 0.0%   | 0.0%   | 0.2%   |
| <b>No answer [%]</b>       | 0.0%   | 0.0%   | 0.9%   | 0.0%   | 0.0%   | 1.9%   | 0.5%   |
| <b>Total [%]</b>           | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

To measure the prevalence at the time when pregnancy was discovered, the interview-question raised to present smokers was: “How many cigarettes did you smoke per day before you found out about this pregnancy?” (Table 7).

Ex-smokers had been excluded from this analysis as they would divide into two subgroups: Those who became ex-smokers prior to this pregnancy and those that stopped smoking during pregnancy. Our interest focused on present smokers to measure the trend of number of cigarettes smoked during pregnancy.

There was a wide range concerning the amount of cigarettes smoked, the maximum reaching 20 cigarettes per day in Portugal to 100 per day in Belgium. The median showed a range from 15 cigarettes per day in Belgium to 25 in Greece and Ireland (total median: 20.0). In Ireland, one woman had reported “no smoking” at the beginning of pregnancy while at the time of delivery she reported to be a smoker.

Table 7:

| Daily consumption of cigarettes smoked before finding out about this pregnancy |         |          |         |        |         |          |       |
|--|---------|----------|---------|--------|---------|----------|-------|
|  | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
| <b>N (smokers only)</b>  | 32      | 14       | 41      | 23     | 104     | 29       | 241   |
| <b>Mean</b>  | 18.5    | 17.9     | 21.7    | 25.5   | 25.6    | 17.7     | 22.6  |
| <b>Maximum</b>   | 100     | 25       | 50      | 50     | 50      | 30       | 100   |
| <b>Minimum</b>   | 6       | 7        | 10      | 15     | 0       | 3        | 0     |
| <b>Median</b>  | 15      | 20       | 20      | 25     | 25      | 20       | 20    |

The smoking prevalence at the time of delivery was measured by asking present smokers: “How many cigarettes did you smoke per day during the week before the birth of your baby?” (“last week”, if interview took place during third trimester; Table 8).



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The present smokers smoked 0 to 40 cigarettes per day (median 7.0). Compared with the time before noticing pregnancy, this is a reduction of 13 cigarettes during pregnancy per day.



Table 8:

| Daily consumption of cigarettes during the week before the birth |         |          |         |        |         |          |       |
|--|---------|----------|---------|--------|---------|----------|-------|
|  | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
| <b>N (smokers only)</b>  | 32      | 14       | 41      | 23     | 101     | 28       | 239   |
| <b>Mean</b>  | 9.3     | 2.9      | 10.3    | 6.6    | 11      | 5.4      | 9.1   |
| <b>Maximum</b>   | 25      | 5        | 30      | 10     | 40      | 20       | 40    |
| <b>Minimum</b>   | 0       | 1        | 1       | 4      | 2       | 1        | 0     |
| <b>Median</b>  | 10      | 2        | 8       | 7      | 10      | 4.5      | 7     |

The majority of women indicated that they had tried to reduce the number of cigarettes smoked during pregnancy (88.9%). The least number of attempts was made by Irish smokers (82.7%), while all Bulgarian and Greek smokers reported attempts to reduce their smoking during pregnancy (Table 9).

Table 9:

| Present smokers: tried to reduce during pregnancy       |         |          |         |        |         |          |       |
|---|---------|----------|---------|--------|---------|----------|-------|
|   | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
| <b>N (present smokers)</b>                              | 32      | 14       | 41      | 23     | 104     | 29       | 243   |
| <b>Percent tried to reduce smoking during pregnancy</b> | 96.9%   | 100.0%   | 85.4%   | 100.0% | 82.7%   | 93.1%    | 88.9% |

Few of the present smokers (21.4%) had tried to quit smoking during the three months before they became pregnant or noticed their pregnancy. No one among the Bulgarian smokers had made an effort to quit prior to noticing pregnancy, while 36.5% of the smoking Irish mothers reported attempts to quit (Table 10). It is not known how many of the attempts were made in conjunction with a woman's / couple's decision to have a planned child.



