Measuring capabilities among individuals with mental health: the OCTET study

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Outline

- Background
  - Economic evaluations and QALYs in the mental health context
  - The 'capability approach' & its relevance to the OCTET study
- Development of the OxCAP-MH instrument
- Baseline analysis & results
- Further research plans

Economic evaluations & the QALY approach

- Economic evaluations:
  - One of the major areas of health economics
  - Compare alternative courses of action in terms of their costs and outcomes
- QALY (quality adjusted life year):
  - Reference case outcome measure for EEs in many countries (e.g. UK)
  - Considers impact on both length and health-related quality of life in a composite measure
  - QoL measured on a 0-1 scale (1=full health, 0=death)
  - Generic (comparable across interventions and individuals)
  - Cost-effectiveness threshold: £20,000-£30,000/QALY (UK), $50,000/QALY (USA)

The mental health context

- Significant social challenges: stigma, discrimination & limitations in relations, societal role, self-support
- Complex, multi-level interventions to address both health and social impairments
- Deinstitutionalisation -> health and social care closely linked/integrated at multiple levels (planning, financing, provision and evaluation)
- QALYs focus on health impact -> likely underestimation of the full welfare impact of interventions

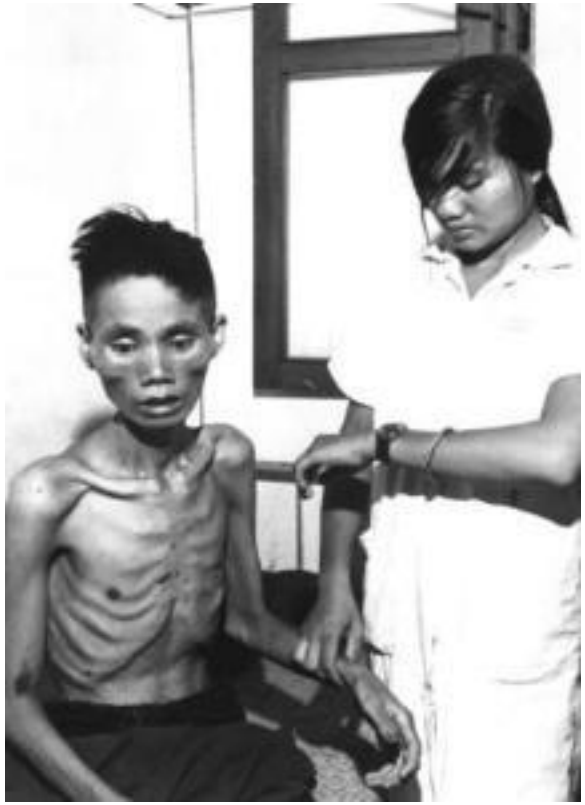
The capability approach

- Amartya Sen in 1980's
- Alternative theoretical approach to welfare assessment:
  - Not only functional outcomes but also capabilities (things that people are free to do or be) should be included
- Central concepts: intrinsic value of freedom of choice, multi-dimensionality, equity, objective valuation of welfare
- So far very influential in development economics (UNDP HDI), but limited applications in the health and health care context

