analesdepediatría
www.analesdepediatria.org

SCIENTIFIC LETTER

Frequency of passive smoking exposure in Pediatric Primary Care Consultations: BACCO study☆

Frecuencia de tabaquismo pasivo en consultas de Pediatría de Atención Primaria: estudio BACCO

Dear editor:

According to data from the European Health Survey in Spain of 2020, 23.31% of men and 16.44% of women were daily smokers. For the first time, exposure to environmental tobacco smoke (ETS) was documented in the survey, and it was reported by as much as 8.79% of the population.[1] It is known that exposure to ETS, both prenatal and postnatal, has deleterious effects on child health: lower birth weight and an increased incidence of respiratory diseases, among others. In addition, the family environment has an impact on the development of smoking habits, and children of parents who smoke are 4 times more likely to acquire the habit compared to children of non-smoking parents.[2] The data available for Spain are scarce and vary widely: according to some studies, between 30% and 50% of the paediatric population, approximately, is exposed to ETS at home.[3] The routine Child Health Programme (CHP) of the Spanish primary care system includes screening for tobacco use and exposure as well as tobacco use prevention counselling (TUPC).

Objectives

To describe the prevalence of exposure to ETS and the delivery of TUPC in the paediatric population.

Material and methods

We conducted a retrospective, cross-sectional and observational study by reviewing the electronic health records of patients born between 01/01/2002 and 31/12/2020 who attended the CHP checkups at a primary care centre in Fuenlabrada in 2016 and 2021. The main study variables were the exposure to ETS (smoking household members: yes/no) and delivery of TUPC (providing information about the harmful effects of smoking and recommendations: yes/no). The study was approved by the Ethics Committee for Research and Medicines of the Hospital Universitario de Fuenlabrada and declared exempt from informed consent.

Results

The study included a total of 2463 patients (50.9% male), 1509 in 2016 (84.6% with a history of exposure to ETS) and 1311 in 2021 (92.2% with a history of exposure to ETS). In 357 patients, information was available for both years. The median age was 4 years (1–8.2) in 2016 and 6.2 years (3–12) in 2021. Delivery of TUPC was documented in 100%.

In the overall sample, 32.7% had documented exposure to ETS (29.6% in 2016 and 33.3% in 2021), with a statistically significant decrease in exposure in infants aged less than 1 year compared to older patients, both in 2016 (24.9% vs 31.3%, $P = .027$) and in 2021 (24.8% vs 34.4%, $P = .023$). Preventive counselling was provided to 81.6% of patients in 2016 and 65.3% in 2021. In the subsets of patients exposed to ETS, TUPC was provided to 81.5% in 2016 and 78.4% in 2021 (Fig. 1 and Table 1).

Discussion

Previously published figures of exposure to ETS in Spain are scarce and highly variable: in a study of parents in conducted in primary care paediatrics (PCP) clinics in Tarragona, 27.7% reported smoking[4]; in another survey conducted in Catalonia, exposure to ETS was reported for 65%–70% of children[5]; a study in Zaragoza found that more than 50% of children aged less than 14 were exposed to ETS at home.[6] None of these studies applied an objective marker, such as serum cotinine, a marker used in previous studies conducted outside Spain. Our ETS figures are consistent with previously published data and suggest that there has not been a decline in exposure in recent years.

With regard to TUPC, we ought to highlight hat it was not delivered to 100% of patients, as would be advisable, and

DOI of original article:
https://doi.org/10.1016/j.anpede.2024.07.004

☆ **Previous meeting:** the study was presented at the 2023 Congress of the Asociación Española de Pediatría, held in Granada, Spain.

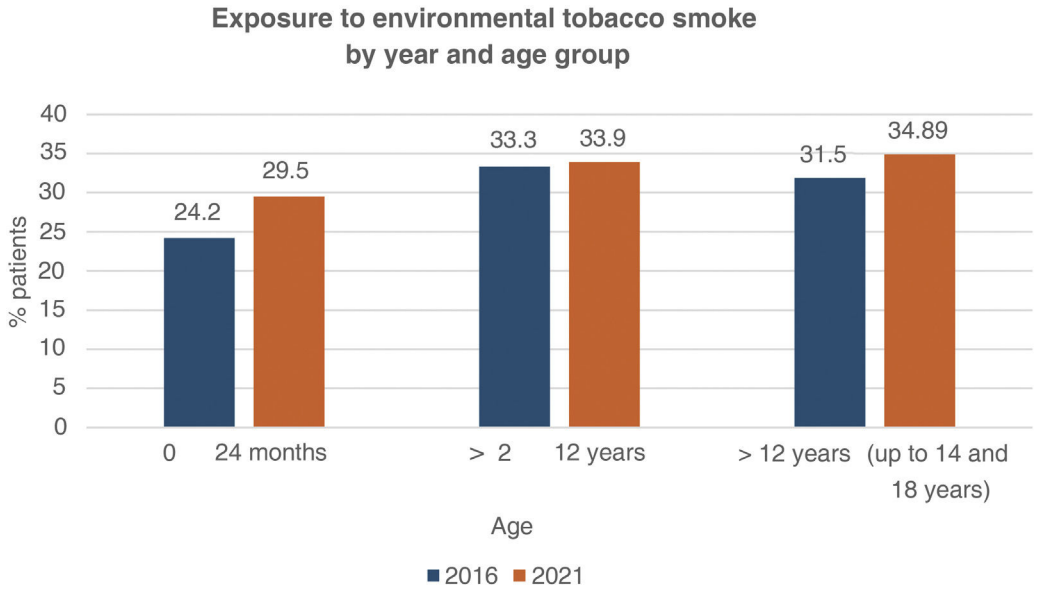

Figure 1 Percentage of patients exposed to environmental tobacco smoke by age group and in the 2 years under study (2016 and 2021).