Table 10:

| Present smokers: efforts to quit before pregnancy  |         |          |         |        |         |          |       |
|--|---------|----------|---------|--------|---------|----------|-------|
|  | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
| <b>N<br/>(present smokers)</b>   | 32      | 14       | 41      | 23     | 104     | 29       | 243   |
| <b>Percent tried to quit<br/>before pregnancy<br/>(&gt; 3 months prior to<br/>detecting pregnancy)</b> | 12.5%   | 0.0%     | 7.3%    | 17.4%  | 36.5%   | 10.3%    | 21.4% |

## Passive smoking

In the pooled analysis, an important fraction (34.4%) of the pregnant women was exposed to passive smoking at home. Stratified by smoking status at the time of the interview, present smokers were at home much more exposed to passive smoke (67.6%), as compared with ex-smokers (29.5%), or never smokers (14.2%). With the exception of Greece and Portugal, it was the present smokers who were the most exposed among the three defined groups of smokers.

The proportion of either being exposed at home or at work was about equal: About one third was exposed at home or at work (those not working excluded from denominator). Combining the two exposure sites and measuring the prevalence for all women in the total sample, about half reported exposure to passive smoke. These exposure figures are high and should be a target for future preventive efforts.

Passive smoking exposure was investigated by location of exposure (at home or at work in both locations; Tables 11–17: Exposure to passive smoke at home (Question 10), at work (Question 11), or both.

There is a striking discrepancy in the proportions on where passive smoke exposure is more prevalent. While in Ireland, the more dominant location of exposure is at home (51.5% reported to be exposed at home while only 9.9 % of women working reported being exposed at work), the situation is the inverse in Greece: Greek mothers have the highest proportion of those confirming passive smoking exposure at work exposure (63.4%), the work location being more



dominant than at home (41.5%). This may reflect less stringent efforts in Greece at the work site to reduce indoor air pollution by smoking. It may well be that Ireland's anti-smoking regulations are more enforced and efficient than in Greece.

**Table 11: Exposure to passive smoke during third trimester: 6 pooled countries**

Percentages for exposure at work are calculated for working women only. Percentages for combined exposure at home and at work are calculated for all women.

| Total N | 6 pooled countries                  | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|---------|-------------------------------------|-------------------|--------------------|---------------|-----------|
| 431     | yes, at home                        | 24.2%             | 67.6%              | 29.5%         | 34.4%     |
| 368     | yes, at work (non working excluded) | 31.4%             | 45.0%              | 37.8%         | 36.0%     |
| 622     | yes, at home or at work             | 39.8%             | 73.4%              | 49.8%         | 49.6%     |
| 1253    | total sample                        |                   |                    |               |           |
| 68      | <b>proportion not working:</b>      | 18.4%             |                    |               |           |

**Table 12: Exposure to passive smoke: Belgium**

| Total N | Belgium                             | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|---------|-------------------------------------|-------------------|--------------------|---------------|-----------|
| 38      | yes, at home                        | 8.3%              | 71.9%              | 10.6%         | 18.9%     |
| 28      | yes, at work (non working excluded) | 13.4%             | 50.0%              | 26.5%         | 13.9%     |
| 58      | yes, at home or at work             | 17.4%             | 75.0%              | 27.7%         | 28.9%     |
| 201     | Belgian sample                      |                   |                    |               |           |
| 68      | <b>proportion not working:</b>      | 33.8%             |                    |               |           |

**Table 13: Exposure to passive smoke: Bulgaria**

| Total N | Bulgaria                            | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|---------|-------------------------------------|-------------------|--------------------|---------------|-----------|
| 53      | yes, at home                        | 15.4%             | 57.1%              | 33.0%         | 26.6%     |
| 52      | yes, at work (non working excluded) | 12.1%             | 64.3%              | 34.4%         | 26.3%     |
| 78      | yes, at home or at work             | 22.0%             | 85.7%              | 48.9%         | 39.2%     |



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|     |                                |      |
|-----|--------------------------------|------|
| 199 | Bulgarian sample               |      |
| 1   | <b>proportion not working:</b> | 0.5% |


