

**Inequalities in physical activity and  
sedentary living?**

**BHFNC Conference 2008**

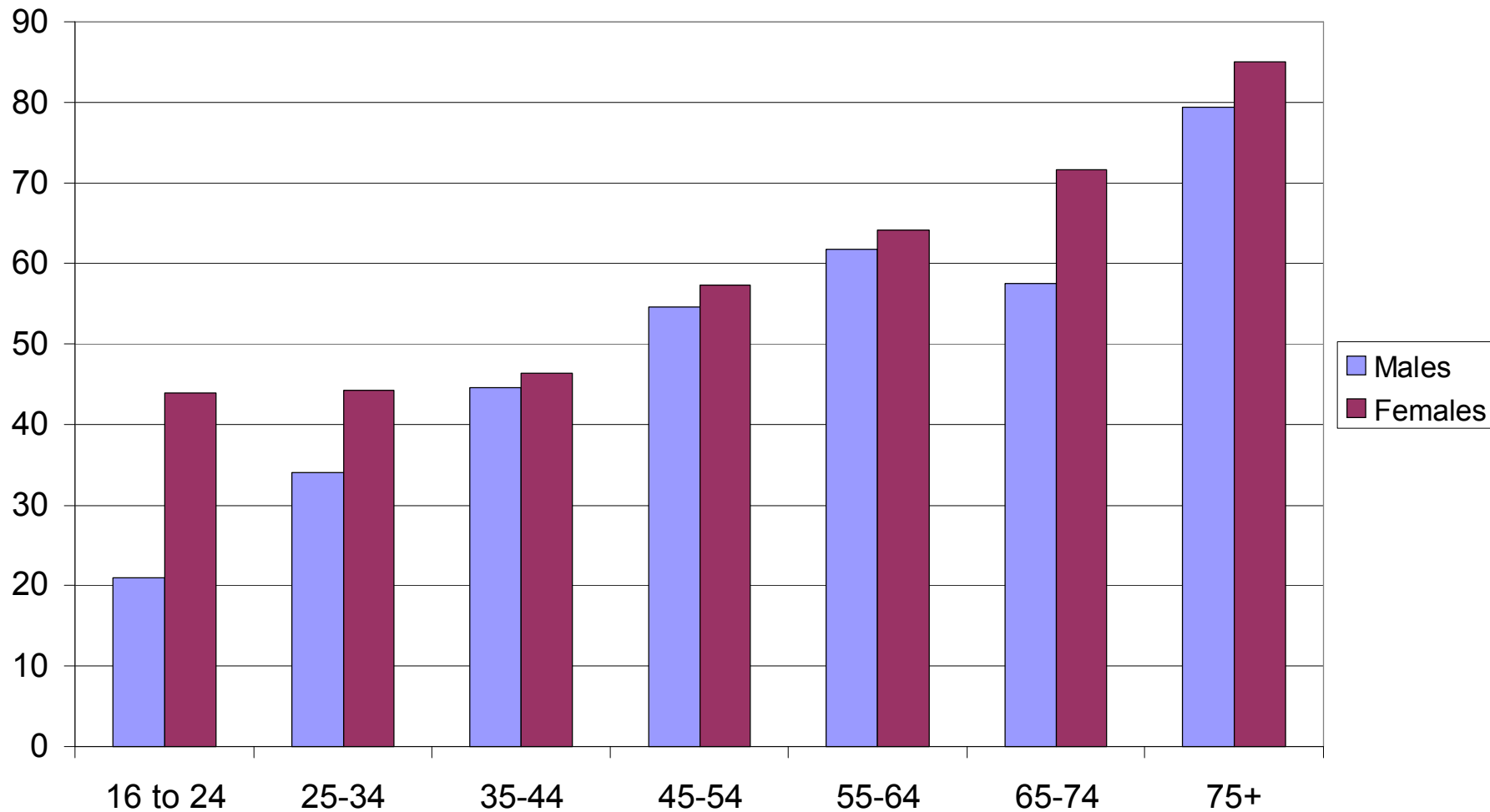
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Health Sciences

