K3.2 The effect of the smoking ban on the newborns of women working in the hospitality sector

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Numerous diseases and a significant proportion of avoidable deaths can be linked to smoking, both globally (*GBD 2015 Tobacco Collaborators*, 2017) and in Hungary (*Wéber*, 2016). This creates a notable level of healthcare expenditure (*Gresz et al*, 2012). Thus, among the public policy measures intending to promote a healthier lifestyle, the measures aimed at discouraging smoking are of highlighted importance. In this piece we are presenting an example of the possibility that public policy measures pertaining to the workplace environment and regulating smoking may have a sizeable positive impact on health.

In Hungary, as a result of the tightening of Act XLII of 1999 on the protection of non-smokers that came into effect in 2012, smoking was banned in workplaces, public institutions, and public means of transportation, among others. The biggest changes occurred in catering establishments and pubs, which formerly, in the absence of considerable statutory restrictions, enjoyed a rare exemption from the smoking ban (*Tárnoki et al*, 2009).

Using micro data sets of the HCSO on live births, fetal losses, and infant deaths, we examined how the smoking ban influenced the health of the newborns of women working in restaurants and drinking establishments (*Hajdu–Hajdu*, 2018). We used the difference in differences method for the analysis. We compared the changes in the health indicators of the newborns of women working either as waitresses or servers that occurred between the periods prior to and following the tightening of the law (a two-year period in total) to the similar data of a control group. The control group was comprised of the newborns of women working in the commercial and service sectors (such as shop attendants, cashiers, hairdressers, beauticians). In the latter group, mothers had typically worked in smoke-free workplace environments during their pregnancies already before the change in legislation, and not only after it, but they did not differ significantly from the women working in catering establishments in their other characteristics.

According to our findings, the smoking ban caused a significant improvement in the health of the newborns of women working at catering establishments. As a result of the change in legislation, the average birth weight increased (by 55 grams), and the rates of low birth weight newborns (under 2500 grams) and premature births decreased (by approximately 2 percentage points each). Favourable changes can be seen in other health indicators as well. The estimated effects are similar to the effects of restrictive measures on smoking measured in other countries (see *Bharadwaj et al*, 2014).

The introduction of the smoking ban may improve newborn health by way of two main mechanisms. On the one hand, it may motivate women smokers to quit smoking. On the other hand, the workplace environment becomes smoke-free as a result of the ban, and thus, passive smoking is decreased. The databases used do not contain any information about smoking habits, therefore we were unable to investigate the significance of these two factors directly, but we found bigger effects for the newborns of women who had no secondary school diploma – who, according to surveys, are smokers in higher proportions. (*Tombor et al*, 2011). These facts indicate that the ban may have caused an improvement in indicators of health at birth by way of causing a change in the smoking habits of the women in question.

In conclusion, our findings show that the smoking ban introduced in catering establishments and pubs had a favourable effect on the indicators of health at birth of the newborns of women working at such locations.

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