**Table 14: Exposure to passive smoke: Germany**

| Total N | Germany                                | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|---------|--|-------------------|--------------------|---------------|-----------|
| 70      | yes, at home                           | 18.0%             | 73.2%              | 21.4%         | 28.8%     |
| 75      | yes, at work<br>(non working excluded) | 27.6%             | 80.0%              | 32.6%         | 37.7%     |
| 112     | yes, at home or at work                | 34.8%             | 85.4%              | 41.1%         | 46.1%     |
| 243     | German sample                          |                   |                    |               |           |
| 44      | <b>proportion not working:</b>         | 18.1%             |                    |               |           |

**Table 15: Exposure to passive smoke: Greece**

| Total N | Greece                                 | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|---------|--|-------------------|--------------------|---------------|-----------|
| 83      | yes, at home                           | 38.8%             | 95.7%              | 22.2%         | 41.5%     |
| 118     | yes, at work<br>(non working excluded) | 53.8%             | 78.3%              | 79.1%         | 63.4%     |
| 141     | yes, at home or at work                | 62.0%             | 95.7%              | 80.0%         | 70.5%     |
| 200     | Greek sample                           |                   |                    |               |           |
| 14      | <b>proportion not working:</b>         | 7.0%              |                    |               |           |

**Table 16: Exposure to passive smoke: Ireland**

| Total N | Ireland                                | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|---------|--|-------------------|--------------------|---------------|-----------|
| 103     | yes, at home                           | 47.5%             | 57.7%              | 42.6%         | 51.5%     |
| 13      | yes, at work (non<br>working excluded) | 12.5%             | 13.3%              | 2.6%          | 9.9%      |
| 105     | yes, at home or at work                | 47.5%             | 58.7%              | 44.4%         | 52.5%     |
| 200     | Irish sample                           |                   |                    |               |           |
| 69      | <b>proportion not working:</b>         | 34.5%             |                    |               |           |

**Table 17: Exposure to passive smoke: Portugal**

| Total N | Portugal                               | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|---------|--|-------------------|--------------------|---------------|-----------|
| 84      | yes, at home                           | 28.1%             | 73.3%              | 50.0%         | 40.0%     |
| 82      | yes, at work (non<br>working excluded) | 42.0%             | 54.5%              | 56.1%         | 46.9%     |



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|     |                                |       |       |       |       |
|-----|--------------------------------|-------|-------|-------|-------|
| 128 | yes, at home or at work        | 52.3% | 83.3% | 69.2% | 61.0% |
| 210 | Portuguese sample              |       |       |       |       |
| 35  | <b>proportion not working:</b> | 16.7% |       |       |       |

### Age of interviewed mothers

The interviewed women were at the age of 14 to 44 years (median 31). Comparing the median by country, there were striking similarities: The youngest population was interviewed in Greece Ireland and Portugal, with a median of 28 years, while women in Germany had a median of 31 years.

The number of births at the time of the interview was not investigated, so it is not known how many first deliveries were in the national samples.

The subgroup of present smokers in the pooled group was younger (median 27) than the never smokers (median 33) and the ex-smokers (median 32.5).

**Table 18: Age of pregnant women, by country**

|                | Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
|----------------|---------|----------|---------|--------|---------|----------|-------|
| <b>N</b>       | 201     | 199      | 243     | 199    | 199     | 210      | 1,251 |
| <b>Mean</b>    | 30.2    | 29       | 30.9    | 27.9   | 29.6    | 30.3     | 29.7  |
| <b>Maximum</b> | 42      | 43       | 44      | 43     | 44      | 44       | 44    |
| <b>Minimum</b> | 14      | 22       | 15      | 18     | 20      | 17       | 14    |
| <b>Median</b>  | 30      | 29       | 31      | 28     | 28      | 30       | 30    |

**Table 19: Smoking Status by years of schooling in pregnant women, pooled**

| Years of schooling | never smoking [%] | present smoker [%] | ex-smoker [%] | total [%] |
|--------------------|-------------------|--------------------|---------------|-----------|
| <9 years           | 9.1%              | 14.0%              | 5.0%          | 8.7%      |
| 9–10 years         | 12.2%             | 32.6%              | 22.1%         | 19.4%     |
| 11–12 years        | 29.9%             | 33.1%              | 25.9%         | 29.2%     |
| 13 + years         | 48.8%             | 20.2%              | 47.0%         | 42.6%     |
| <b>total</b>       | 100.0%            | 100.0%             | 100.0%        | 100.0%    |



There was a strong gradient for smoking status by years of schooling: Women with less than nine years were more likely to be smokers at the time of the interview (31.5%) versus 9.3% among those with 13 or more years at school reported to be smokers (Table 20). Women in the group with the lowest number of school years (< years) represented 8.7% of the total sample, while this group accounted for 14.0% among the group of smokers (Table 19).