Table 1 Frequency of exposure to environmental tobacco smoke in the overall sample, by age group and in the 2 years under study (2016 and 2021) and frequency of tobacco use prevention counselling.

Exposure to environmental tobacco smoke (overall)				
Not exposed (n, %)			1481 (67.3%)	
Exposed (n, %)			719 (32.7%)	
Total (n, %)			2200 (100%)	
By year		**2016**		**2021**
Not exposed (n, %)		899 (70.4%)		807 (66.7%)
Exposed (n, %)		378 (29.6%)		403 (33.3%)
Total (n, %)		1277 (100%)		1210 (100%)
By age (2016%)	**Not exposed**	**Exposed**	**Total**	***P* = .027**
0—12 months (n, %)	256 (75.1%)	85 (24.9%)	341	
>1—14 years (n, %)	643 (68.7%)	293 (31.3%)	936	
Total	899	378	1277	
By age (2021%)	**Not exposed**	**Exposed**	**Total**	***P* = .023**
0—12 months (n, %)	106 (75.2%)	35 (24.8%)	141	
>1—18 years (n, %)	701 (65.6%)	368 (34.4%)	1069	
Total	807	403	1210	
Tobacco use prevention counselling (total sample)				
Not provided (n, %)				570 (23.1%)
Provided one or both years (n, %)				1893 (76.9%)
Total (n, %)				2463 (100%)
By year (total sample)		**2016**		**2021**
Not provided (n, %)		277 (18.4%)		455 (34.7%)
Provided (n, %)		1232 (81.6%)		856 (65.3%)
Total (n, %)		1509 (100%)		1311 (100%)
By year (group exposed to ETS)		**2016**		**2021**
Not provided (n, %)		70 (18.5%)		87 (21.6%)
Provided (n, %)		308 (81.5%)		316 (78.4%)
Total (n, %)		378 (100%)		403 (100%)

its frequency even decreased between the 2 periods under study (81.6% in 2016 and 65.3% in 2021 in the total sample and 81.5% in 2016 and 78.4% in 2021 in the subset of exposed patients).

The interest of this study lies in the substantial sample size (2463 patients, of who 2200 had been exposed to ETS) and in providing updated data with an intervening period of five years in a single primary care centre. Its main limitations are the lack of an objective parameter to assess exposure and the potential for documentation errors in the health records. In addition, the data may not be representative of other population groups.

Conclusion

Approximately 30% of the paediatric patients in the sample lived with smokers, a proportion that remained stable in the 2 study periods; and the delivery of TUPC did not reach 100% even in the exposed group. The frequency of exposure was significantly lower in patients aged less than 1 year compared to older patients, which may reflect greater awareness of household members in the first months of life and suggests that this period may be a crucial window to reinforce TUPC. Our findings support the delivery of TUPC in the framework of CHP check-ups and should encourage providers to engage more actively in the prevention of this important risk factor.

Funding

The study received and was funded through the second-award research grant given by the Fundación Pediatría y Salud (FPS, Paediatrics and Health Foundation) of the Asociación Española de Pediatría de Atención Primaria (AEPap, Spanish Association of Primary Care Paediatrics) for research projects carried out in the field of primary care paediatrics in 2022.

Conflicts of interest

The authors have no conflicts of interest to declare.

Acknowledgments

We thank the staff of the Technical Directorate of Information Systems and the Central Research Committee (Primary Health Care Administration of Madrid).

References

1. Estudio comparativo de dos periodos de la Encuesta Europea de Salud en España 2020: antes de la declaración del primer estado de alarma y posterior a este. Ministerio de Sanidad; 2020 [Accessed 4 July 2024]. Available from: https://www.sanidad.gob.es/estadEstudios/estadisticas/EncuestaEuropea/Enc_Eur_Salud_en_Esp_2020.htm
2. Del Pino V, Astray J [Accessed 4 January 2022]. Available from: http://www.comunidad.madrid/servicios/salud/boletin-epidemiologico, 2019.
3. Moneo Hernández I, Forés Catalá A, Esteller Carceller M [Accessed 4 January 2022]. Available from: http://aepap.org/grupos/grupo-de-vias-respiratorias, 2013.
4. Ruiz Escusol S, Gallardo Moreno S, Guijarro Tapia E, Cardona Marqués A. Hábitos tabáquicos de los padres de los niños de nuestra consulta. Rev Pediatr Aten Primaria. 2021;23:127–32.
5. Pérez-Bauer M, Vila-Córcoles A. Efectos del tabaco en los hijos. FMC. 2005;12:669–73.
6. Sánchez-Ventura JG, Sánchez NG, García RC. Abordaje del tabaquismo activo y pasivo desde la consulta del pediatra de Atención primaria. FAPap. 2011;4:6.

María Almudena Santos Sánchez-Rey[a,*], Irene Zamanillo Herreros[b], Aida Frías González[c], María Rosa Albañil Ballesteros[d]

[a] *Centro de Salud Las Tablas, Madrid, Spain*
[b] *Servicio de Hematología, Hospital Doce de Octubre, Madrid, Spain*
[c] *Servicio de Nefrología, Hospital Doce de Octubre, Madrid, Spain*
[d] *Centro de Salud Cuzco, Fuenlabrada, Madrid, Spain*

* Corresponding author.
E-mail address: mariaalmudena.santos@salud.madrid.org (M.A. Santos Sánchez-Rey).