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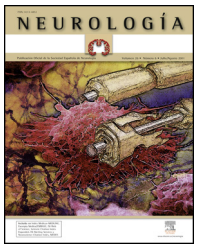

ORIGINAL ARTICLE

Effect of socioeconomic level on knowledge of stroke in the general population: A social inequality gradient☆

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KEYWORDS
Stroke;
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Social factors;
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Methods;
Knowledge

Abstract
Objectives: Socioeconomic status is a factor that influences health-related behaviour in individuals as well as health conditions in entire populations. The objective of the present study was to analyse the sociodemographic factors that may influence knowledge of stroke.
Method: Cross-sectional study. A representative sample was selected by double randomisation. Face-to-face interviews were carried out by previously trained medical students using a structured questionnaire with open- and closed-ended questions. Adequate knowledge was previously defined. The Mantel—Haenszel test and adjusted logistic regression analysis were used to assess the association between knowledge of stroke and the study variables.
Results: 2411 subjects were interviewed (59.9% women; mean age 49.0 [SD 17.3] years) Seventy-three per cent were residents of urban areas, 24.7% had a university education, and 15.2% had a low level of schooling. Only 2.1% reported earning more than 40 000 euros/year, with 29.9% earning less than 10 000. Nearly 74% reported having an excellent or good state of health. The unemployment rate was 17.0%. Prevalence of 'adequate knowledge' was 39.7% (95% CI: 37.7%-41.6%). Trend analysis showed an association between knowledge of stroke and income ($Z = 10.14$, $P < .0001$); educational level ($Z = 15.95$, $P < .0001$); state of health ($Z = 7.92$, $P < .0001$); and employment status ($Z = 8.98$, $P < .0001$).

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Conclusions: Educational level, income, employment status, and state of health are independent factors for adequate knowledge of stroke. Public awareness campaigns should present material using simple language and efforts should be directed towards the most disadvantaged social strata in particular.

PALABRAS CLAVE
Ictus;
Educación;
Factores sociales;
Promoción de la salud;
Metodología;
Conocimiento

Impacto del nivel socioeconómico en el conocimiento del ictus de la población general: un gradiente de desigualdad social

Resumen
Objetivos: El nivel socioeconómico es un factor que condiciona el comportamiento individual ante la salud y las condiciones de salud de la población. Se evalúa la asociación entre factores socio-demográficos y el conocimiento del ictus en la población general.
Método: Estudio transversal. Los sujetos fueron seleccionados por un sistema de asignación al azar doble. Se administró un cuestionario estructurado con preguntas abiertas y cerradas mediante entrevistas cara a cara. El «conocimiento adecuado» fue definido previamente. Se utilizaron el test de Mantel-Haenszel y la regresión logística con modelos ajustados para evaluar la asociación entre el conocimiento del ictus y las variables estudiadas.
Resultados: Entrevistas, 2.411; 59,9% mujeres; edad media ± desviación estándar, 49,0 ± 17,3 años. El 74% reside en área urbana. Un 24,7% tenía estudios universitarios, el 15,2% un nivel de escolarización bajo. Solo el 2,1% declaraba ganar mas de 40.000 euros/año y un 29,9% menos de 10.000. Casi el 74% declaró tener un excelente o buen nivel de salud. El desempleo fue del 17,0%. La prevalencia de «conocimiento adecuado» fue del 39.7% (IC del 95%, 37,7%-41,6%). El análisis de tendencias mostró una asociación entre conocimiento y nivel económico ($z = 10{,}14$; $p < 0{,}0001$); nivel de estudios ($z = 15{,}95$; $p < 0{,}0001$), estado de salud ($z = 7{,}92$; $p < 0{,}0001$) y situación laboral ($z = 8{,}98$; $p < 0{,}0001$).
Conclusiones: El nivel de estudios y renta, disponer de trabajo y gozar de salud son factores independientes de un «conocimiento adecuado» del ictus. Las campañas educativas deberían realizarse con un lenguaje sencillo y dirigirse con especial interés a las clases sociales mas desfavorecidas.

Introduction

Several studies in the literature have identified an association between vascular disease and different socioeconomic risk factors.[1] Some of these studies have shown that socioeconomic parameters, specifically income, have a greater influence on vascular health than do many classic risk factors. In fact, they may serve as predictors of vascular diseases.[2] Studies have also shown that subjects who have not finished secondary studies tend to display unhealthy lifestyles and poor control over vascular risk factors.[3] The same is true of individuals who are unemployed and those performing unskilled or low-paid jobs.[3] Other studies have shown that level of income may have a negative impact on health, and their findings have revealed an association between income and stroke risk. One study even found a correlation between income inequality and stroke mortality.[4]

Likewise, preventing delays should be the main objective during the pre-hospital phase of stroke care in order to provide patients with the best possible treatment.[5] Delays to acute stroke care have been identified at different levels: the patient level (patient or family did not recognise symptoms of stroke or seek medical assistance urgently); the emergency unit and doctor level (when stroke patient transfer is not prioritised); and the hospital level (delays in neuroimaging tests or inefficient in-hospital procedures).[6] Nevertheless, the longest delays take place during the pre-hospital phase,[7,8] and the time interval between symptom onset and the first call for medical help accounts for the largest part of the delays.[9–12] The main reasons for these delays include lack of knowledge of symptoms and also denial of the disease and the hope that symptoms might spontaneously resolve.

Therefore, raising public awareness of stroke symptoms so that both patients and bystanders can recognise them should reduce the time between the event and the intervention by first responders, as has been shown in some studies.[13,14] Studies aimed at identifying demographic, social, cultural, behavioural, and clinical factors associated with prehospital delays provide new targets for the development of more effective stroke education campaigns.[15] This study examines the association between different socioeconomic factors and a good level of stroke knowledge in a