

Non-motor symptoms profiles of different ethnic groups with Parkinson's disease: a cross sectional study comparing the UK, Thailand, Nigeria and Kuwait.

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OBJECTIVE

- To analyse and compare the Non-Motor Symptoms (NMS) profiles and burden in people with Parkinson's disease (PD) with different ethnic origins: Asian (Thailand), African (Nigeria), Arab (Kuwait) and White Caucasian (UK).

BACKGROUND

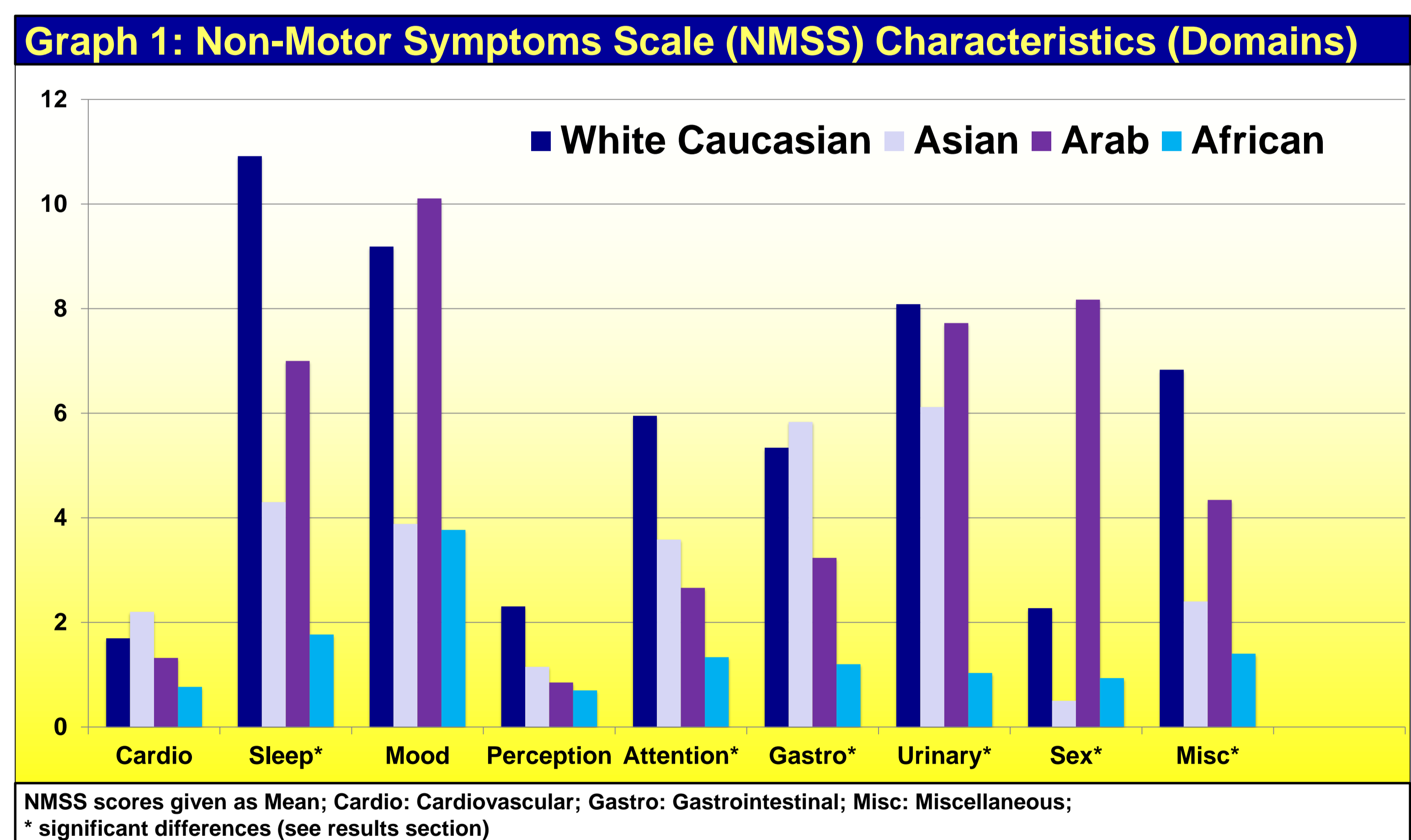
- We have shown previously that non white PD cases in London are more likely to have:
 - an atypical response to Levodopa (hyporesponsiveness)^{1,2,3}
 - a greater/ atypical cognitive burden^{3,4}
 - an abnormal surrogate imaging³
 - an atypical natural history in terms of progression of PD⁵

