Overcrowding and Health

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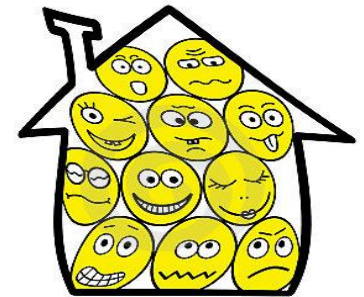
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Background

- Overcrowding
  - Used in many UK surveys
  - Health (Office of the Deputy Prime minister, 2004)

- Overcrowding as an indicator for material resources
  - An indicator used for area deprivation indices
  - Physical living space?

Background

- Overcrowding measures
  - PPR: Numbers of person / numbers of room excluding Kitchen and toilet
    - Overcrowding: >1.0 (ONS definition)
  - Bedroom Standard & Modified Bedroom Standard
    - A set of rules applied to derive ideal numbers for each household and assess differences with the actual numbers of the bedrooms

Project aim: Overcrowding and Health (WP13)

- – Which overcrowding measure is closely capturing the changes in household composition in the UK over time?
- – Which overcrowding measure is closely capture the negative health aspect of overcrowding?

Outline

- Harmonisation: Procedures and challenges
- A picture of overcrowding over time: Cross cohort comparisons
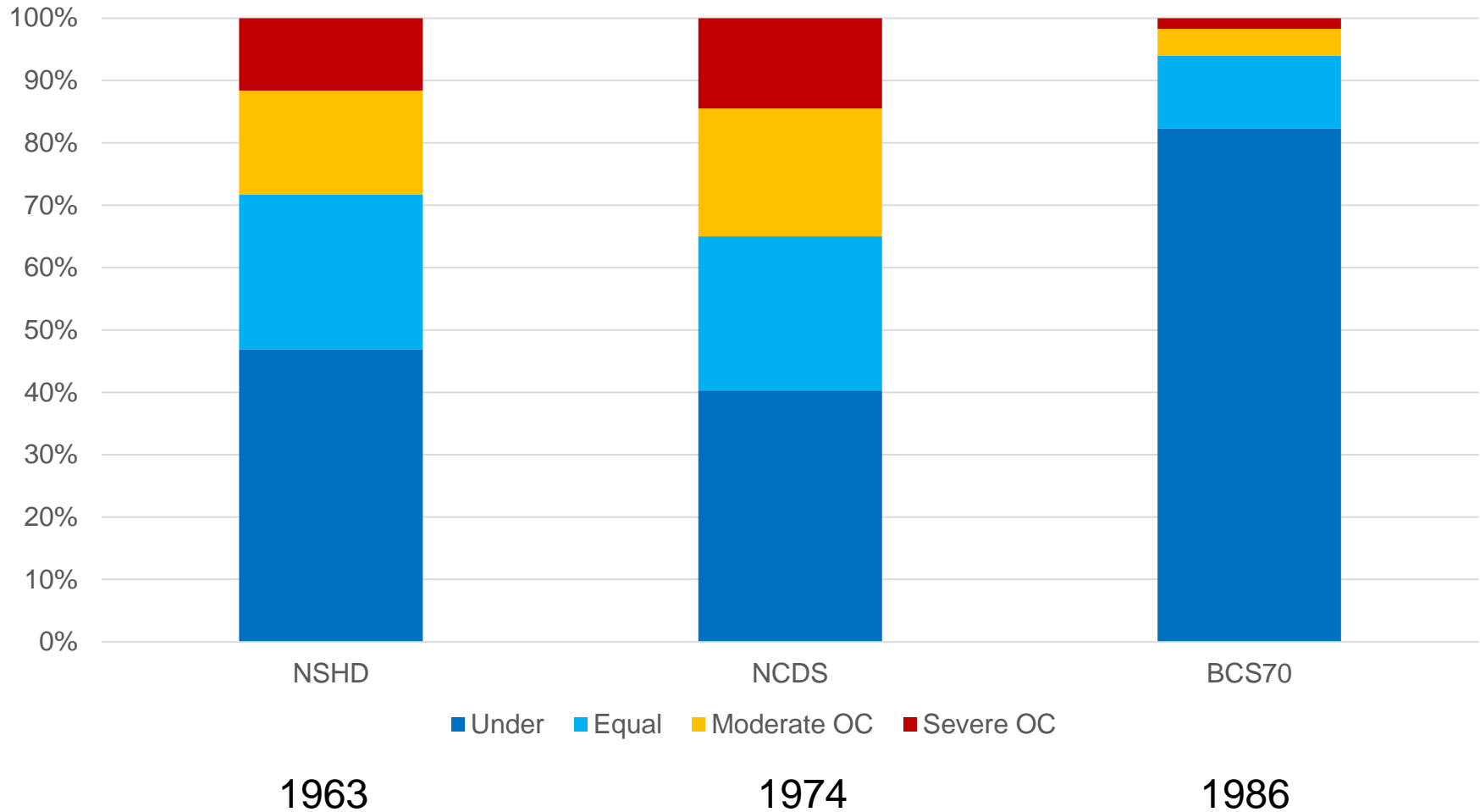- Validation and association with health