Functioning vs. Ability to function

- Fasting

Starvation



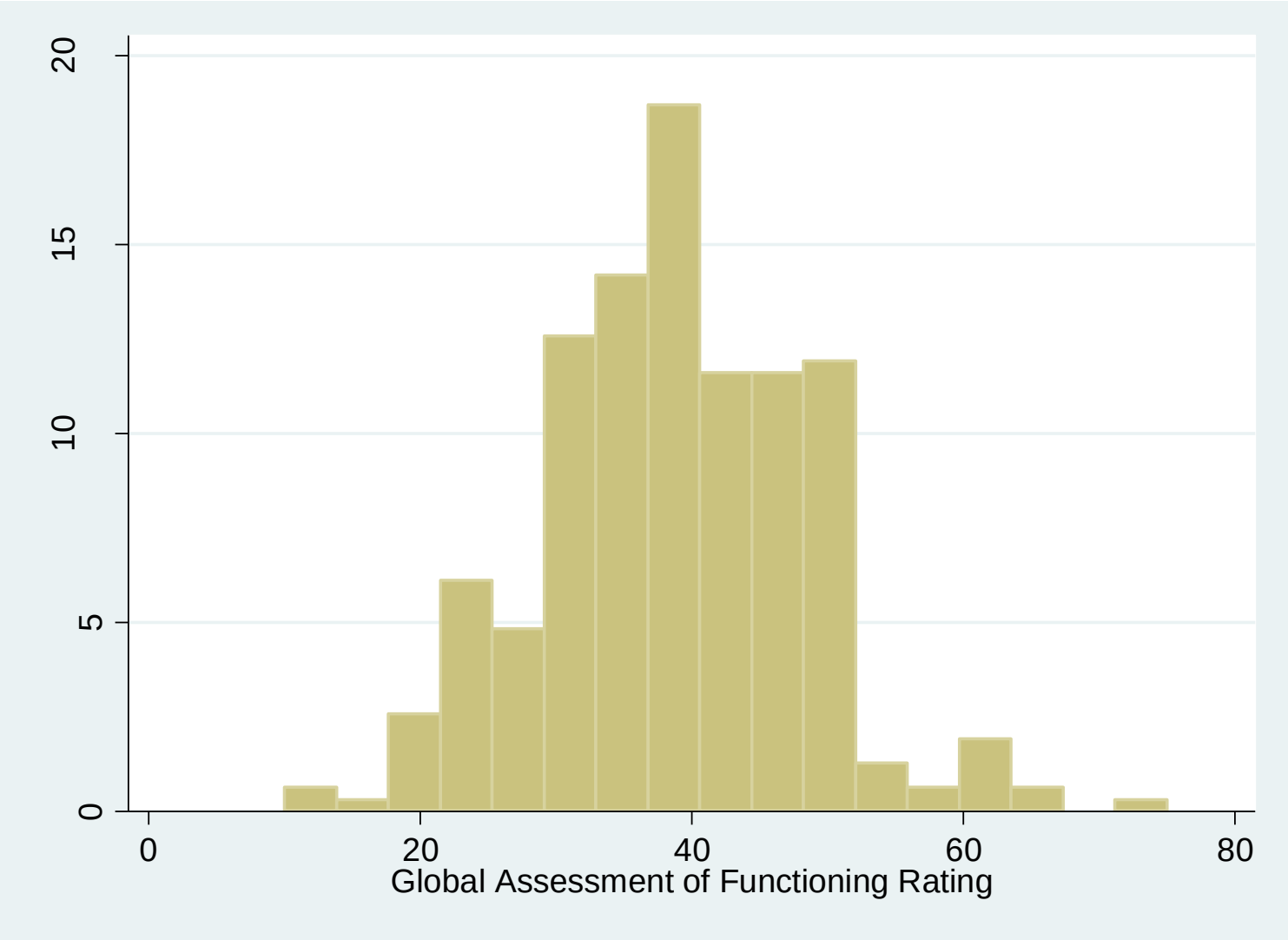
The OCTET study

- Oxford Community Treatment Order Evaluation Trial (2008-2012)
- Patients with psychotic disorders detained in hospital
  - CTOs vs. Section 17 leave
  - 12 months follow-up after randomisation
  - Potential trade-off between reduced readmission to hospital and increased degrees of coercion
  - Clinical outcome measurement: hospital readmission, coercion (*McArthur leverage interview)*, social functioning (*GAF*)
  - Economic evaluation: HRQoL (*EQ5D*)

Cohort characteristics (n=333)

Variable		Variable	
Age, years: mean(SD)	39.57 (11.42)	Formal education, years: mean(SD)	11.87(1.94)
Male: %	67	Length of diagnosis, years: mean(SD)	14.29 (10.30)
Employment: %		Clinical diagnosis: %	
Regular paid	1	Schizophrenia, schizotypal and delusional disorders	85
Voluntary/protected/sheltered	1		
Job seekers allowance	4	Other psychotic disorders (including bipolar)	15
Sickness benefit	88		
Unemployed	4		
Other(student/pensioner)	3		
Marital status: %		BMI: %	
Single (never married)	74	Underweight	2
Married/co-habiting	9	Normal	29
Separated/divorced	17	Overweight	28
Missing	1	Obese	20
		Missing	22
Accommodation: %		GAF (n=309)	38.69 (9.63)
Independent	71	EQ-5D utility (n=277)	0.72 (0.28)
Supported	17	EQ-5D VAS (n=275)	65.70 (23.75)
Homeless	11		
Missing	1		

Social functioning: GAF



The GAF scale

- 1-10: Persistent danger of severely hurting self or others, persistent inability to maintain minimal personal hygiene
- **31-40: Impairments in reality testing or communication (e.g. speech is at times illogical, obscure or irrelevant), major impairment in several areas of functioning, such as work or school, family relations, judgment, thinking, or mood (e.g. man avoids friends, neglects family, unable to work)**
- 41-50: Serious symptoms (e.g. suicidal ideation, severe obsessional rituals, frequent shoplifting), any serious impairment in social, occupational, or school functioning (e.g. no friends, unable to keep job)
- 91-100: No symptoms, superior functioning