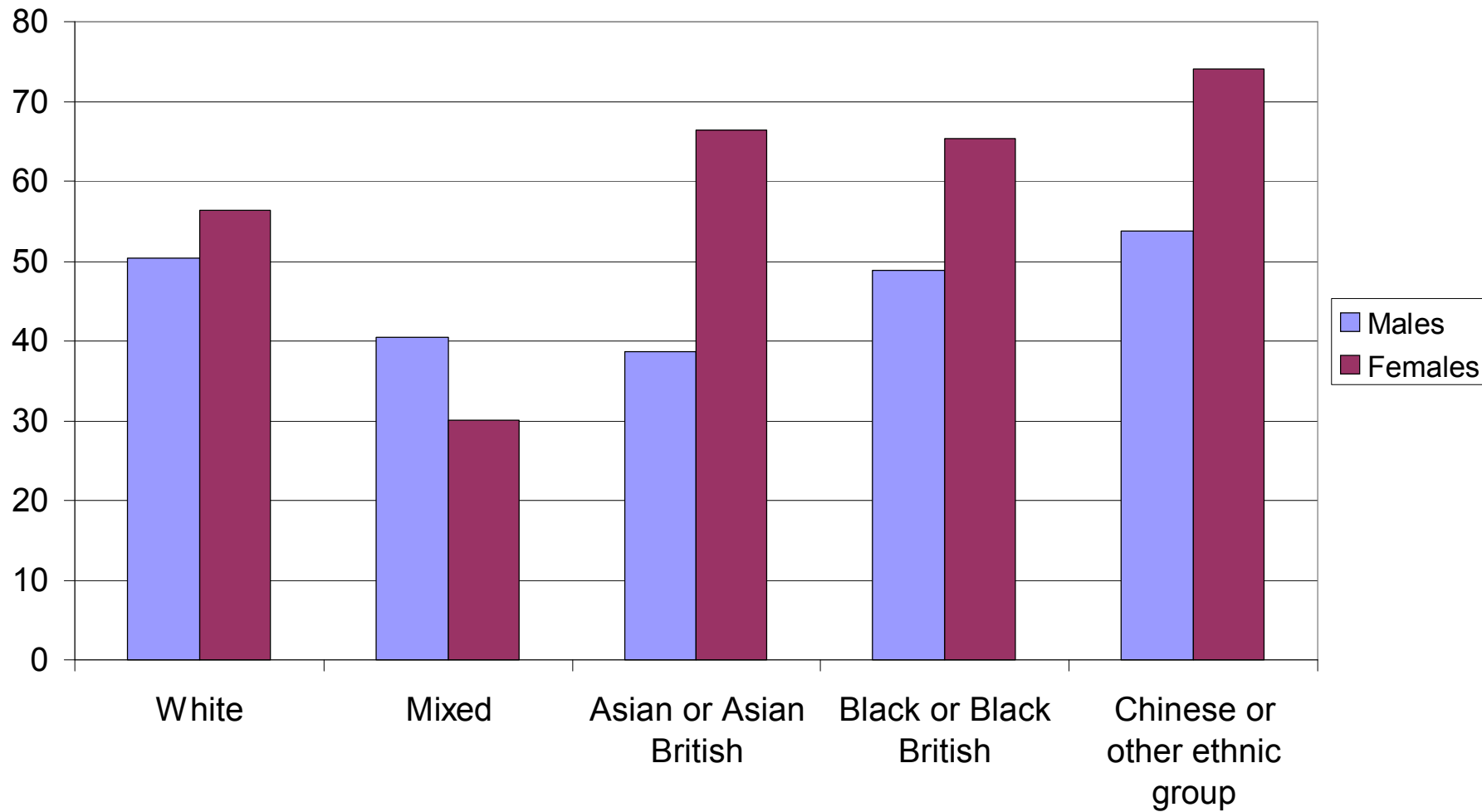
University of Bristol

# Patterns of physical activity inequalities

## Proportion of adults reporting no occasions of sport or active recreation in last 4 weeks by age and gender



## Proportion of adults reporting no occasions of sport or active recreation in last 4 weeks by ethnic group



## Prevalence of any 30 minute occasion of sport or active recreation in the last 4 weeks

Limiting long standing illness or disability	%
Yes	30.1
No	49.2

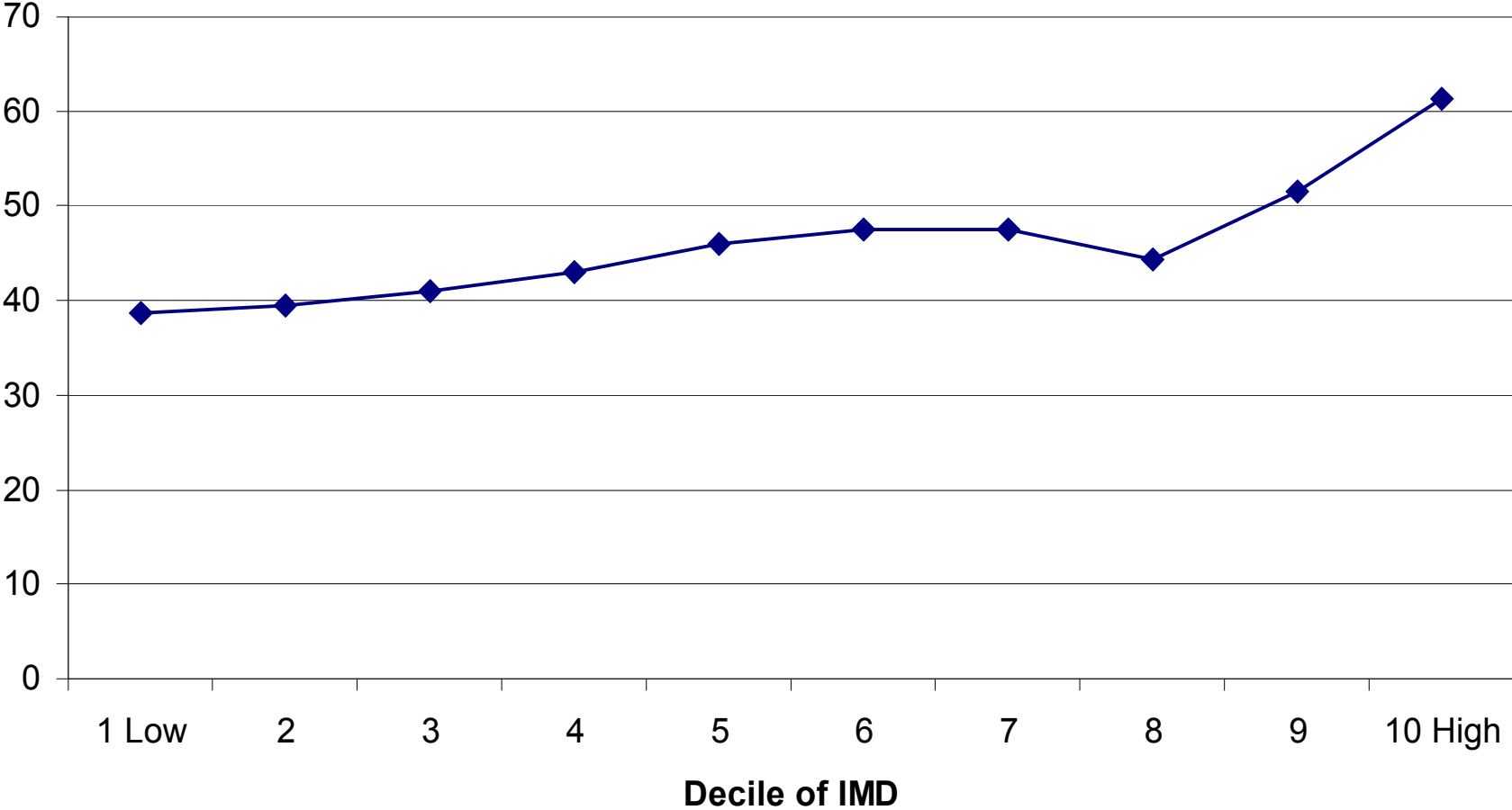
## Prevalence of any 30 minute occasion of sport or active recreation in the last 4 weeks

Education	%
Degree or equivalent	54.94
A level	53.82
GCSE O level	48.04
Other inc. vocational	38.95
No qualifications	22.69
Still studying	45.76