Harmonisation: Procedures and challenges

- Datasets used: NSHD, NCDS, BCS70, MCS, BHPS/USOC

- Requires:
  - Household information: sex, age
  - Rooms (excluding kitchen and toilets)
    - Bedrooms and total rooms.

- Not all datasets have required information
  - PPR – most of sweeps
  - Bedroom Standard/Modified bedroom
    - Only if information about the bedrooms are addressed
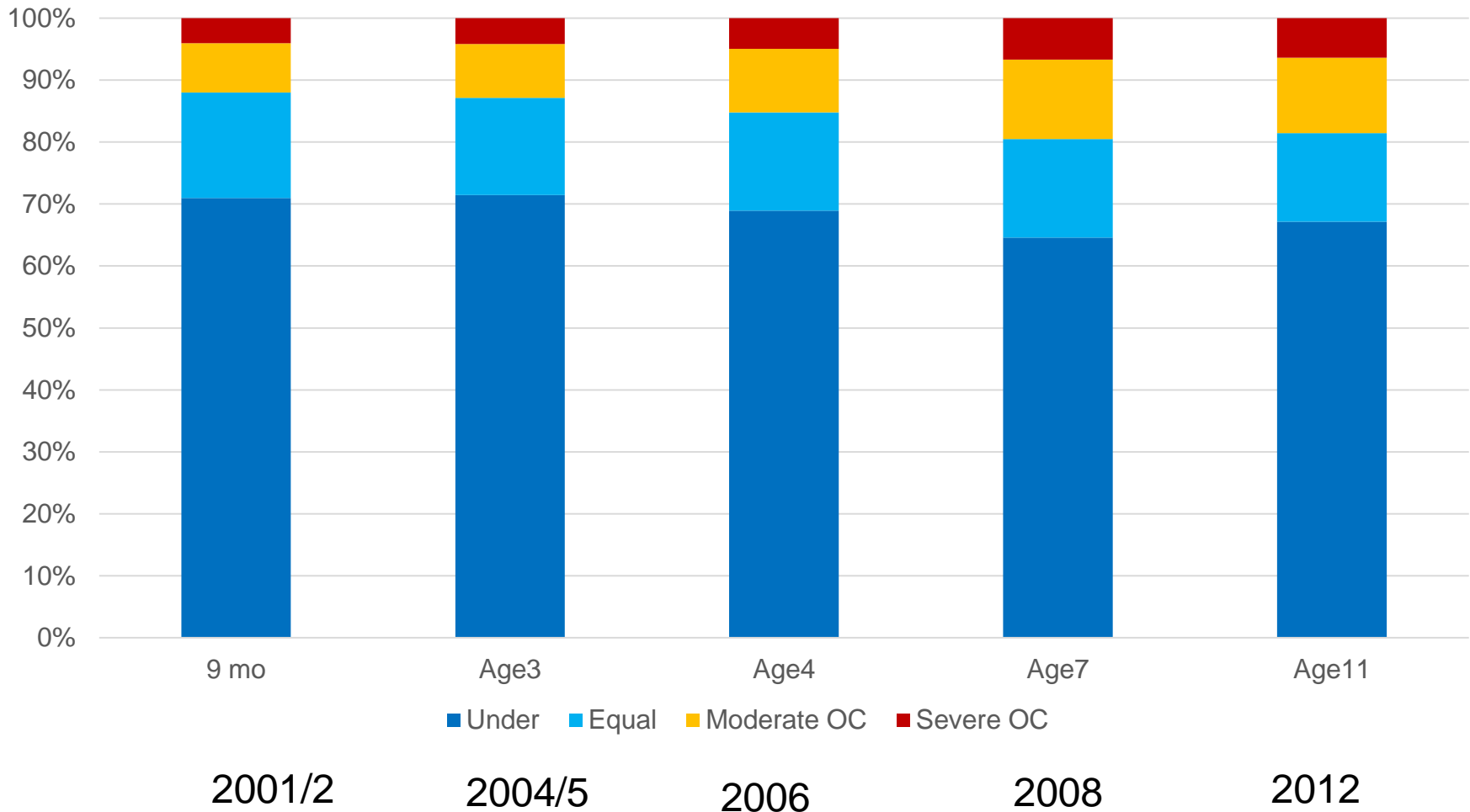
- Information were not collected consistently
  - NSHD & earlier NCDS sweeps:
    - Kitchen was included in Scotland
      - Big enough to be used as a living room
  - NCDS age 33
    - No key variable to identify solo living
- Derived PPR variables
  - Some do not have any raw information (i.e. rooms, people)