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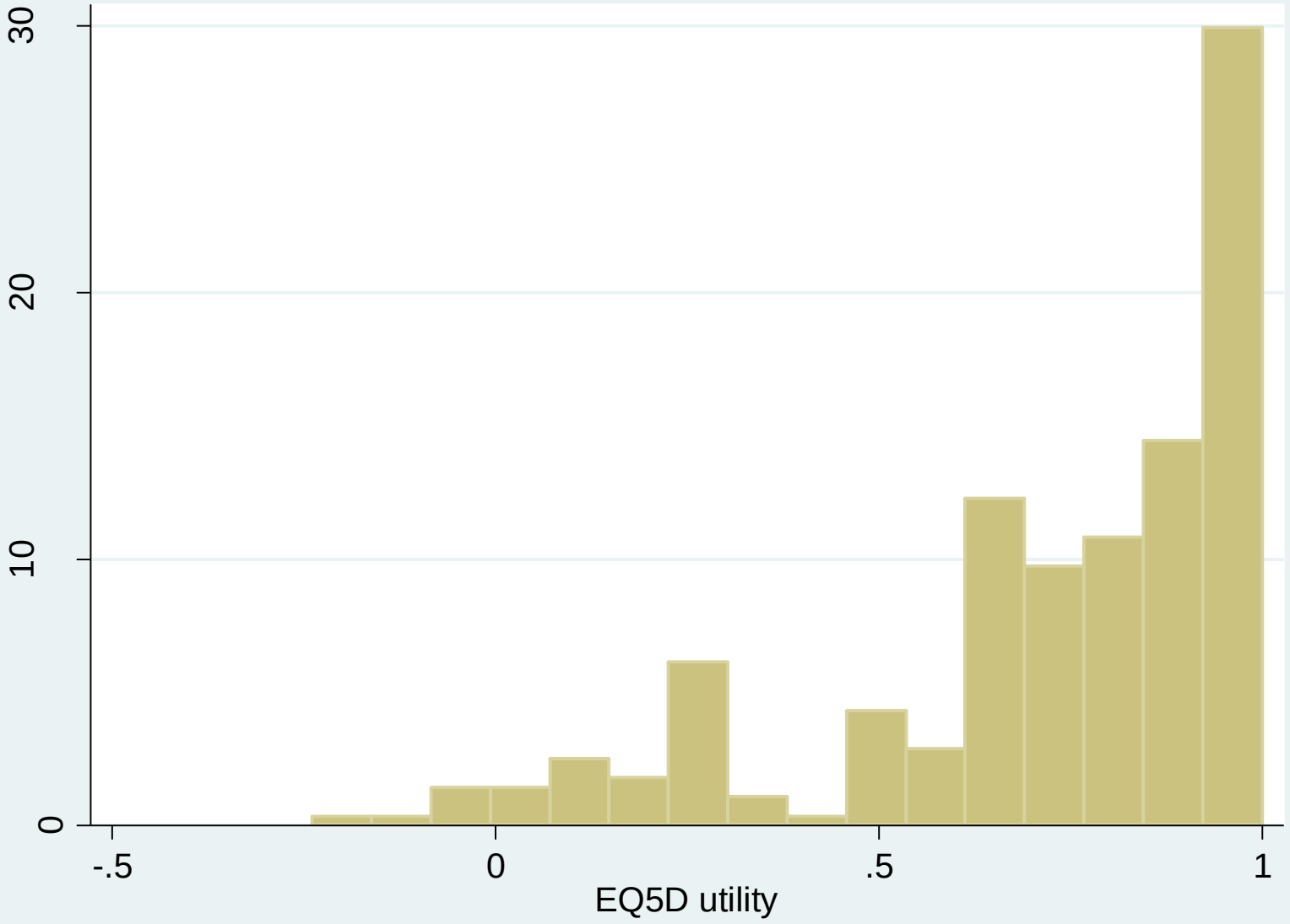
QoL: EQ5D utility