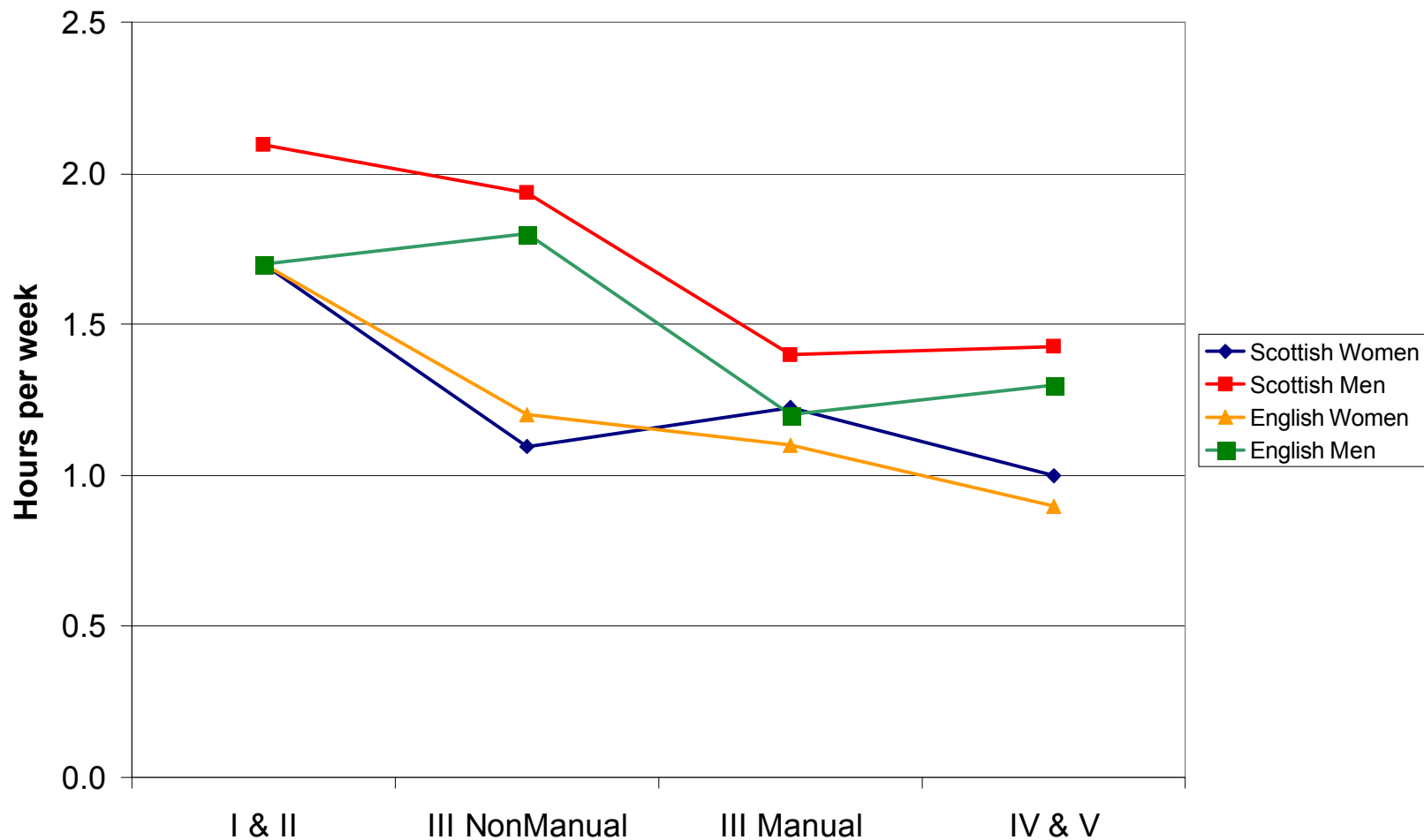
## Prevalence of any 30 minute occasion of sport or active recreation in the last 4 weeks

