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SOCIAL FACTORS AND STORAGE DISORDER: A CROSS-SECTIONAL STUDY

Hypothesis / aims of study

There is very limited information available on the relative prevalence of storage disorder between different socio-economic groups. Such information provides a basis for identifying inequalities in health care need and informing aetiological hypotheses. The conduct of a large scale cross-sectional study, in a representative UK population with a substantial minority (9%) of mainly Gujarati-speaking S. Asians, provides an opportunity to investigate social factors associated with storage disorder.

Study design, materials and methods

A random sample of men and women aged 40 or more was drawn from the registers of 108 general practices. People living in long-term care were excluded. 23,182 respondents (63% response rate) returned a postal questionnaire containing questions on urinary symptoms developed for the study (1) in line with recommended ICS standards. The questionnaire also contained standard socio-economic indicators (2) including employment status, home and car ownership; a question concerning self-rated ethnic group, based on the national census; and standard questions on health, including current general health, long-term illness, physical functioning and reported height and weight.(3) Logistic regression was used to examine the association between socio-economic factors and storage disorder. All socio-economic factors, including age and sex, associated univariately with storage disorder ($p<0.05$) were entered into a multivariate model. A backward stepwise technique was used to establish the final model. The effect of adjusting for health factors was also investigated.

Results

Prevalence was inversely associated with the extent of car ownership (0 cars - 41.5%; 1 car – 29.9%; 2 cars – 22.7%; 3 cars – 21.3%; $p<0.001$) as well as home ownership ($p<0.001$) and employment status ($p<0.001$) in the univariate analysis. Prevalence was higher in S. Asians (38.5%) compared to white (29.0%) or other (32.7%) groups ($p<0.001$). The results of the multivariate analysis are shown in table 1. The results show independent associations with S. Asian ethnicity and less than full-time employment, (especially long-term sick), and with the more direct indicators of disposable income (ie car and home ownership). All general health factors were also independently associated with storage disorder, including: poor health 2.92 (2.42–3.51); long-term illness 1.23 (1.11-1.35); ADL lowest:highest quartile 3.03 (2.62-3.50) and obesity 1.44 (1.29-1.61) odds ratios (95% confidence intervals).

Interpretation of results

These results show that storage disorder was independently associated with material deprivation and S. Asian ethnicity. Potential mechanisms supported by the analysis include poor health as well as non-health factors, the latter possibly cultural in relation to ethnicity and social isolation in relation to employment. Differences could potentially arise due to non-response bias. An in-depth large scale study of non-response suggested minimal differences in prevalence of storage disorder between responders and non-responders. The response rate in S. Asians was low compared to others (39% v 66%), a typical finding for such studies. Comparison of the health status of respondents with local information from the national census for S. Asians and white groups is currently in progress.

Concluding message

Storage disorder was associated with low socio-economic status and S. Asian ethnicity as well as indicators of poor general health, including obesity.

Table 1 Socio-economic factors associated with storage disorder

Factor		Odds ratio (95% CI) [1]		Odds ratio (95% CI) [2]	
Ethnicity:	S. Asian	1.64	(1.43-1.88)	1.26	(1.03-1.53)
	Other	1.22	(0.99–1.65)	0.90	(0.60-1.33)
	White	1		1	
Employment	Long term sick	4.11	(3.53-4.77)	1.56	(1.27-1.91)
	Other	1.93	(1.52-2.44)	1.48	(1.11-1.98
	Retired	1.67	(1.47-1.90)	1.27	(1.09-1.48)
	Part-time	1.41	(1.26-1.58)	1.45	(1.27-1.65)
	At home	1.38	(1.18-1.62)	1.12	(0.92-1.35)
	Unemployed	1.37	(1.04-1.80)	1.19	(0.85-1.66)
Cars	None	1.16	(1.06-1.27)	0.96	(0.85-1.08)
	1	1		1	
	2	0.89	(0.81-0.96)	0.98	(0.89-1.08)
	3+	0.83	(0.71-0.96)	0.89	(0.75-1.05)
Accommodation	Rent (public)	1.18	(1.06-1.31)	Not significant	
	Sheltered	1.18	(0.90-1.56)		
	Other	1.15	(0.89-1.48)		
	Rent (private)	1.03	(0.87-1.21)		
	Owner occupier	1			

[1] multivariate analysis adjusted for age and sex
[2] multivariate analysis adjusted for general health indicators; age and sex

References

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