

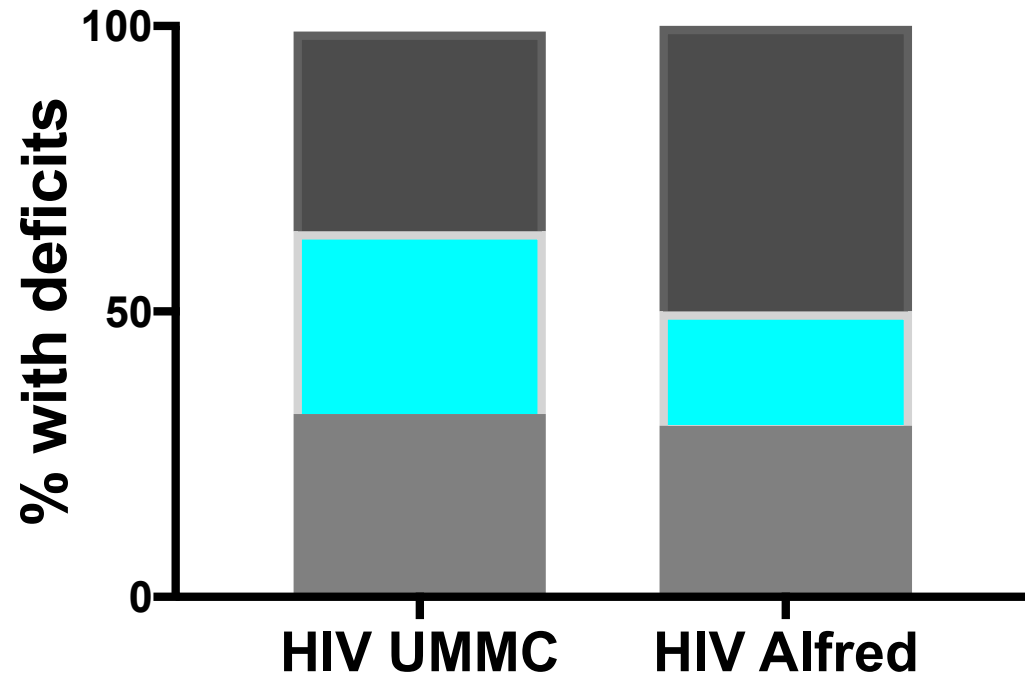
# Drivers for mental health issues among young and old HIV-infected individuals and opportunities for intervention

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# Under-diagnosed and under-treated



# Mental health and aging



**Fried's Frailty Phenotype**

■ Physical ■ Psychosocial ■ Functional

- Malaysian HIV and Aging Study (n=329; median age = 43 years)
  - 1 in 3 socially isolated; independent risk factor for geriatric syndromes

(Rajasuriar R *et al.* AIDS 2017)

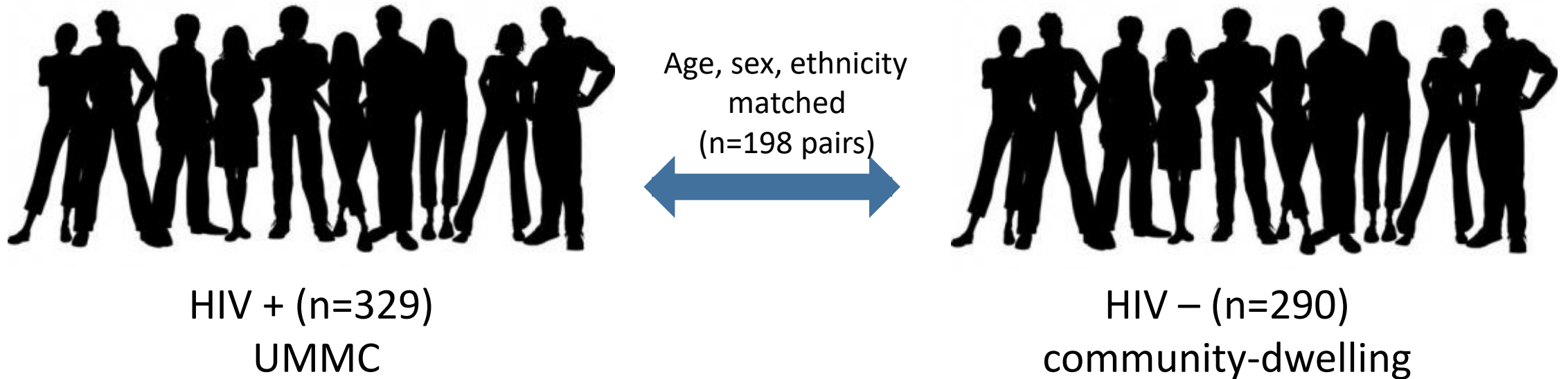
- Among frail individuals, deficits in psychosocial domains as important as physical and functional domains