Tertiles of income	%
Low	30.2
Middling	48.1
High	63.4

# Prevalence of at least one 30 minute occasion of sport or active recreation



# Mean hours per week of brisk/fast pace walking in Scotland and England by social class



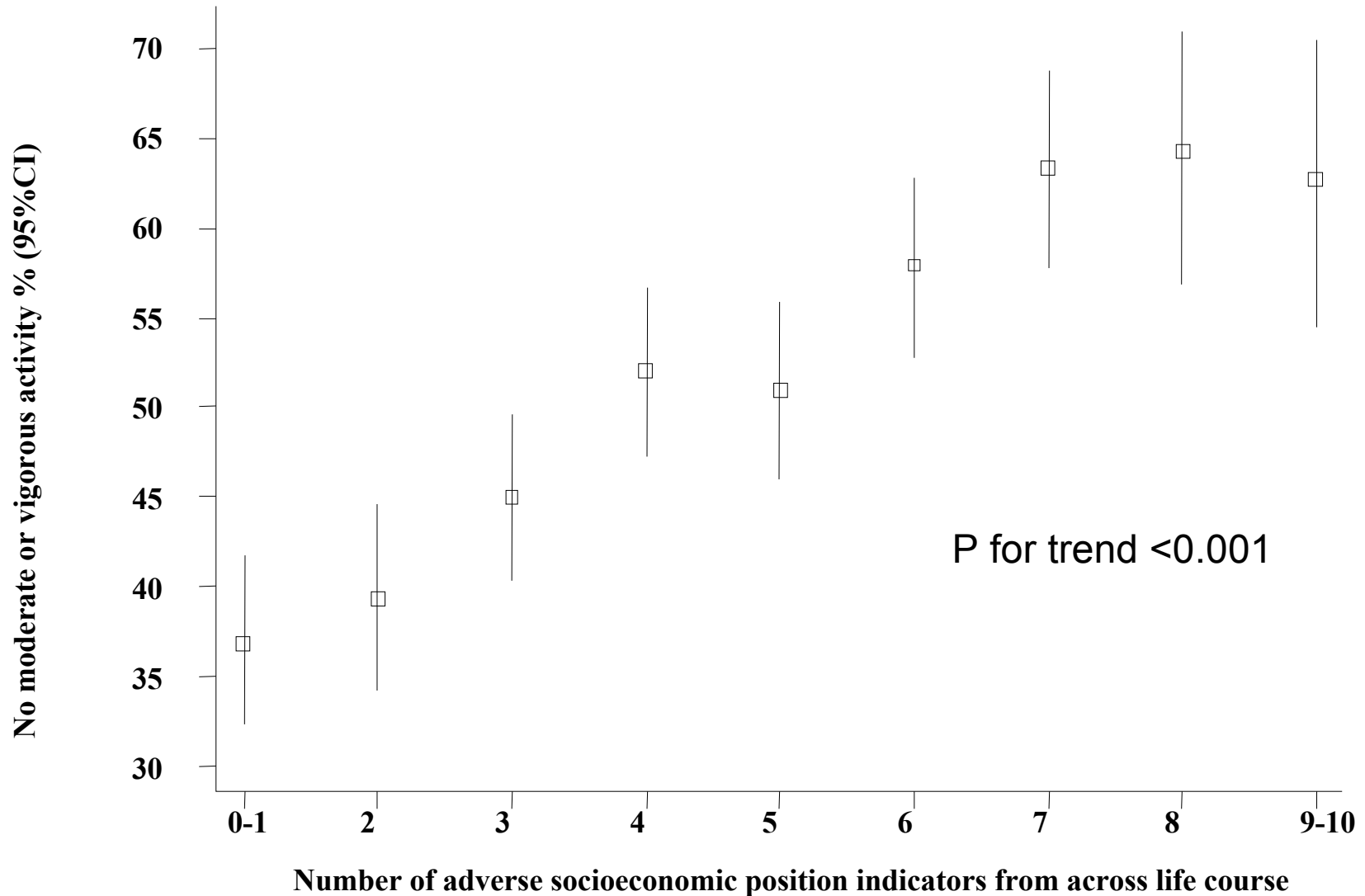
Scottish and English Health Surveys

# Walking trips for transport, per person, per year, by household income

	Lowest real income	Second level	Third level	Fourth level	Highest real income
Walk	307	275	239	218	208
Car	224	325	458	537	602

National Travel Survey, 2006

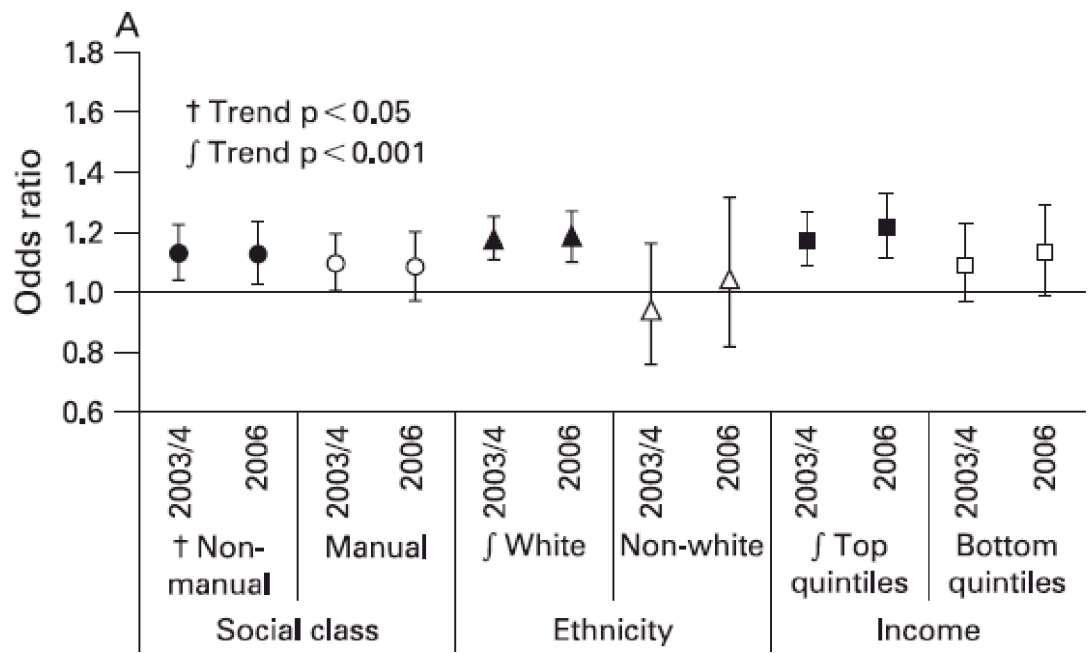
# Prevalence (%) of inactivity in 4,286 women aged 60-79 years by number of individual level adverse socioeconomic position indicators from across the life course



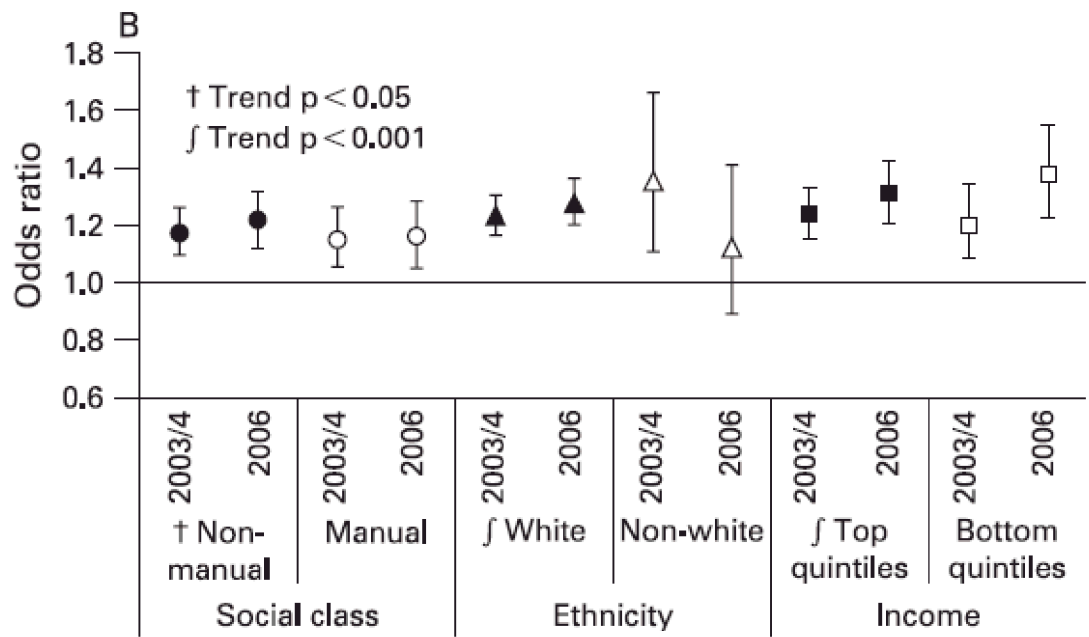
**Proportion of children who walk to school and average distance to school for 11-16 year-olds by SEG of HoH: 1991/1993 & 2002**

	<b>1991/1993</b>		<b>2002</b>	
	<b>Walk</b>	<b>Average distance</b>	<b>Walk</b>	<b>Average distance</b>
Professional/managerial/clerical	38.0	3.7	36.4	4.1
Skilled & unskilled manual	54.5	2.5	41.2	3.4

# **Trends in physical activity by SES**



Men



Women

# Summary I

- In adults, leisure time physical activity is more prevalent in higher SES groups.
- Transport activity is higher in lower SES groups.
- Sedentary activities (TV viewing) are higher in lower SES groups.