This corresponds well with other findings about higher smoking prevalences among members of lower social class.

**Table 20: Years of schooling, by smoking status and country [%]**

**Part 1**

| Years of schooling | Belgium |         |       |       | Bulgaria |         |       |       | Germany |         |       |       | Greece |         |       |       |
|--------------------|---------|---------|-------|-------|----------|---------|-------|-------|---------|---------|-------|-------|--------|---------|-------|-------|
|                    | never   | present | ex-   | total | never    | present | ex-   | total | never   | present | ex-   | total | never  | present | ex-   | total |
| <9 years           | 75.0%   | 25.0%   | 0.0%  | 100%  | -        | -       | -     | -     | 33.3%   | 41.7%   | 25.0% | 100%  | -      | -       | -     | -     |
| 9-10 years         | 36.4%   | 36.4%   | 27.3% | 100%  | -        | -       | -     | -     | 28.3%   | 22.0%   | 49.6% | 100%  | 100%   | 0.0%    | 0.0%  | 100%  |
| 11-12 years        | 64.6%   | 18.5%   | 16.9% | 100%  | 25.7%    | 20.0%   | 54.3% | 100%  | 31.8%   | 9.1%    | 59.1% | 100%  | 69.0%  | 11.9%   | 19.0% | 100%  |
| 13 + years         | 61.9%   | 9.5%    | 28.6% | 100%  | 50.0%    | 4.3%    | 45.7% | 100%  | 50.6%   | 7.6%    | 41.8% | 100%  | 58.8%  | 11.8%   | 29.4% | 100%  |
| <b>Total</b>       | 60.5%   | 16.0%   | 23.5% | 100%  | 45.7%    | 7.0%    | 47.2% | 100%  | 36.3%   | 17.1%   | 46.7% | 100%  | 65.6%  | 11.8%   | 22.6% | 100%  |

**Part 2**

| Years of schooling | Ireland |         |           |       | Portugal |         |       |       | Total |         |       |       |
|--------------------|---------|---------|-----------|-------|----------|---------|-------|-------|-------|---------|-------|-------|
|                    | never   | present | ex-smoker | total | never    | present | ex-   | total | never | present | ex-   | total |
| <9 years           | 9.5%    | 66.7%   | 23.8%     | 100%  | 62.7%    | 19.4%   | 17.9% | 100%  | 50.0% | 31.5%   | 18.5% | 100%  |
| 9-10 years         | 13.6%   | 67.8%   | 18.6%     | 100%  | 61.3%    | 9.7%    | 29.0% | 100%  | 30.0% | 32.9%   | 37.1% | 100%  |