(Yeoh HL *et al.* Antivir Ther 2018; Abdul Aziz SA *et al.*, Poster #45 APACC 2018)

# AIMS

- Prevalence of depression, anxiety and stress in HIV-infected vs matched controls
- Explore risk factors and health outcomes associated with these negative emotional states
- Explore preferred media platforms to access health information

# Malaysian HIV & Aging Study



## Inclusion criteria:

- Age  $\geq 25$  years
- No reported acute illness at recruitment
- On stable cART (HIV RNA  $< 50$  copies/ml for at least 12 months)

# Assessments

- Screening with DASS-21 – symptoms of depression, anxiety and stress in the past week
  - Interpretation: Recommended cut-offs for individual conditions and normalised total scores (Z-statistics)<sup>1</sup>
- Health outcomes :
  - VACS index (mortality risk)
  - Healthcare utilization (healthcare visits past 12 months)
  - Quality of life (CASP-12)
  - Self-rated health

<sup>1</sup> Lovibond, S.H. & Lovibond, P.F. (1995). Manual for the Depression Anxiety & Stress Scales. (2nd Ed.)Sydney: Psychology Foundation.

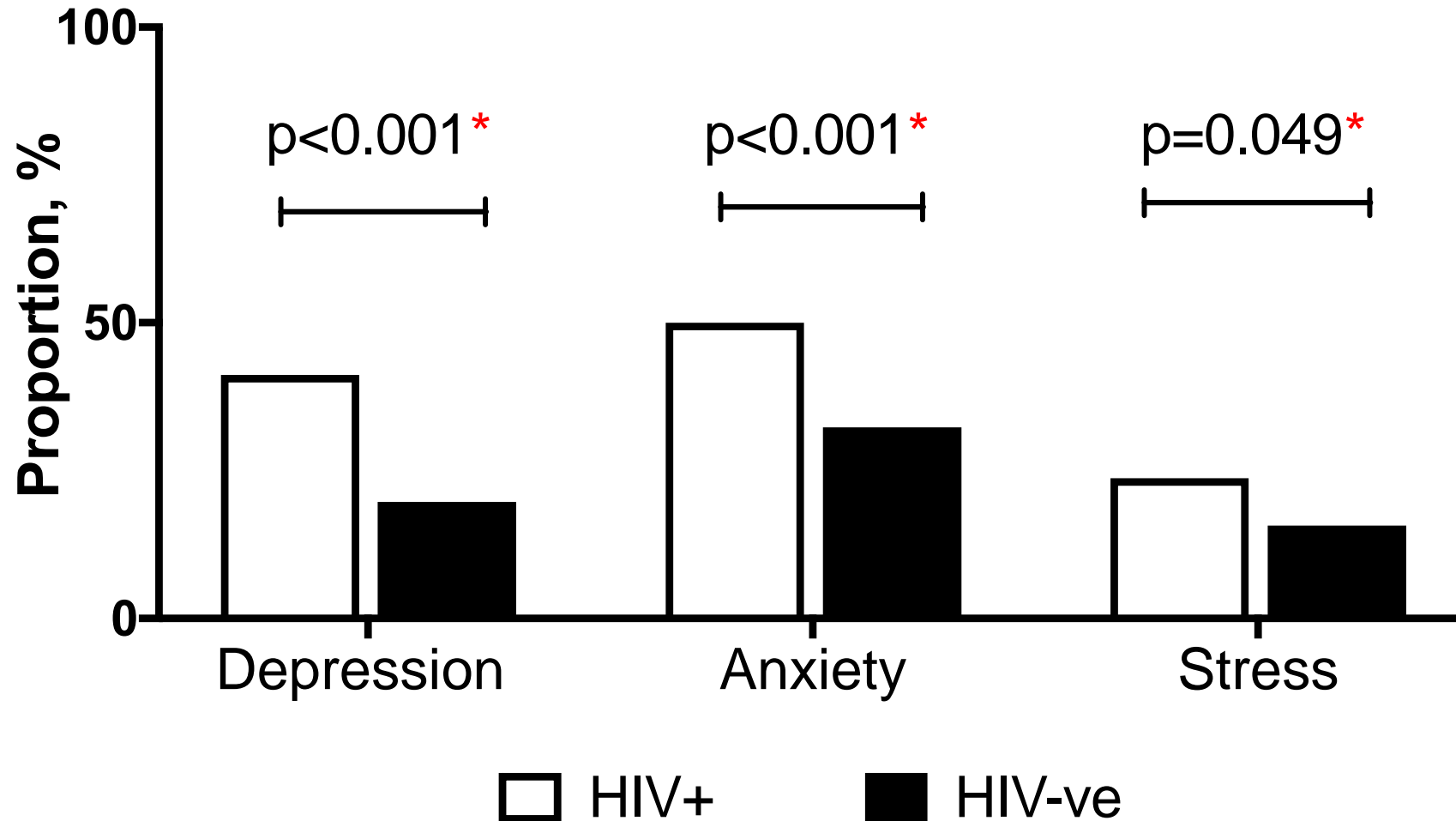
Patient characteristics	Total HIV+ (n=329)	Matched HIV+ (n=198)	Matched HIV- (n=198)	P-value
Age (years)	44 (38-50)	41 (34-52)	41 (32-52)	0.598
Gender, n (%)				1.00
- Male	273 (83%)	149 (75%)	149 (75%)	
Ethnicity, n (%)				1.00