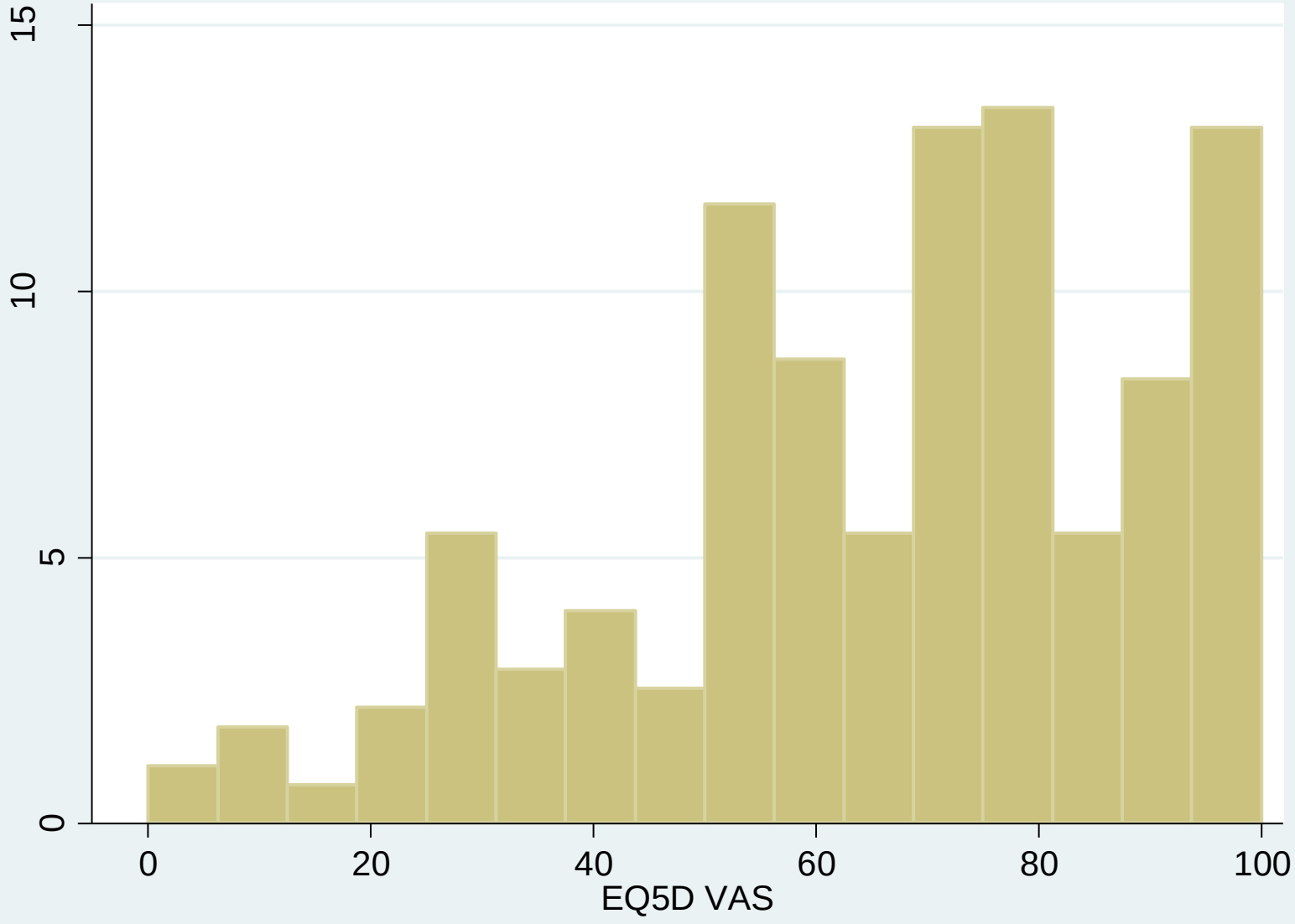


OCTET vs. UK norms

	Males (n)		**Females (n)**	
Age (years)	OCTET	UK norms*	OCTET	UK norms*
<25	0.84 (25)	0.94	0.71 (3)	0.94
≥25 to <35	0.78 (62)	0.93	0.71 (16)	0.93
≥35 to <45	0.72 (59)	0.91	0.75 (29)	0.91
≥45 to <55	0.78 (25)	0.84	0.54 (23)	0.85
≥55 to <65	0.73 (21)	0.78	0.56 (10)	0.84
≥65 to <75	0.055 (1)	0.78	0.21 (3)	0.78
≥75	NA	0.75	NA (0)	0.71

* Kind et al. 1999

QoL: EQ5D VAS



Relevance of the capability approach

- Existing outcome measures to assess quality-of-life and social challenges focus on functioning
- Coercion is expected to directly impact also on service users' freedoms to be or do things people usually have reason to value -> synergies with capability approach
- No previous application in (mental health) economic evaluations
- No applied instrument available for clinical study settings

Phase I: Instrument development

- Development of a capabilities instrument suitable for the direct estimation of capability sets in this context
- Based on earlier work by
  - Anand et al. (Open University): OCAP
    - 90 questions for >60 indicators to survey capabilities and well-being (BHPS)
    - Reflects Nussbaum's 10-item central human capabilities list
  - Lorgelly et al. (University of Glasgow): OCAP-18
    - Refined OCAP into an 18-item capability instrument
    - Validated for the evaluation of public health interventions

The OxCAP-MH

- Adaptation of OCAP-18
  - Expert focus group discussions
  - Piloting with patients
- Focused on:
  - Content validity (applicability, relevance and interpretation of questions)
  - Feasibility (underlying cognitive task)
- Findings:
  - Some Qs not applicable in this context (e.g. ‘discrimination at work’)
  - Additional important indicator identified (‘access to interesting activities’)
  - Some questions needed rewording or turning into a statement/two phase question (e.g. ‘life expectancy’)
  - Ordering of Qs crucial for successful completion
  - Response cards to ease cognitive task

Structure

10 Central Human Capabilities	OCAP-18	OxCAP-MH
Life	Life expectancy	Life expectancy
Bodily integrity	Daily activities Suitable accommodation	Daily activities Suitable accommodation
Bodily health	Neighbourhood safety Potential for assault	Neighbourhood safety Potential for assault
Senses, imagination & thought	Freedom of expression Imagination and creativity	Freedom of expression Imagination and creativity
Emotions	Love and support Losing sleep	Love and support Losing sleep
Practical reason	Planning one's life	Planning one's life
Affiliation	Respect and appreciation Social networks Discrimination	Respect and appreciation Social networks Discrimination
Species	Appreciate nature	Appreciate nature
Play	Enjoy recreation	Enjoy recreation
Control over one's environment	Influence local decisions Property ownership Employment discrimination	Influence local decisions Property ownership Access