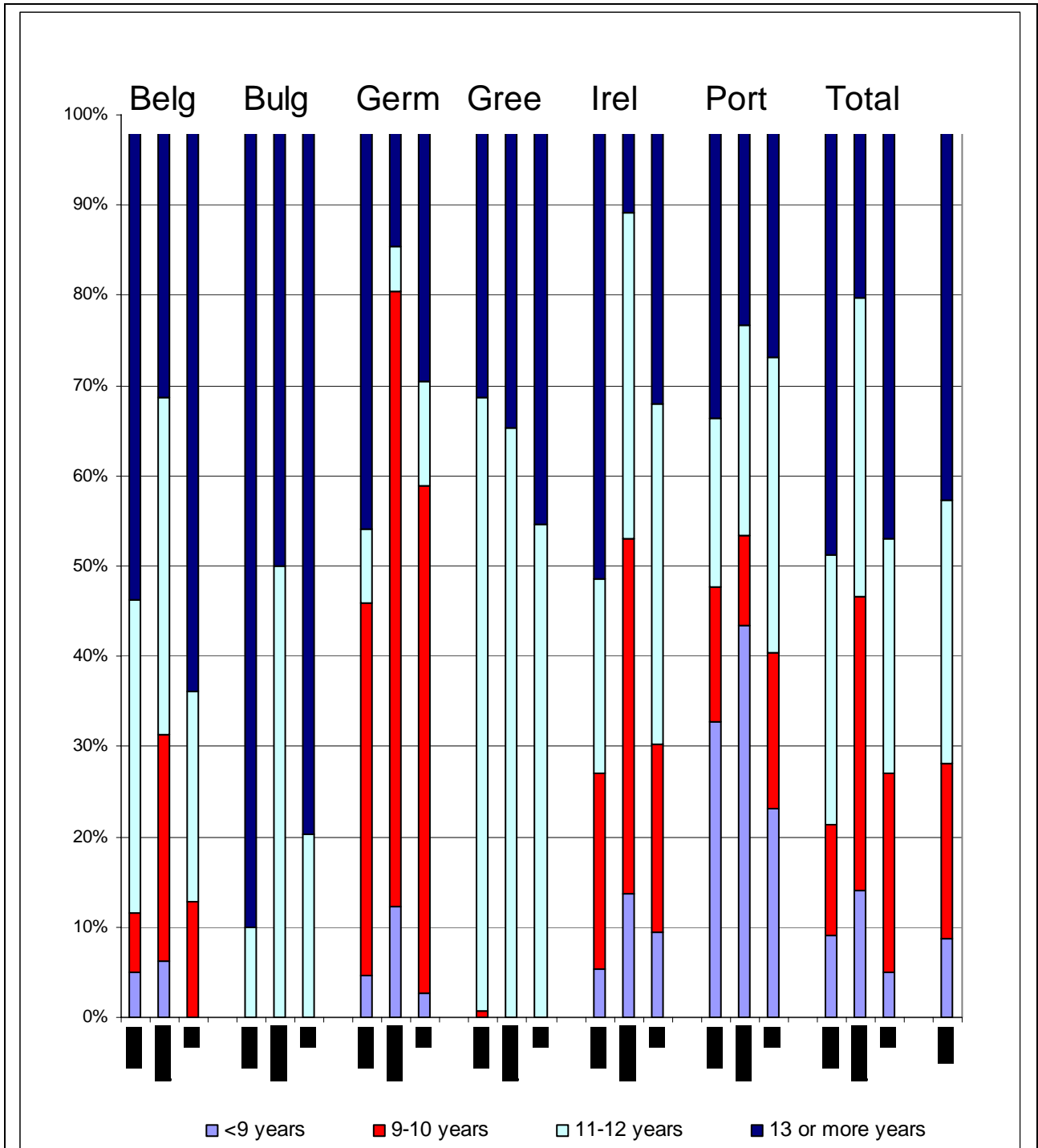


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| continued          | Ireland |         |           |       | Portugal |         |       |       | Total |         |       |       |
|--------------------|---------|---------|-----------|-------|----------|---------|-------|-------|-------|---------|-------|-------|
| Years of schooling | never   | present | ex-smoker | total | never    | present | ex-   | total | never | present | ex-   | total |
| 11-12 years        | 12.3%   | 56.9%   | 30.8%     | 100%  | 50.0%    | 14.6%   | 35.4% | 100%  | 49.0% | 22.2%   | 28.8% | 100%  |
| 13 + years         | 40.4%   | 23.4%   | 36.2%     | 100%  | 67.2%    | 10.9%   | 21.9% | 100%  | 54.8% | 9.3%    | 35.9% | 100%  |
| Total              | 19.3%   | 53.1%   | 27.6%     | 100%  | 61.0%    | 14.3%   | 24.8% | 100%  | 47.9% | 19.6%   | 32.5% | 100%  |



**Figure 1:**

**Years of schooling [%], by smoking status (never smoker, present smoker at time of delivery/interview and ex-smokers; by country**



The majority of the interviewed women had spent 13 and more years in school (42.6%, Table 19 and Figure 1).