- Malay	62 (19%)	53 (27%)	53 (27%)	
- Chinese	237 (72%)	124 (63%)	124 (63%)	
- Indians	30 (9%)	21 (11%)	21 (11%)	
Highest Education, n (%)				0.002
- Primary/less	48 (15%)	28 (14%)	8 (4%)	
- Secondary	115 (35%)	56 (28%)	60 (30%)	
- Tertiary	166 (51%)	114 (58%)	130 (66%)	
Currently employed, n (%)	269 (83%)	156 (80%)	154 (79%)	0.724
Married/Life Partner, n (%)	138 (42%)	76 (38%)	144 (73%)	<0.001
# financial dependents	1 (0-2)	1 (0-2)	1 (0-3)	0.001
Social isolation, n (%)	112 (35%)	84 (43%)	54 (28%)	<0.001

Patient characteristics	Total HIV+ (n=329)	Matched HIV+ (n=198)	Matched HIV- (n=198)	P- value
Duration on ART (years)	6 (3-10)	5 (3-9)	-	
Baseline CD4+ T-cell count (cells/ $\mu$ l)	107 (35-244)	120 (41-248)	-	
Current CD4+ T-cell count (cells/ $\mu$ l)	561 (396-739)	556 (398-739)	-	
History of AIDS-defining illness, n (%)	142 (43%)	77 (39%)	-	
Efavirenz use, n (%)	249 (76%)	157 (80%)	-	
Alcohol consumption, n (%)				<0.001
- Never	122 (37%)	88 (45%)	100 (51%)	
- Previous	59 (18%)	31 (16%)	8 (4%)	
- Current	147 (45%)	78 (40%)	88 (45%)	
Smoking status, n (%)				<0.001
- Never	181 (56%)	118 (61%)	153 (78%)	
- Previous	52 (16%)	29 (15%)	16 (8%)	
- Current	93 (27%)	47 (24%)	28 (14%)	
Low physical activity (IPAQ), n (%)	102 (31%)	64 (35%)	63 (32%)	0.522
Cognitive impairment (nMOCA), n (%)	78 (24%)	46 (23%)	28 (14%)	0.031