METHODS

- Clinical data related to Asian people with PD in Thailand, African in Nigeria, Arab in Kuwait, Syria and Egypt and White Caucasian in UK as part of a NMS naturalistic longitudinal study were analysed. Cross sectional data are presented.
- Each patient underwent clinical interview and neurological examination.
- In particular the total scores as well as the scores of each domain of the Non-Motor Symptom Scale (NMSS) were analysed.

	WC (English)	Asian (Thai)	Arab (Kuwait)	African (Nigeria)
Number of patients	59	60	47	30
Male in %	71	45	53	73
Mean Age (SD)	68.0 (10.2)	60.5 (11.2)	63.2 (10.8)	62.6 (10.3)
Mean disease duration (SD)	7.6 (6.2)	10.8 (5.4)	10.3 (5.6)	2.7 (2.2)
Mean age of onset (SD)	60.3 (11.2)	49.7 (12.4)	53.2 (11.5)	59.9 (9.7)
Mean Scopa Motor score (SD)	16.9 (9.3)	28.7 (14.1)	20.5 (10.7)	NA
Median HY (range)	2 (1-5)	NA	2 (1-5)	2 (1-4)
Mean LEDD (SD)	766.7 (565.6)	868.5 (404)	555.6 (403.8)	505.2 (287.2)

SD = standard deviation; LEDD = Levodopa equivalent daily dose; HY = Hoehn and Yahr; WC = White Caucasian



RESULTS

- Cross sectional data are presented:
- Observed non-motor symptoms differences**
Applying the Kruskal-Wallis equality-of-populations rank test, there were significant differences between the 4 ethnic groups in the following domains:
 - Sleep and fatigue (p<0.001)
 - Attention and memory (p<0.01)
 - Gastrointestinal dysfunction (p<0.01)
 - Urinary dysfunction (p<0.001)
 - Sexual dysfunction (p<0.001)
 - Miscellaneous (p<0.001)

	White Caucasian (N=59)	Asian (N=60)	Arab (N=47)	African (N=30)
Mean Sleep/fatigue (SD)	10.9 (8.1)	4.3 (4.5)	7 (5.9)	1.8 (1.2)
Mean Attention(SD)	5.9 (7.7)	3.6 (4.6)	2.7 (4.0)	1.3 (1.0)
Mean Gastrointestinal (SD)	5.3 (6.0)	5.8 (6.4)	3.2 (3.6)	1.2 (0.9)
Mean Urinary (SD)	8.1 (7.5)	6.1 (6.1)	7.7 (8.1)	1.0 (0.9)
Mean Sexual (SD)	2.3 (5.3)	0.5 (1.3)	8.2 (7.0)	0.9 (0.8)
Mean Miscellaneous (SD)	6.8 (6.8)	2.4 (2.9)	4.3 (3.9)	1.4 (1.1)
Mean NMSS total (SD)	52.6 (41.2)	29.9 (23.7)	45.4 (33.4)	12.9 (5.4)

SD = standard deviation; N = Number; NMSS = Non-Motor Symptoms Scale

CONCLUSIONS: This is a first study of its kind and our preliminary results support previous observations:

- NMS profiles might differ between different ethnic groups

 However, given that we present a “snapshot” survey in non-matched populations, the study is now expanding to a larger and matched sample to explore the range and nature of these differences.

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