	NSHD	NCDS	BCS70	MCS	BHPS	USOC
PPR	Yes	Yes	Yes	Yes	Yes	Yes
BS	▲	▲	▲	No	▲	Yes
MBS	▲	▲	▲	No	▲	Yes

A picture of overcrowding at age 15/16 across cohort

Overcrowding in MCS during childhood

Validation: Methods

- Overcrowding
  - PPR (under<1 ;equal=1;moderate >1 or<1.5;severe >1.5)
  - BS (under <0, equal =0, moderate >0 or <2, severe >=2)
  - MBS (same as BS)
- Validating variables
  - Social position (household occupational social position)
    - NCDS & BCS70
  - Education (age left full time education)
    - NCDS & BCS70
  - Housing tenure
    - NCDS & BCS70
  - Income (USOC W1, W2)

Results:

NCDS	RGSC	Education	Tenure
PPR	0.27	-0.21	-0.30
BedS	0.23	-0.15	-0.29
MBedS	0.24	-0.17	-0.28

BCS70	RGSC	Education	Tenure
PPR	0.23	-0.16	-0.20
BedS	0.22	-0.08	-0.37
MBedS	0.23	-0.09	-0.37

USOC	W1 Income	W2 Income
PPR	-0.037	-0.048
BedS	-0.038	-0.049
MBedS	-0.041	-0.053

Overcrowding and health: Longitudinal associations

- OC measures and health/well-being variables (Crude, NCDS only)
  - Self rated health (poor/fair vs. good/excellent)
  - Life satisfaction (0-6 vs. 7-10 very satisfied)
  - Malaise (0-6 vs. 7-24 emotionally distressed)

Crude associations (OR, 95%CI) between overcrowding measures (NCDS age 33) and health variables (NCDS age 42)

	SRH@42	Life satisfaction@42	Malaise@42
OC33: equal	0.76(0.67-0.87)	0.87(0.77-0.98)	1.36(1.19-1.55)
Sbed33: equal	0.57(0.51-0.64)	0.68(0.57-0.90)	1.49(1.30-2.12)
MSBed33: equal	0.61(0.54-0.68)	0.70(0.64-0.78)	1.49(1.33-1.67)

	SRH@42	Life satisfaction@42	Malaise@42
OC33: mod	0.49(0.42-0.59)	0.71(0.61-0.84)	1.66(1.39-1.99)
Sbed33: mod	0.56(0.44-0.72)	0.72(0.57-0.90)	1.66(1.23-2.13)
MSBed33: mod	0.50(0.40-0.63)	0.71(0.57-0.89)	1.73(1.37-2.19)

	SRH@42	Life satisfaction@42	Malaise@42
OC33: severe	0.53(0.40-0.72)	0.74(0.55-0.97)	1.97(1.47-2.64)
Sbed33: severe	0.62(0.33-1.14)	0.64(0.36-1.12)	1.81(0.99-3.32)
MSBed33: severe	0.69(0.37-1.27)	0.73(0.42-1.28)	1.78(0.99-3.18)

Summary and Discussion

- Overcrowding measures across secondary datasets
  - PPR are more readily accessible
  - Caution needed in interpretation
    - Kitchen included if big enough in earlier – should be re-calibrated?
    - Definition of the living space
      - Focused on bedroom only?

- Validation
  - 3 OC measures correlated with other SES
  - Possible cohort differences in the choice of other SES such as education and income

- Longitudinal associations with health
  - 3 OC measures showed expected associations
  - The severe OC category, especially for BS/MBS is likely to be underpowered in contemporary datasets.

- Verdict?
  - For SES
    - Any would do
    - Should stick to PPR?
  - For physical conditions of living space
    - Bedroom as a sleeping space
      - BS/MBS should be used
  - Picture of overcrowding changing rapidly
    - Changes in family composition, housing
      - Definition of the 'space' may change over time.
- We need all measures, taken consistently

Acknowledgement

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