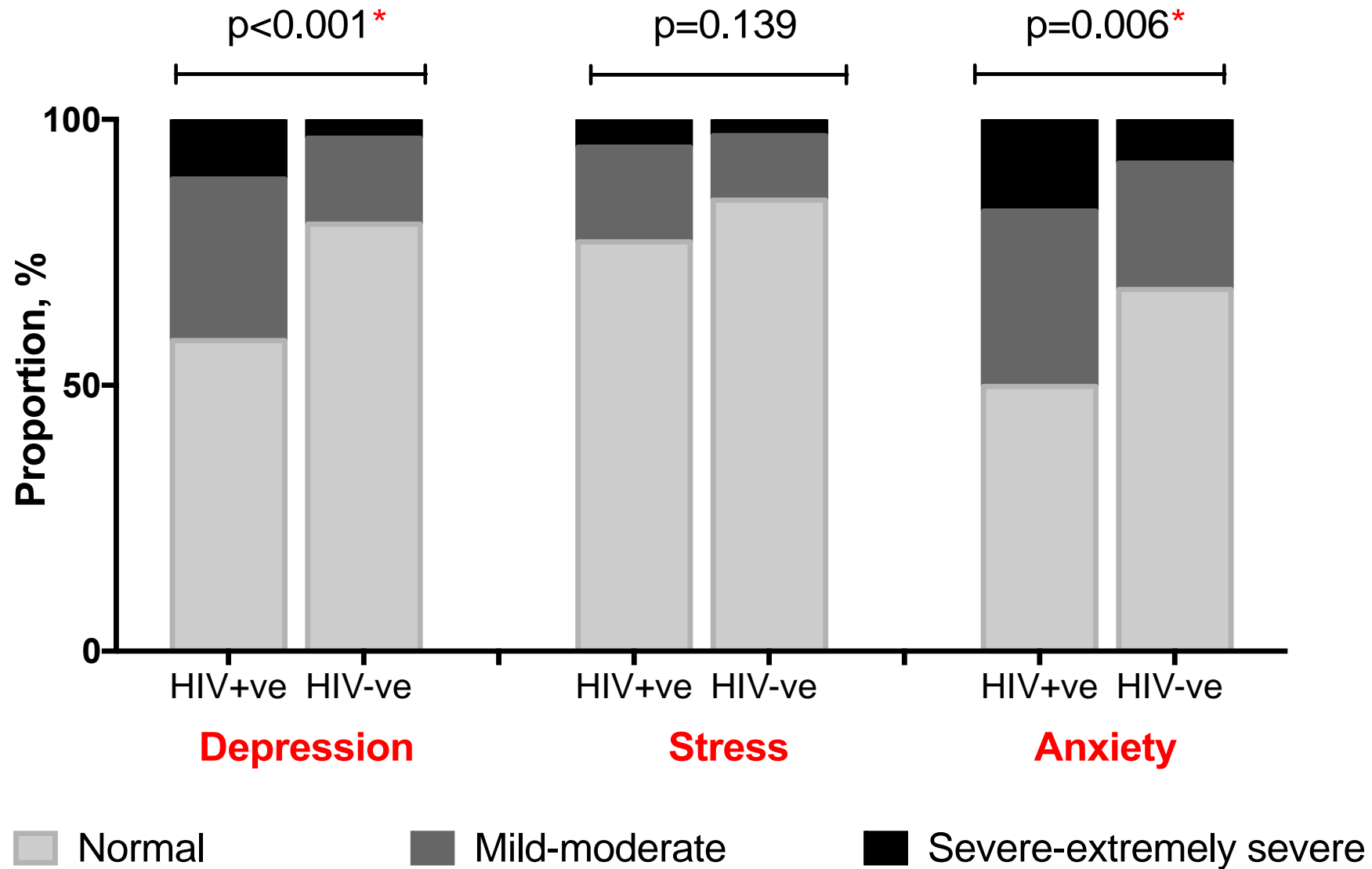
# Higher mental health issues in HIV-infected