The level of school education reported in the sample seems to be rather high: especially in Bulgaria, Germany, and Greece the women reported many school years. This may reflect some bias in recruiting women for the interview. In Greece, the Survey was done in private maternity clinics, which may explain the findings. In Bulgaria, the considerable high educational status of the pregnant women on study can be explained by the higher education level of women living in the capital (Sofia) where the survey was done in comparison with the whole country and especially by the fact that those pregnant women who were included in the sample were attending the "School for Pregnant women" in order to get health information about their pregnancy are supposed to have higher education as well.



It may be estimated that smoking prevalence in both countries would have been higher if the sample had not been biased towards the better educated pregnant women.

For the Irish group, the opposite may be true; there are some hints that women in the sample were less educated and heavier smokers than the national average.

## Discussion

The original goal of the Euro-scip-III-Survey was to measure smoking prevalence at different points in time during pregnancy to get smoking prevalence estimates for each pregnancy trimester separately. In this Survey, this was done once in a cross-sectional approach, the 12 months funding period was too short to approach a cohort of women several times during their pregnancies to get information of a changing smoking behaviour during pregnancy. It was considered logistically impossible to build up a cohort of women entering the cohort during the first trimester of pregnancy and being re-interviewed during their third trimester. It was thus decided to interview women in the third trimester only and ask them about their smoking behaviour before and during pregnancy until the time of delivery. The women were



retrospectively asked about their behaviour regarding smoking/non-smoking and to their second hand smoking situation at home and work. Answers were given to smoking/non-smoking habits before pregnancy, in the first and in the third trimester. Trends were calculated by how much smoking women reduce their amount smoked.

The pooled analysis shows that about half of the women interviewed had smoked at some time during their lives (52.2%), while 47.3% reported they had never smoked. The proportion of ever-smokers is slightly bigger in our sample than national figures of the Partner States indicate, e.g., for Greece it is 29% while the Greek Survey measured 35%.

For Germany, the corresponding figures were 63% in the Survey while national figures report 59 % ever-smokers in womwn younger than 30 years and 61% in women 30+ years (see National Status Reports for more detail).

For example, the Irish Office for Tobacco Control (OTC) collates and analyses smoking statistics on a monthly basis. The information comes from a collection of a 1.000 responses a month from people over fifteen years of age. A quota sample of 1.000 people aged over fifteen years and weighted by gender, age, social class and region. The most recent statistics from January 2006 indicate the following: Among the figures reported is a prevalence of almost 32% of people in the 19 – 35 age group classified as smokers. This is by far less than what was found in the present Survey and thus raises the issue of a



biased sample. The Irish partner believes that the recruitment over-sampled women in the lower socioeconomic class with a known higher smoking prevalence.

For Belgium, a prevalence of 25 % smoking women is reported, which corresponds well to the 22.4 % found in our Survey. The Birth and Childhood Office (Office de la Naissance et de l'Enfance – ONE) shows a slight decline in tobacco use since 2002.

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**Table 21: Summary table of Euro-scip-III-Survey**

|         |          |         |        |         |          |       |
|---------|----------|---------|--------|---------|----------|-------|
| Belgium | Bulgaria | Germany | Greece | Ireland | Portugal | Total |
|---------|----------|---------|--------|---------|----------|-------|