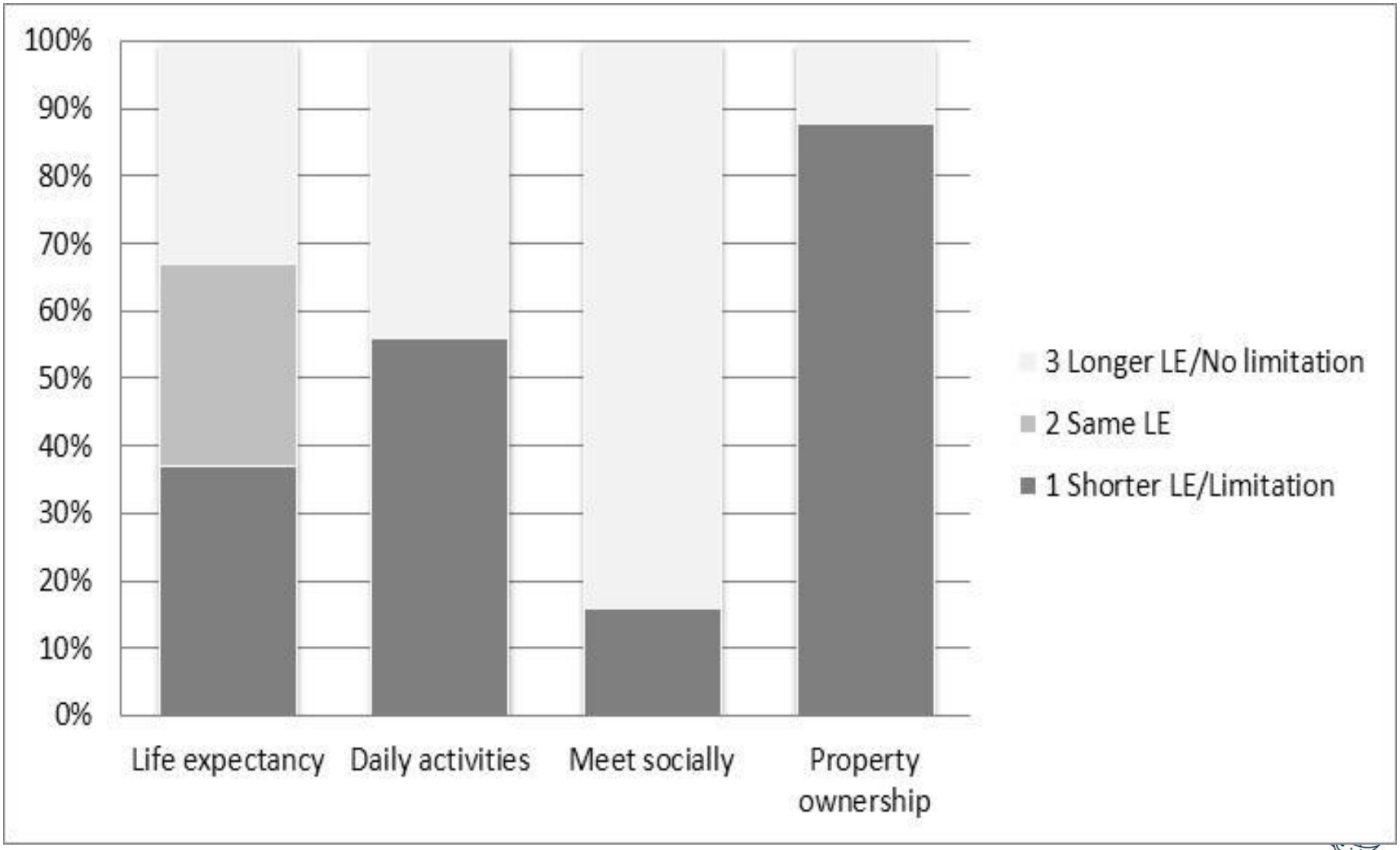
Modifications

OCAP-18	OxCAP-MH
Are you able to meet socially with friends, relatives or work colleagues?	Are you able to meet socially with friends or relatives?
At present, how easy or difficult do you find it to enjoy the love, care and support of your family and friends?	I find it easy to enjoy the love, care and support of my family and friends.
In your current or any future employment, how likely do you think it is that you will experience discrimination (e.g. because of your race, gender, religion, sexual orientation, age, or health)? Outside of any employment, in your everyday life, how likely do you think it is that you will experience discrimination (e.g. because of your race, gender, religion, sexual orientation, age, or health)?	A) How likely do you think it is that you will experience discrimination? B) On what grounds do you think it is likely that you will be discriminated? Race/ethnicity, gender, religion, sexual orientation, age, health or disability (including mental health). *(Recorded 3 most likely reasons if answer is 'Very likely' or 'Fairly likely' to part A.)*
	I have access to interesting forms of activity (or employment).
Until what age do you expect to live, given your family history, dietary habits, lifestyle and health status?	The average life expectancy in the UK is 77 years for men and 81 years for women. Some people think they are going to live longer than the average person whilst other people believe they are going to live shorter that the average person. A) Given your family history, dietary habits, lifestyle and health status, do you expect to live … longer/same/shorter than average? *B) Elicitation of exact age by research nurse if answer is longer/shorter to part A.*