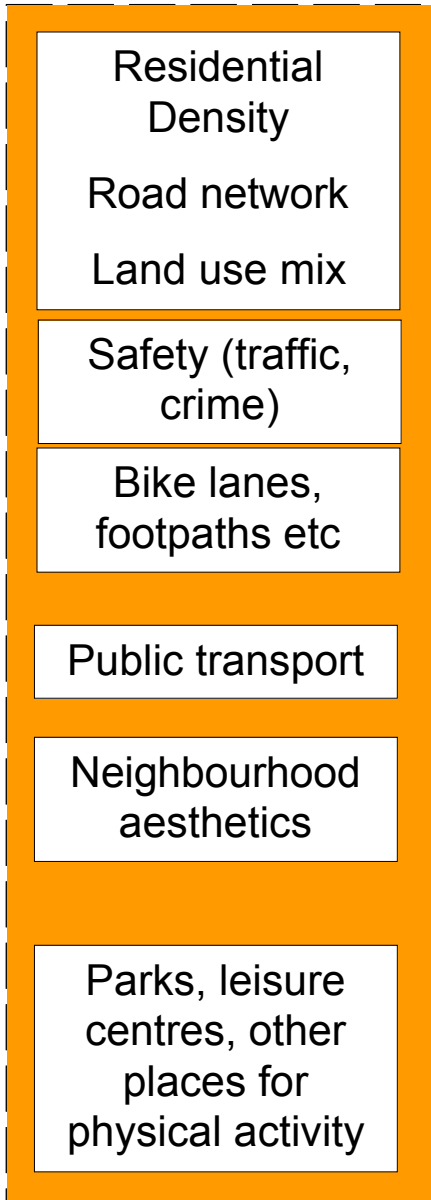
# Discussion points

- Higher SES groups voluntarily engage in active leisure time pursuits that they find rewarding.
- Lower SES groups' participation in physical activity is more out of necessity and they aspire to do less of it. E.g. acquire a car.
- 'Working class' families find watching TV etc in their non-work time relaxing and rewarding after a 'hard days work' more so than engaging in leisure time physical activity.