Matched HIV+ and HIV- (n=198), Median age 41 years



\*McNemars test

# More severe symptoms among HIV-infected

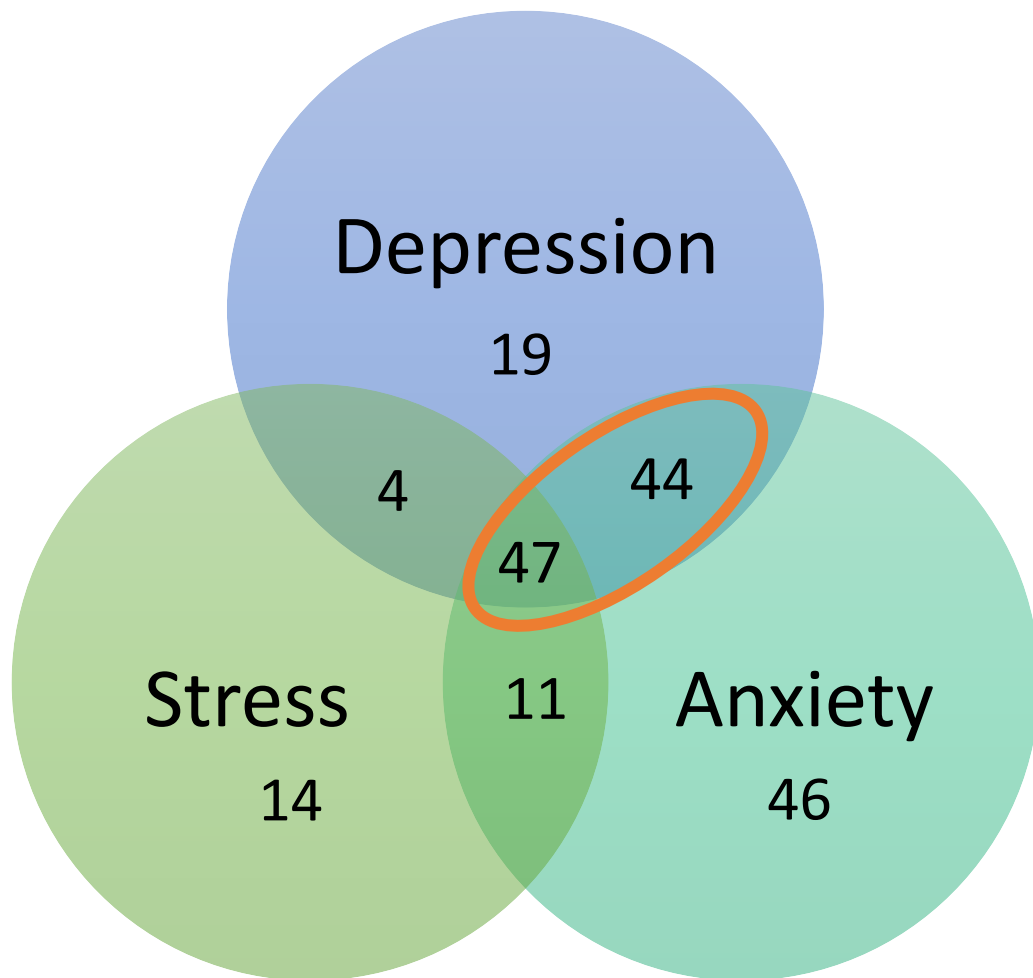


\*Chi-square

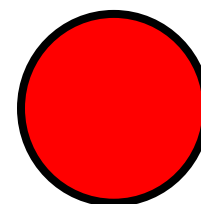
# Negative emotional states overlap in HIV

(Total HIV+ve cohort, n=329; median age= 44 years )

