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.

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.

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

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%

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

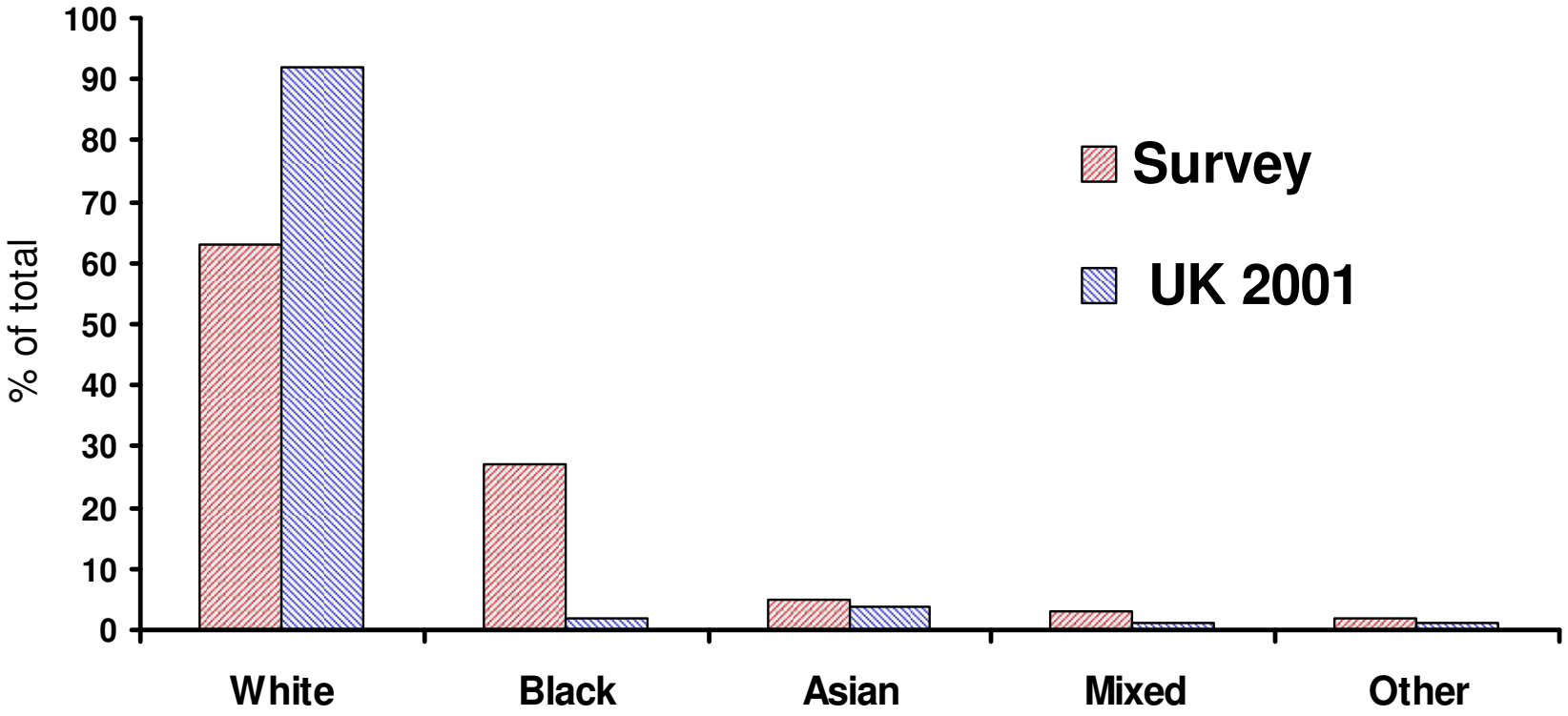
Methods – data analysis

- 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 *factormat* using the principal component method (+ varimax rotation with Kaiser normalization)

Findings - sample

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

Ethnic group:

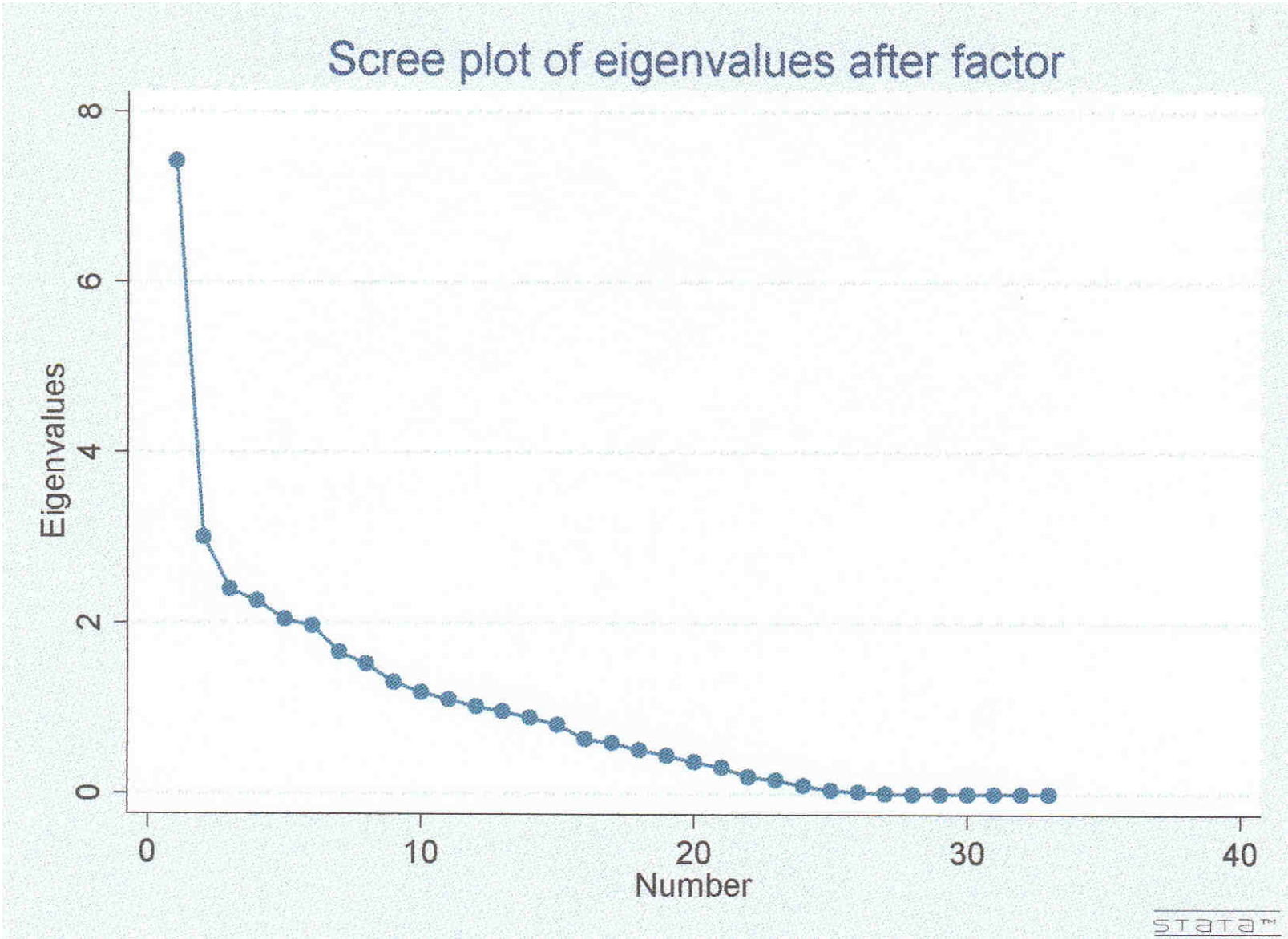


Findings – Most frequently reported symptoms

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%

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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Eigenvalues
0
2
4
6
8
0
10
20
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40
Number
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	F1	F2	F3	F4	F5
Factor 1 "Vasomotor 1"					
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
Factor 2 "Physical / Psychological 1"					
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		

	F1	F2	F3	F4	F5
Factor 3 "Physical / Psychological 2"					
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**		
Factor 4 "Physical (Gut)"					
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**	
Factor 5 "Vasomotor 2"					
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

Discussion and Conclusion

- London women experience high levels of symptoms

- Patterns of symptoms from this multi-ethnic group do not permit simple classification

Acknowledgements

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