# Possible determinants of physical activity inequalities

Neighbourhood

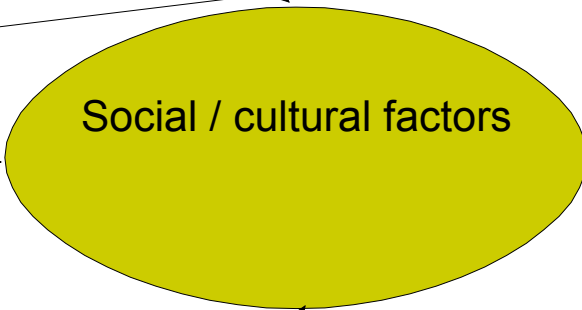
Individual



Demographics



Social / cultural factors



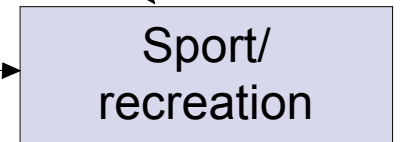
Psychosocial factors



Active transport

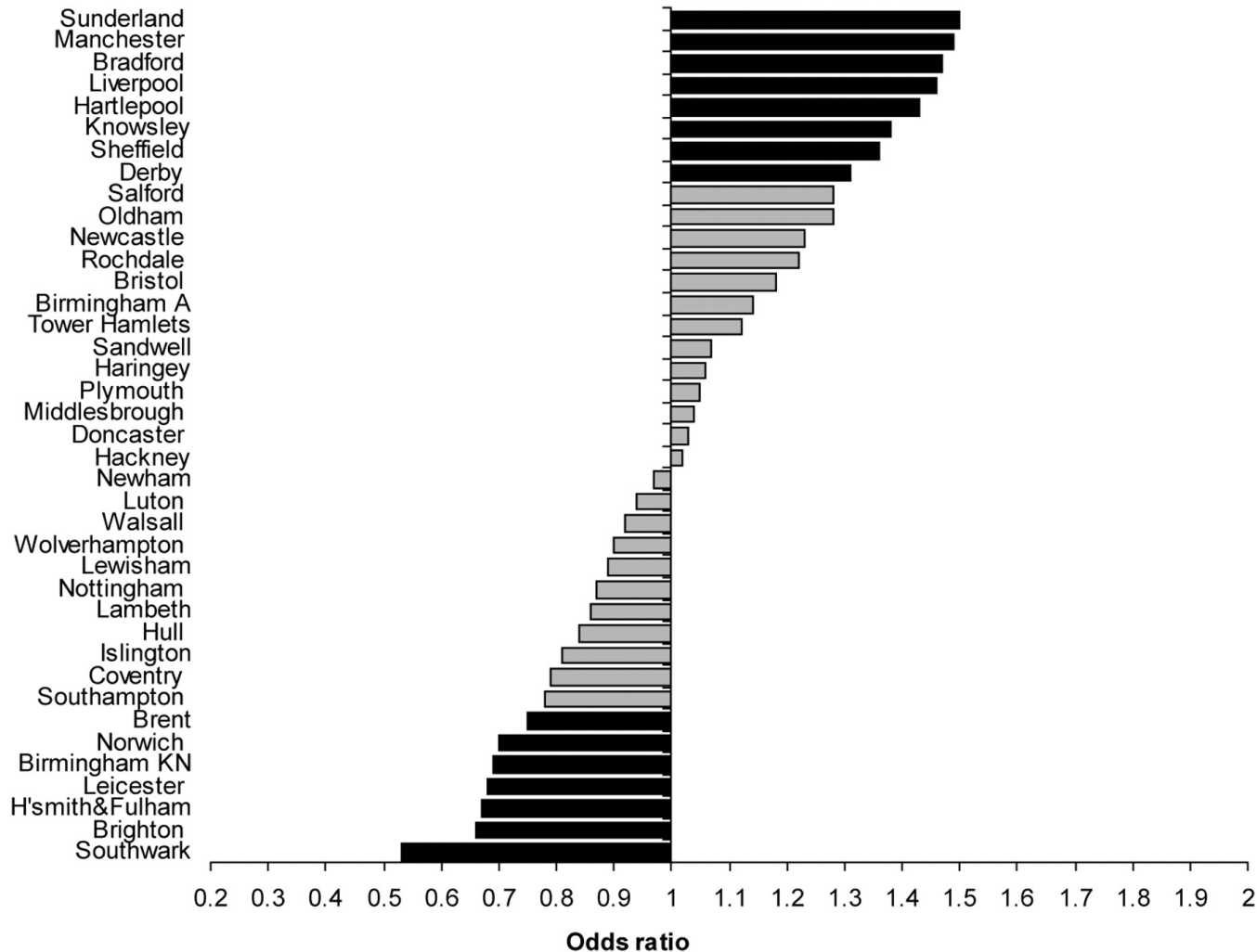


Sport/ recreation



# **Socio-cultural factors**

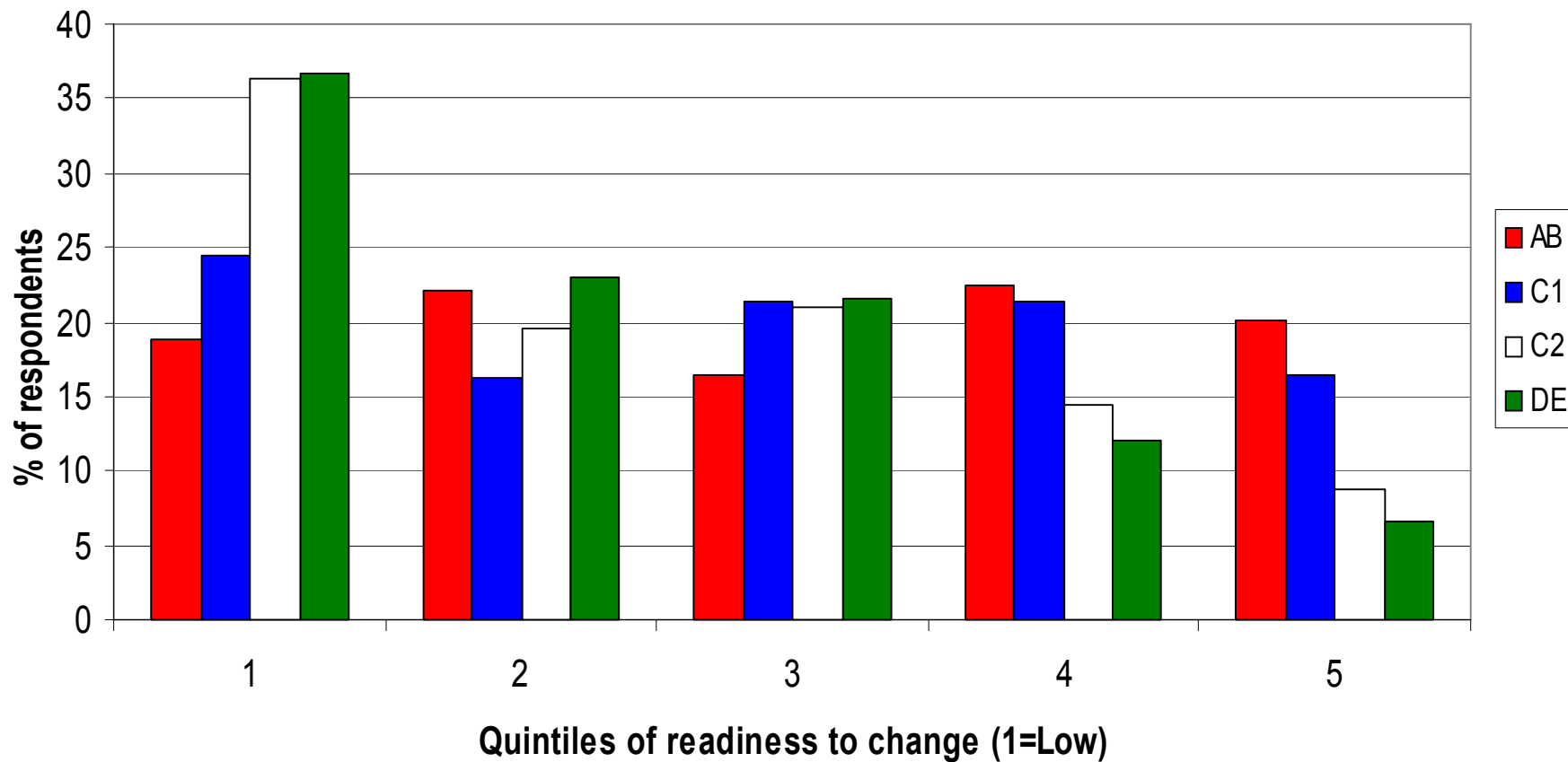
# Adjusted odds ratios for low physical activity by partnership (adjusted for respondents' age, gender, self-reported ethnicity, education level, and recent mobility; household composition)



Ellis, E. et al. J Public Health 2007 29:27-34; doi:10.1093/pubmed/fdl089

# **Psychosocial factors**

## Readiness of sedentary adults to take up regular physical activity by social class



# SES differences in attitudes to health and health behaviour

- Lower SES associated with
  - less health consciousness (less likely to think about doing things to stay healthy);
  - stronger beliefs about the influence of chance on health;
  - lower self rated health;
  - less thinking about the future

# **SES differences in attitudes to health and health behaviour**

- Self rated health associated with lower physical activity
- Low health consciousness associated with lower physical activity

# Motives for physical activity by highest level of education achieved

Percentage of EU participants reporting motives

	Primary	Secondary	Tertiary
Release tension	23	31	35
To be outdoors	25	18	16
Maintain good health	46	40	42
To socialise	15	14	11
Control weight	12	14	12
For fun	6	11	13
To get fit	26	30	38

Zunft et al PHN 1999;2:153-160

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# Barriers to physical activity by income

Percent citing each barrier

	<£5k	£5-10k	£10-15k	>£15k
Lack of motivation	37.9	46.8	50.3	53.2
Lack of leisure time	22.4	41.3	61.2	64.6
Lack of money	57.0	35.1	11.7	13.6
Lack of transport	17.4	11.7	6.2	7.3
Illness/disability	24.6	13.6	7.3	5.8

Chinn et al JECH 1999;53:191-192

# Summary II

- Physical activity motives and barriers are different between SES groups rather than greater or fewer.