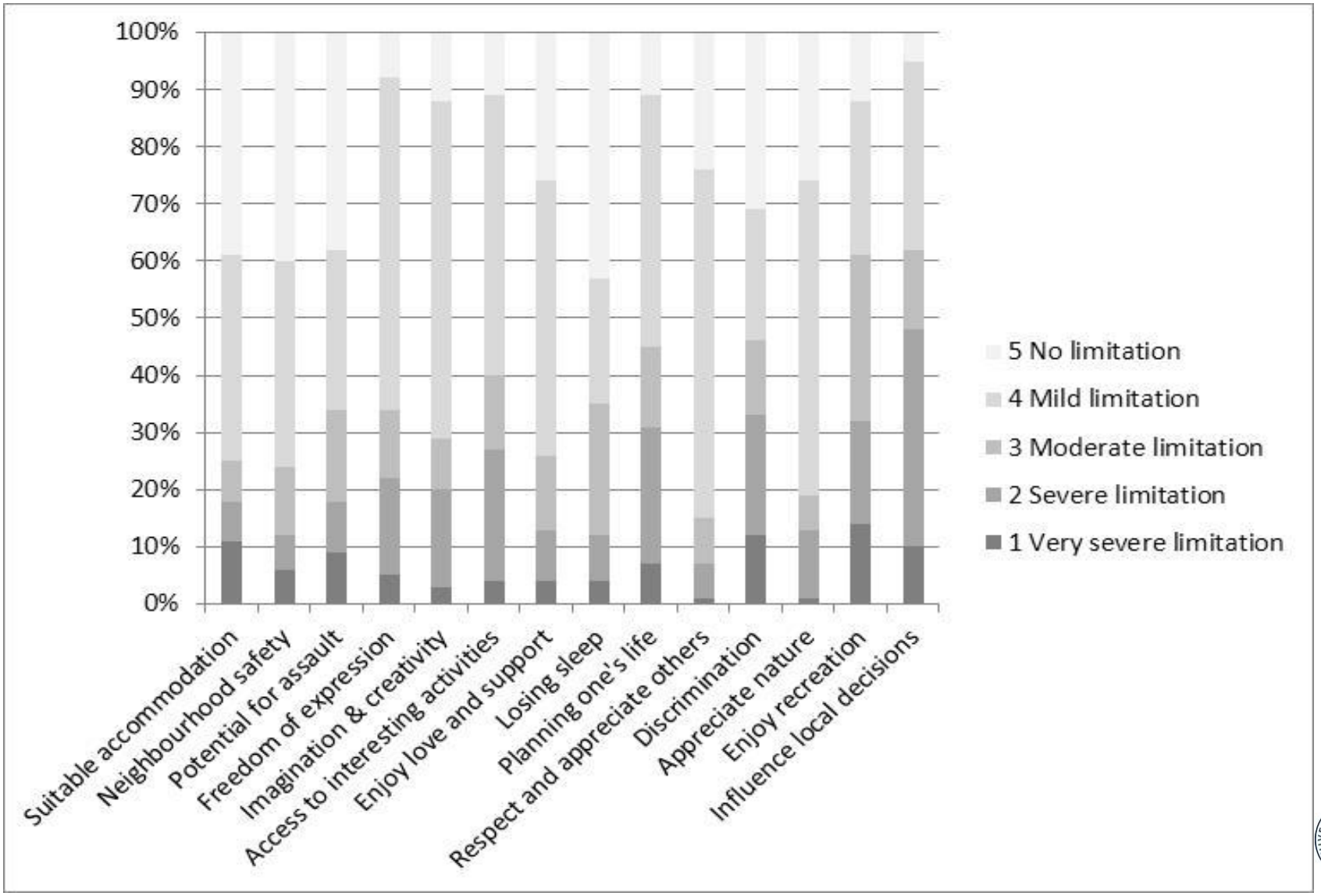
Phase II: Baseline analysis

- Profiling approach
  - Exploration of capability domains most affected by severe mental health problems
- Single index value development
- Multiple regression
  - association with sociodemographics (age, gender, illness duration, primary clinical diagnosis)
  - correlation with other measures of well-being (GAF, EQ-5D)

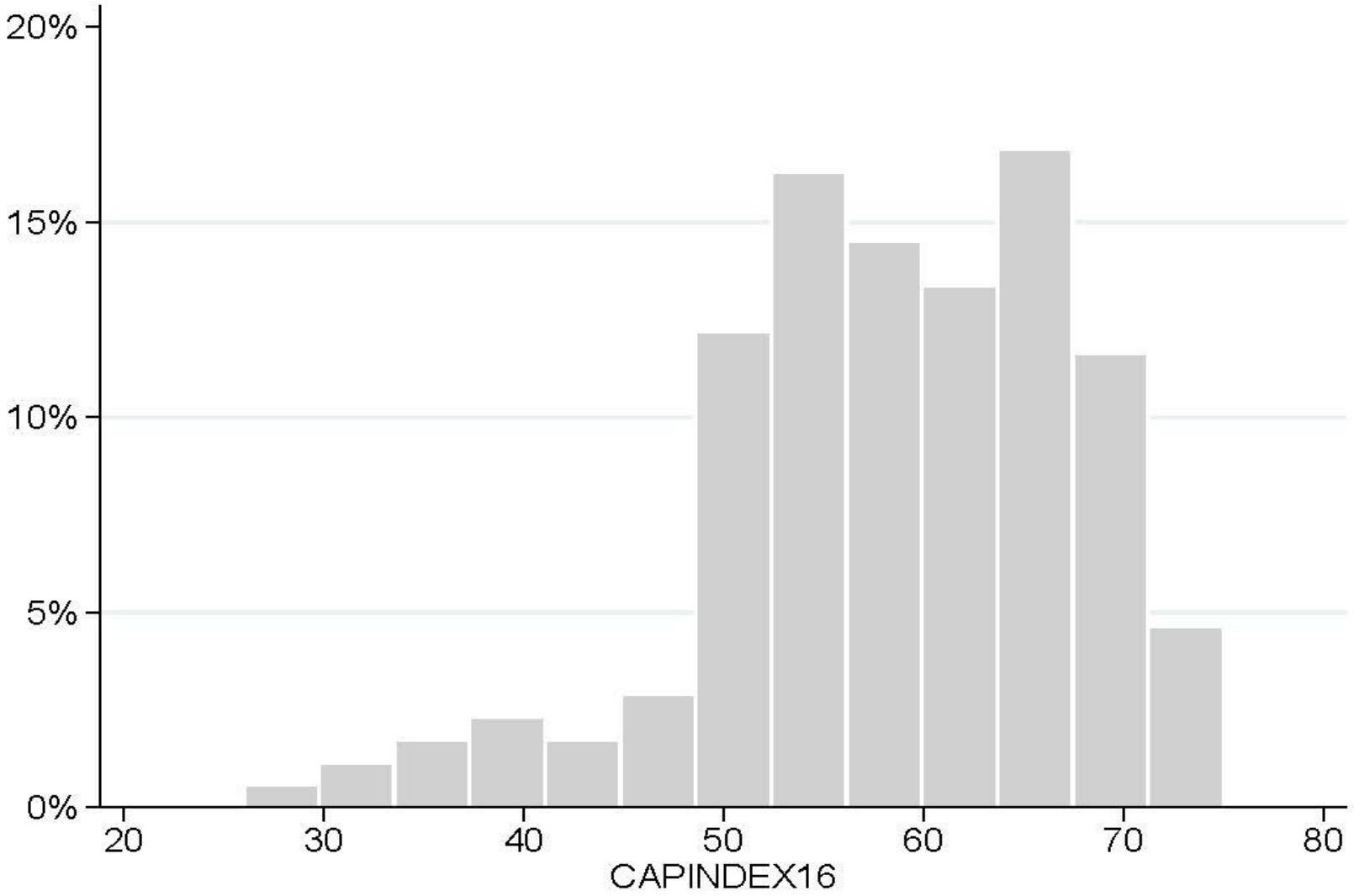
Capability domain scores (L3, L2)