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|  |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|
| <b>Smokers when pregnancy was detected (N)</b>   | 45     | 66     | 94     | 60     | 133    | 54     | 451    |
| <b>Smoking prevalence</b>                        |        |        |        |        |        |        |        |
| when pregnancy was detected                      | 22.4%  | 33.2%  | 38.7%  | 30.0%  | 66.5%  | 25.7%  | 36.1%  |
| at the time of delivery                          | 16.0%  | 7.0%   | 16.9%  | 11.7%  | 52.5%  | 14.3%  | 19.6%  |
| % decline in smoking prevalence during pregnancy | -28.6% | -78.9% | -56.3% | -61.0% | -21.1% | -44.4% | -45.7% |
| total sample N                                   | 201    | 199    | 243    | 200    | 200    | 210    | 1,253  |
| <b>Smokers when pregnancy was detected</b>       |        |        |        |        |        |        |        |
| Tried to reduce                                  | 96.9%  | 100.0% | 85.4%  | 100.0% | 82.7%  | 93.1%  | 88.9%  |
| Quit smoking at beginning of pregnancy           | 15.6%  | 66.7%  | 38.3%  | 23.3%  | 12.8%  | 37.7%  | 30.6%  |
| Gave up smoking later during pregnancy           | 13.3%  | 12.1%  | 18.1%  | 38.3%  | 9.0%   | 7.5%   | 15.5%  |
| Remained a smoker                                | 71.1%  | 21.2%  | 43.6%  | 38.3%  | 78.2%  | 54.7%  | 53.9%  |
|  |        |        |        |        |        |        |        |
| <b>Median number of cigarettes per day</b>       |        |        |        |        |        |        |        |
| before pregnancy                                 | 15     | 20     | 20     | 25     | 25     | 20     | 20     |
| when interviewed                                 | 10     | 2      | 8      | 7      | 10     | 4.5    | 7      |
|  |        |        |        |        |        |        |        |
| <b>Percent exposed to passive smoking</b>        |        |        |        |        |        |        |        |
| at home  | 18.9%  | 26.6%  | 28.8%  | 41.5%  | 51.5%  | 40.0%  | 34.4%  |
| at work, of those working                        | 13.9%  | 26.3%  | 37.7%  | 63.4%  | 9.9%   | 46.9%  | 36.0%  |
| at home or at work, of total sample              | 28.9%  | 39.2%  | 46.1%  | 70.5%  | 52.5%  | 61.0%  | 49.6%  |



**Appendix: List of institutions involved**

|  |  |  |
|--|--|--|
| <p><b>Belgium</b><br/>Fondation Contre Les Affections Respiratoires Et Pour L'Education A La Santé (F.A.R.E.S.)<br/><i>Bérengère Janssen</i><br/>56, Rue de la Concorde<br/>B 1050 Bruxelles</p> <p>Phone: +32.2.512 29 36<br/>Fax: +32.2.512 32 73<br/>Email:<br/>berengere.janssen@skynet.be</p> | <p><b>Bulgaria</b><br/>Bulgarian Association "Women Against Tobacco"<br/><i>Prof Liliana Tsoneva-Pentcheva, PhD</i><br/>22a, Dondukov Blvd.<br/>1000 Sofia</p> <p>Phone: +359 2 9898030<br/>Fax: +359. 2. 9819009<br/>Email:lilitstoneva@e-card.bg<br/>www.geocities.com/wat_bg/WAT_BG</p> | <p><b>Germany</b><br/>Bremen Institute for Prevention Research and Social Medicine (BIPS)<br/><i>Dr Klaus Gierstepen, MPH</i><br/><i>Dr Holger Hassel</i><br/>Linzer Straße 10<br/>D 28359 Bremen</p> <p>Phone: +49.421.59 59 6-50<br/>Fax: +49.421.59 59 6-68<br/>Email:<br/>Hassel@BIPS.uni-bremen.de<br/>www.BIPS.uni-bremen.de</p> |
| <p><b>Greece</b><br/>Hellenic Cancer Society<br/><i>Dr Maria Pilali</i><br/>A. Tsoha 18 - 20<br/>11521 ATHENS</p> <p>Phone: +30210-6456713 or 15<br/>fax +30210-6410011.<br/>Email:hellas-cancer@ath.forthnet.gr</p>   | <p><b>Ireland</b><br/>Ballina, Co. Mayo,<br/>Women North West, Ltd.<br/><i>Marian Flannery</i><br/>Moygownagh Community Center<br/>Ballina, Co. Mayo</p> <p>Phone: +353 .96 31 900<br/>Fax: +353 .96 31 900<br/>Email:nmwomen@eircom.net</p>   | <p><b>Portugal</b><br/>Conselho de Prevenção do Tabagismo<br/><i>Paulo Duarte Vitória</i><br/>Av. dos E.U.A., 53D-4º<br/>P 1700-165 Lisboa</p> <p>Phone. + 351 .21 846 4219<br/>Fax. + 351. 21 846 4212<br/>Email: mop22251@mail.telepac.pt</p>  |