# Discussion points

- Lower SES groups are less ready to change their physical activity and less inclined to see it as an investment in future health – that is more a matter of chance.
- Higher SES groups motives and barriers relate to predictions of anticipated future gains and losses whereas lower SES groups relate to observations about the here and now.
- Lower SES groups reporting of barriers may be a response to external pressures to behave in certain ways they don't feel they have control over – they protect their autonomy.
- There may be a culture of sedentary living – particularly among former industrial towns

# **Environmental factors**

# Percentage of data zones with city, district or local parks within 500 m of their centroids by SIMD quintile

SIMD quintile	Within 500 m of a green space		Not within 500 m of green space		Total	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
1 Most affluent	65	46.8	74	53.2	139	100.0
2	52	37.4	87	62.6	139	100.0
3 Middling	57	41.0	82	59.0	139	100.0
4	57	41.0	82	59.0	139	100.0
5 Most deprived	47	34.1	91	65.9	138	100.0
Total	278	40.1	416	59.9	694	100.0

Chi-Square Value = 5.18,  $p = 0.269$

# Density (per 1000) of physical activity facilities\* by IMD quintile in England

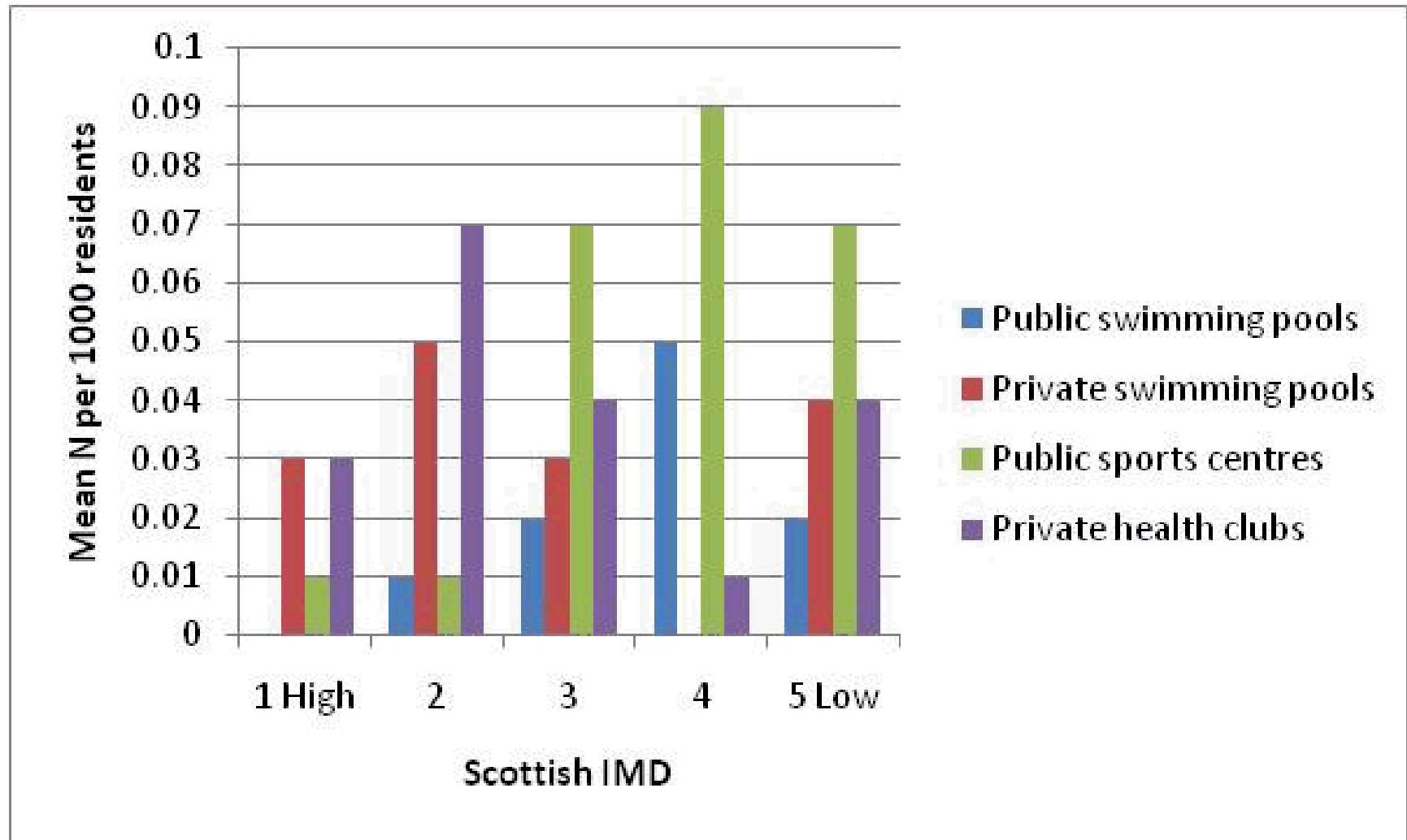
	<b>All</b>		<b>Public</b>		<b>Private</b>	
<b>IMD Quintile</b>	<b>Mean</b>	<b><i>n</i></b>	<b>Mean</b>	<b><i>n</i></b>	<b>Mean</b>	<b><i>n</i></b>
<b>1 (Least)</b>	<b>0.136</b>	<b>1324</b>	<b>0.069</b>	<b>670</b>	<b>0.068</b>	<b>653</b>
<b>2</b>	<b>0.119</b>	<b>1146</b>	<b>0.061</b>	<b>596</b>	<b>0.057</b>	<b>551</b>
<b>3</b>	<b>0.117</b>	<b>1127</b>	<b>0.058</b>	<b>538</b>	<b>0.061</b>	<b>589</b>
<b>4</b>	<b>0.107</b>	<b>1037</b>	<b>0.054</b>	<b>524</b>	<b>0.052</b>	<b>513</b>
<b>5 (Most)</b>	<b>0.093</b>	<b>918</b>	<b>0.050</b>	<b>491</b>	<b>0.044</b>	<b>427</b>
<b>Total</b>	<b>0.114</b>	<b>5552</b>	<b>0.058</b>	<b>2819</b>	<b>0.056</b>	<b>2733</b>
<b><i>P</i> value (ANOVA)</b>	<b>&lt;0.0001</b>		<b>&lt;0.0001</b>		<b>&lt;0.0001</b>	

IMD=Index of multiple deprivation

Hillsdon M et al, AJPM 2007; in press

\*Sports halls/gyms/swimming pools

# Density of facilities in Glasgow by area deprivation



# Summary III

- There is mixed evidence to indicate that lower SES groups have less access to opportunities for physical activity compared to higher SES groups.