Capability domain scores (L5)



Capability index (16D, n=172)

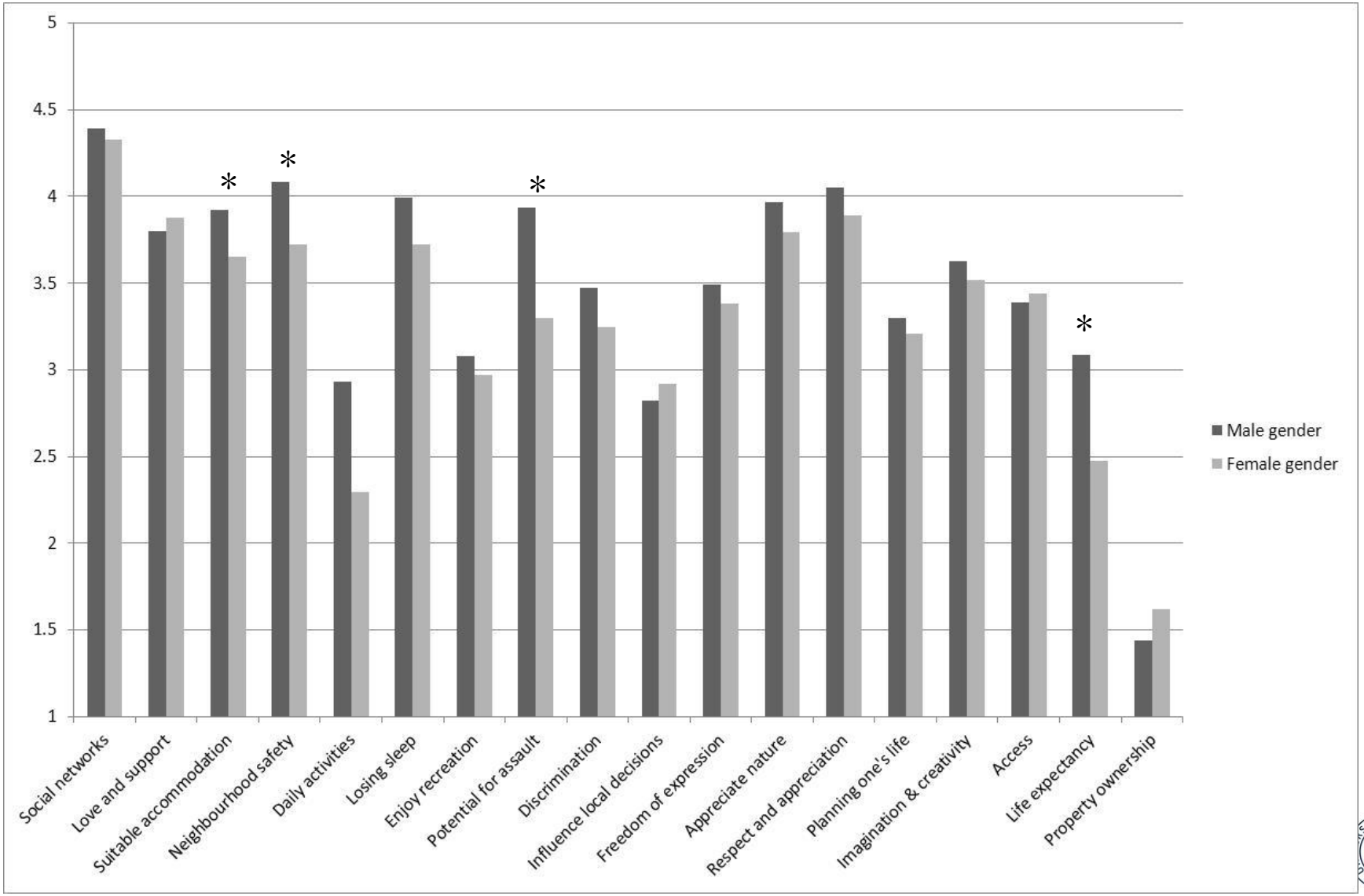


Associations of well-being

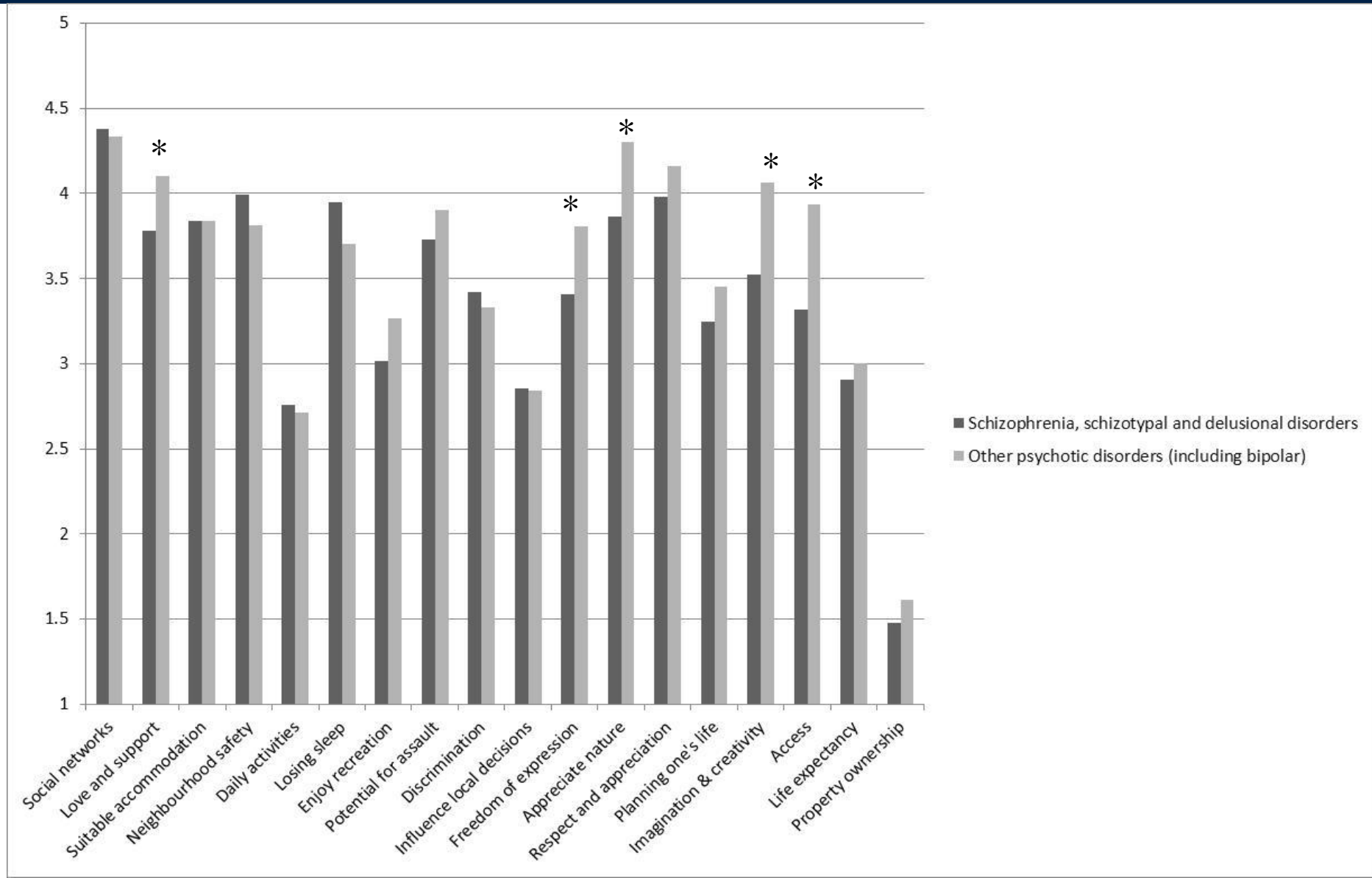
Scales	n	_cons		Age (years)		Female gender		Other psychotic disorders (including bipolar)		Illness duration (years)	
		β	p	β	p	β	p	β	p	β	p
GAF (0-100)	304	40.82	0.000*	-0.04	0.579	0.63	0.604	2.14	0.171	-0.08	0.264
EQ-5D VAS (0-100)	271	72.94	0.000*	0.07	0.679	**-8.95**	0.004*	4.83	0.234	**-0.58**	0.002*
EQ-5D utility (0-1)	274	0.85	0.000*	-0.00	0.898	**-0.10**	0.007*	0.01	0.885	**-0.01**	0.007*
CAPINDEX16 (16-80)	172	59.88	0.000*	0.05	0.604	**-3.32**	0.040*	**5.16**	0.026*	**-0.22**	0.033*

Gender effect

(1= Very severe limitations, 5= No limitation)



Effect of primary clinical diagnosis
(1= Very severe limitations, 5= No limitation)



Summary of baseline results

- Feasible instrument (90%-68% item response rate)
- Content validity (except for life expectancy and property ownership questions)
- Significant correlations with other measures of well-being (construct validity)
  - Strongest correlation with EQ-5D VAS scores (corr=0.514)
- Most affected capability domains:
  - Daily activities
  - Influencing local decisions
  - Enjoying recreation
  - Planning one's life
  - Discrimination

Phase III: Longitudinal analysis

- Ongoing
- Correlation between capabilities and different levels of coercion
- Sensitivity to changes of well-being/coercion over time
- Trial outcome measurement
- Economic evaluation

Phase IV: Further research

- Perceived vs. objective capabilities
  - Adaptation
  - Altered perception: delusion, mania, depression
  - Effect of coercion
  - Direct comparability with general population values
- Further psychometric validation
- Context specificity
  - Implementation in other UK-based studies (IPS-Lite, MINI, OXTEXT6)
  - Possible cross-country adaptation

Thank you!

Any questions?