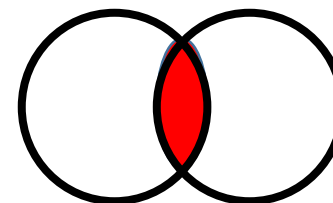
Number of participants, n=185



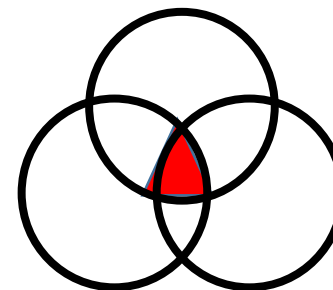
Proportion with symptoms



43%



32%

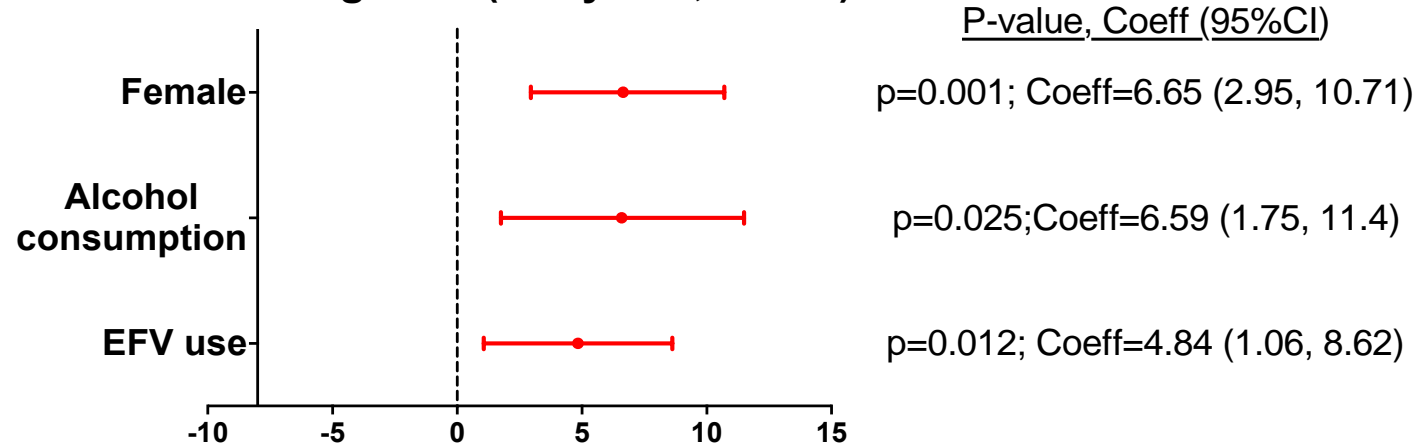


25%

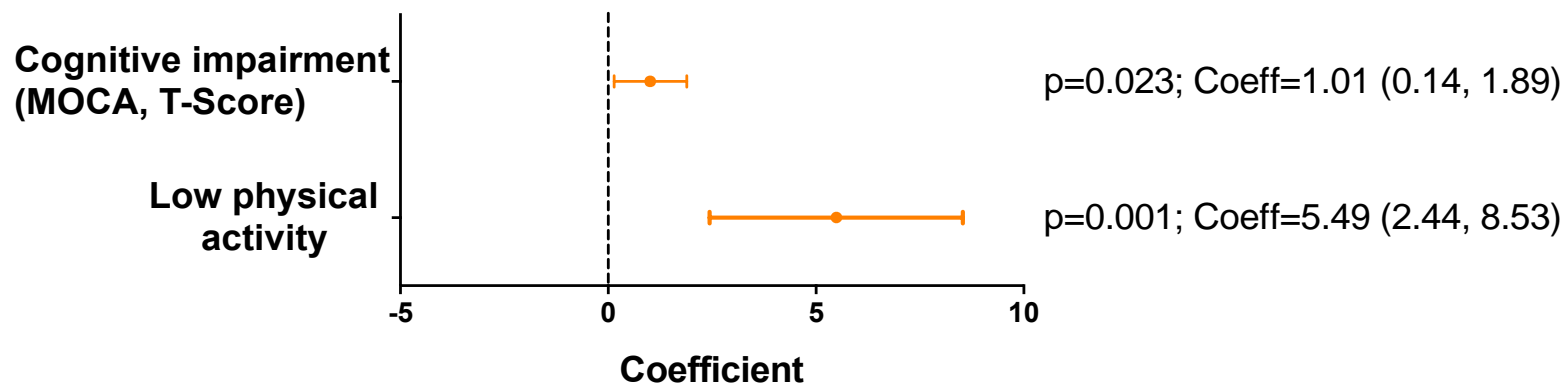
# Risk factors associated with negative emotional states

(Normalized DASS-21 scores)

## Young HIV+ (<45 years, n=186)



## Old HIV+ (<sup>≥</sup> 45 years, n=143)



- Social isolation, partnership status and number of financial dependents were not associated with normalised DASS scores

