

## Women's mid-life health experiences in urban UK, a factor analysis

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## Background – Menopause

- Individual experiences of menopause vary greatly
- Many symptoms attributed to process of menopause, but difficult to differentiate age-related symptoms from those due to menopause
- The experience also differs across ethnic groups / nationally, indicating that symptoms are influenced by culture
- Complex combination of biological, psychological and cultural factors, so research into a "menopausal syndrome" is undertaken using varied epistemological positions and research frameworks.

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## Background – menopause in the UK

- Has been claimed that up to 80% of women experience menopausal symptoms, and 45% of these find the symptoms distressing
- Not clear what exactly these symptoms are; how they differ between ethnic groups; how they relate to aging v. menopause, or how they compare to other regions
- Methodological problems as to how existing data were compiled – bias in questions; most data from Caucasians, and varied methods used.

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## Background – this survey

- An attempt to overcome these difficulties
- Understand contemporary women's experience
- Compare variations across ethnic groups in urban UK
- Allow cross-cultural comparisons of symptom prevalence with studies from the US, Canada, Japan and China
- One stage of larger research project exploring potential for integration of East Asian medical treatment strategies for symptoms associated with the menopause into the NHS

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## Methods – sampling

- GP lists in Lambeth, Lewisham and Southwark due to ethnic diversity
- Targeted electoral wards using Index of Multiple Deprivation
- Women between 45 – 55 years old
- Mailed 1931 booklets; response rate of 58%

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## Methods – questionnaire

- Self-administered; postal; didn't use "menopause" in the title or in questions; two week recall; "Yes" / "No" response
- Adapted general symptom checklist with "menopause-related" symptoms embedded – 37 symptoms of which 15 "core" symptoms from the four older studies
- Pre-menopausal = menstruating regularly
- Peri-menopausal = menses irregular over previous year, or menstruated in the past 12 months but not the last 3
- Post-menopausal = no menstruation in last 12 months
- Non-natural menopause = stopped menstruating following surgery, radiotherapy or chemotherapy

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## Methods – data analysis

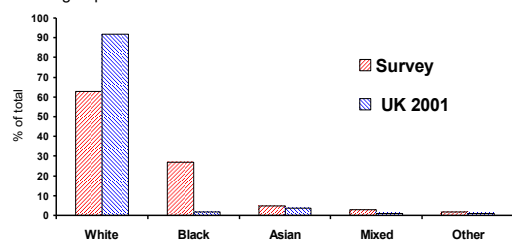
- Basic statistical analysis undertaken using SPSS V.15.0
- For those subjects who had missing responses for only one or two of the 37 symptoms, imputed negative response for these questions
- Exploratory factor analysis using STATA Release 9
- FA applied to menopausal symptom data to detect symptom clusters, and findings used to argue against menopausal syndrome
- FA ideally applied to normally-distributed continuous variables, so inappropriate for binary variables?
- Where binary variables are indicators of underlying continuous variables, can use FA with tetrachoric correlation matrices
- So obtained tetrachoric correlation matrix, then applied *factomat* using the principal component method (+ varimax rotation with Kaiser normalization)

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## Findings - sample

Stage: 29% pre-menopausal; 42% peri-menopausal;  
29% post-menopausal (total N = 883)

Ethnic group:



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### Findings – Most frequently reported symptoms

Question	Symptom	N	Prev.
31	Tiredness	880	64.0%
10	Aches or stiffness in the joints	862	52.1%
22	Hot flush and/or sudden sweating	875	47.2%
18	Feeling low or depressed	874	44.4%
9	Headache	862	42.1%
15	Irritability	870	41.5%
14	Insomnia	880	38.9%
8	Backache affecting the lower back	860	38.8%
37	Puffiness anywhere on body	875	35.4%
20	Dry skin or eyes	877	34.5%

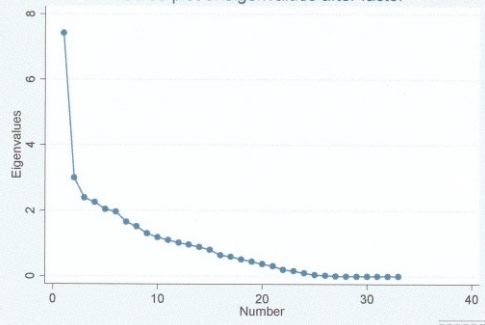
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### Findings – Least frequently reported symptoms

Question	Symptom	N	Prev
24	Hot flush most frequently in daytime	869	20.9%
17	Dizzy spells	874	20.5%
5	Short of breath	862	18.7%
21	Sore throat	872	16.3%
28	Sweating on head only	870	14.7%
11	Pain/discomfort in chest	862	14.7%
3	Nausea	863	12.6%
4	Persistent cough	860	12.4%
29	Sweating on chest & extremities only	868	8.8%
33	Increased libido	870	6.2%

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Scree plot of eigenvalues after factor



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	F1	F2	F3	F4	F5
<b>Factor 1 "Vasomotor 1"</b>					
Q23 Hot flushes with sweating	0.91				
Q22 Hot flushes and/or sudden sweating	0.89				
Q19 Feel hot most of the time	0.78				
Q30 Sweat all over	0.76				
Q27 Sweating easily (spontaneously)	0.70				
Q24 Hot flush most frequently in daytime	0.69				
Q25 Hot flush most frequently in night time	0.68				0.39
Q28 Sweating on head only	0.31				0.30
<b>Factor 2 "Physical / Psychological 1"</b>					
Q10 Aches or stiffness in the joints	0.63				
Q15 Irritability	0.61				
Q31 Tiredness	0.61		0.33		
Q18 Feeling low or depressed	0.55				
Q8 Backache affecting the lower back	0.54				
Q35 Dislike of being near draught	0.54				0.48
Q14 Insomnia	0.52				
Q37 Puffiness anywhere on body	0.50				
Q34 Decreased libido	0.50				
Q7 Backache affecting neck or shoulders	0.47		0.36		
Q20 Dry skin or eyes	0.47				
Q9 Headache	0.35		0.31		

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	F1	F2	F3	F4	F5
<i>Factor 3 "Physical / Psychological 2"</i>					
Q5 Short of breath			0.74		
Q4 Persistent cough			0.74		
Q11 Pain/discomfort in chest			0.70		
Q17 Dizzy spells		0.34	0.56		
Q3 Nausea			0.51	0.42	
Q21 Sore throat			0.50		
Q16 Awareness of heartbeat (palpitations)			0.43		
Q33 Increased libido			0.42		
<i>Factor 4 "Physical (Gut)"</i>					
Q1 Diarrhoea or constipation				0.81	
Q2 Upset stomach				0.86	
Q12 Pain or discomfort in stomach				0.83	
Q13 Pain or discomfort in low abdomen				0.68	
<i>Factor 5 "Vasomotor 2"</i>					
Q26 Cold sweats and/or night sweats	0.48				0.61
Q36 Tending to get cold feet		0.44			0.57
Q29 Sweating on chest & extremities only					0.76

## Findings – other

- No statistically significant variation by ethnicity in hot flushes – unlike data from the USA (black women experienced more)
- Insomnia, irritability, and tiredness varied according to ethnicity with the Black ethnic group at lower risk

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## Discussion and Conclusion

- London women experience high levels of symptoms
- Patterns of symptoms from this multi-ethnic group do not permit simple classification

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## Acknowledgements

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