# Discussion points

- Equity of access to opportunities to for physical activity is necessary but may not be sufficient.
- Understanding the relationship between the built environment and physical activity is still in its infancy and is more complicated than simply the proximity of destinations for activity.
- Differences between SES groups on perceived and observed environmental facilitators requires much better understanding.

# Why don't people change?

## The problem with them is ...

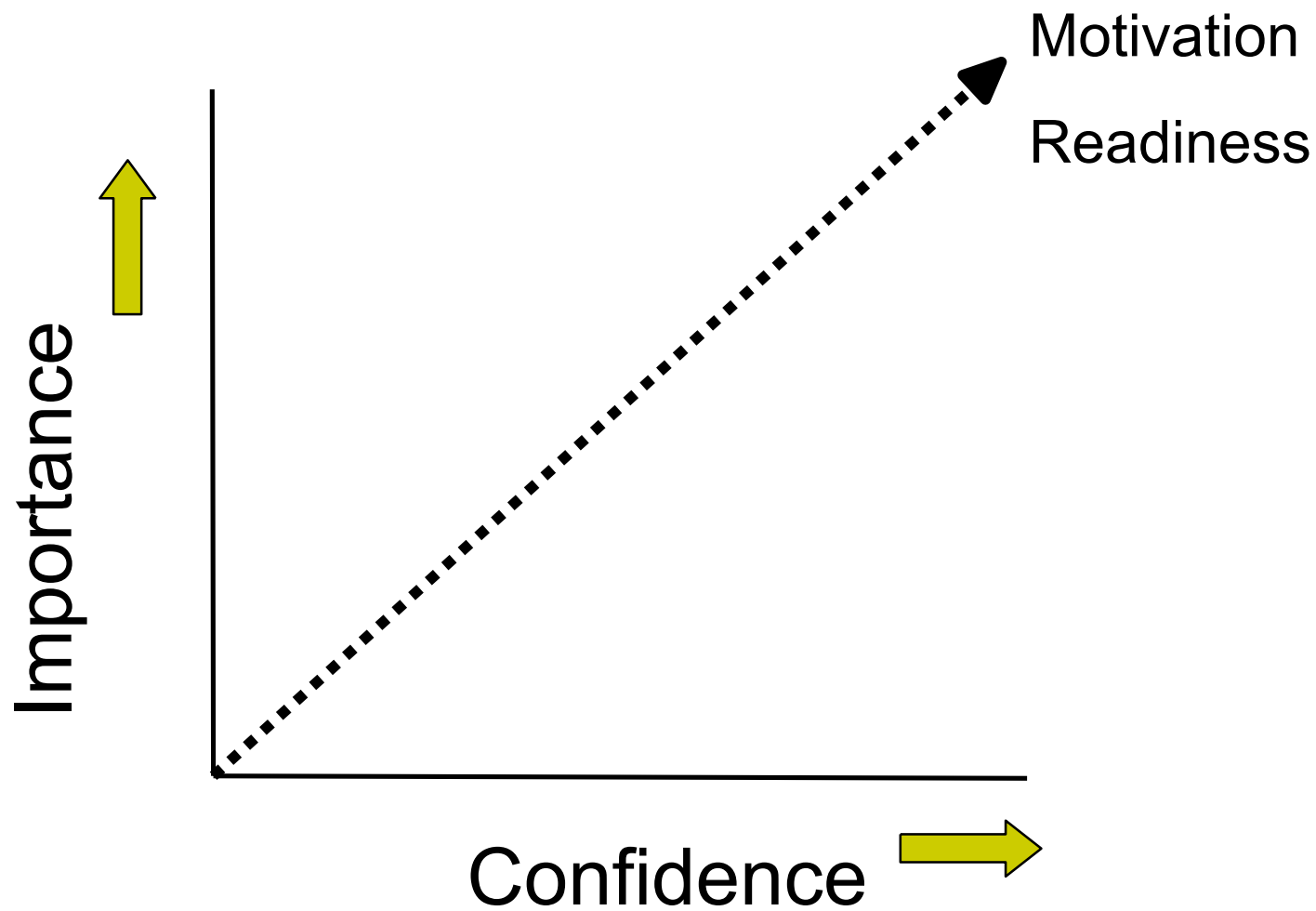
- They don't see (denial, insight, etc.)
  - *They don't realise they're not active enough*
- They don't know
  - *They don't know why physical activity is good for them*
- They don't know how
  - *They don't know how to increase their physical activity*
- They don't care
  - *They don't believe their lack of physical activity is a significant risk*

# What Does It Take?

## Four Common Solutions

- Give them **Insight** - if you can just make people see, then they will change
- Give them **Knowledge** - if people just *know* enough, then they will change
- Give them **Skills** - if you can just teach people *how* to change, then they will do it
- Make them “**concerned**” - if you can just make people feel *bad or afraid* enough, they will change

- Physical activity promotion efforts that:
  - Tell people they are not active
  - Tell people physical activity is good for them
  - Tell people that 'inactivity' is bad for them
  - Tell them how to change their physical activity
- Are likely to:
  - Promote concern and change in those with the personal and environmental resources to act.
  - Promote guilt, defensiveness and resistance in those who lack the personal and environmental resources to act.



# Conclusions

- Efforts to promote physical activity among lower SES groups should address environmental facilitators and barriers as well as individual factors.
- The influence of cultural factors (values and beliefs) between SES groups is relatively unknown but is likely to be a significant determinant of behavior.
- It is likely that successful interventions that reach inactive communities will:
  - 'Help people (individuals and communities) see that physical activity can lead to outcomes they value;
  - Will promote autonomy;
  - Increase confidence in ability to change;
  - Maximise opportunities for physical activity and minimise barriers