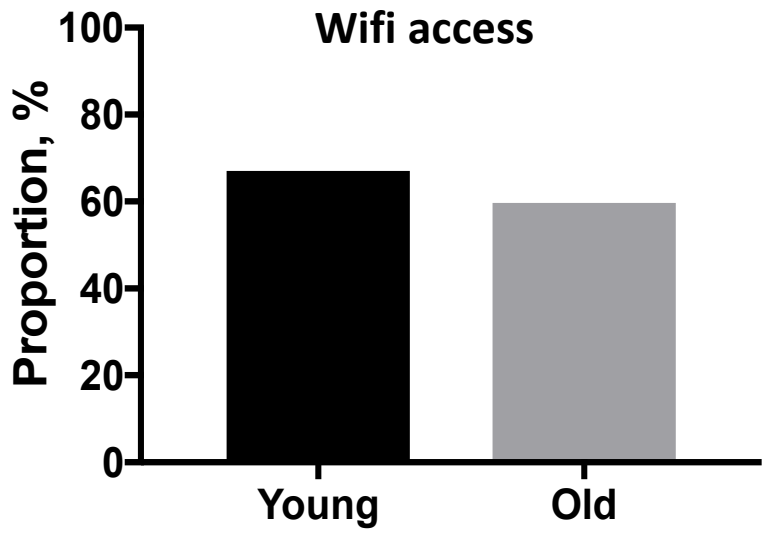
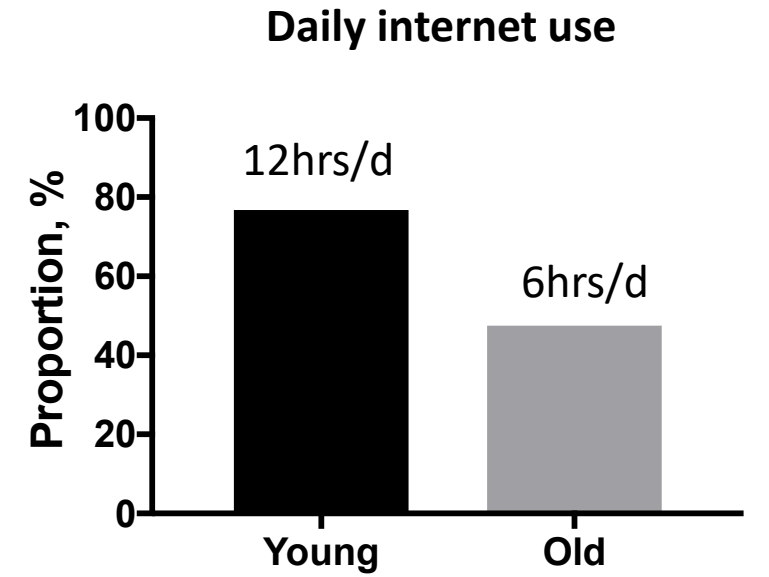
# Health outcomes associated with negative emotional states

(Normalized DASS-21 scores)

Health outcomes	Young, < 45 years Coefficient (95% CI)	<i>P</i> -value	Old, ≥ 45 years Coefficient (95% CI)	<i>P</i> -value
QoL (CASP 12)	<b>-0.30 (-0.36, -0.24)</b>	<b>&lt;0.001</b>	<b>-0.28 (-0.37, -0.18)</b>	<b>&lt;0.001</b>
VACS index	-0.01 (-0.10, 0.10)	0.899	-0.50 (-0.30, -0.19)	0.679
Self-rated health*	<b>0.96 (0.94, 0.99)</b>	<b>0.014</b>	<b>0.95 (0.92, 0.98)</b>	<b>0.004</b>
Functional activity (IADL)	-0.01 (-0.06, 0.04)	0.621	0.01 (-0.04, 0.07)	0.594
Healthcare utilisation	<b>0.10 (0.03, 0.17)</b>	<b>0.004</b>	-0.01 (-0.01, -0.08)	0.890

\*Ologit

# Media preference for health information



# Summary

- Higher prevalence and severity of depression, anxiety and stress among HIV-infected compared to matched controls; symptoms often overlap.
- Risk factors associated with negative emotional states were different in young and older individuals.
- Potential points of intervention: EFV use and increasing physical activity.
- Use of mobile technology platforms : ↑ awareness and deliver interventions

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