VALIDITY OF A SELF-REPORTED MODIFIED FRAILTY PHENTOYPE AMONG PEOPLE WITH HIV

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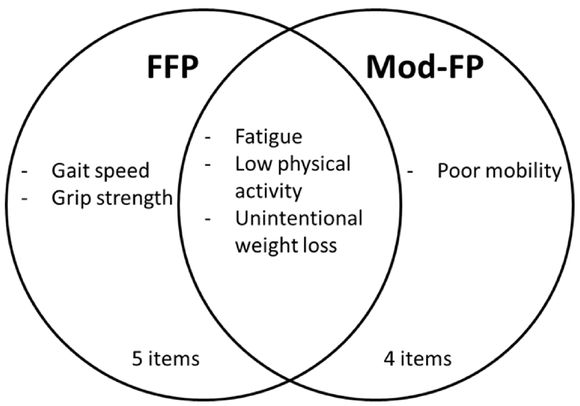
BACKGROUND

- People with HIV (PWH) are experiencing frailty more often and at younger ages compared to the general population
- Modifications to Fried's frailty phenotype (FFP) are common to address data collection limitations in large clinical settings (e.g., not always feasible in busy clinics)
- We have developed a low burden, self-reported frailty phenotype to increase frailty ascertainment among PWH, and evaluated the validity compared to the full FFP

METHODS

- We measured two frailty phenotypes among 522 PWH engaged in the PROSPER-HIV study within the Centers for AIDS Research Network of Integrated Clinical Systems (CNICS) cohort
- Each phenotype was comprised of multiple dichotomized physical functioning characteristics
  - **Fried's frailty phenotype (FFP)**: 5-items, fatigue (self-reported, SR), weight loss (SR), physical activity (SR), slowness (objectively-assessed, OA), weakness (OA) **Modified Fried phenotype (Mod-FP)**: 4-items, fatigue (SR), weight loss (SR), physical activity (SR), mobility (SR)
- We compared the Mod-FP with FFP via correlation, receiver operator characteristic (ROC) curves, agreement in classifying frailty status, and construct validity via cross-sectional association with risk of having experienced a fall



Our **self-reported modified frailty phenotype** has **good performance** in measuring frailty among PWH, and can be used when objective assessments are not feasible

RESULTS

- The Spearman correlation coefficient between the Mod-FP and FFP was 0.81 (p<0.001)
- Based on ROC, frailty stages on Mod-FP should be defined as in FFP: 0 components is not frail/robust, 1-2 components is prefrail, and ≥3 components is frail (Table)
- Cohen's kappa conferred substantial agreement (κ ranged 0.64-0.75, unweighted to weighted) between classifying frailty status on Mod-FP vs. FFP

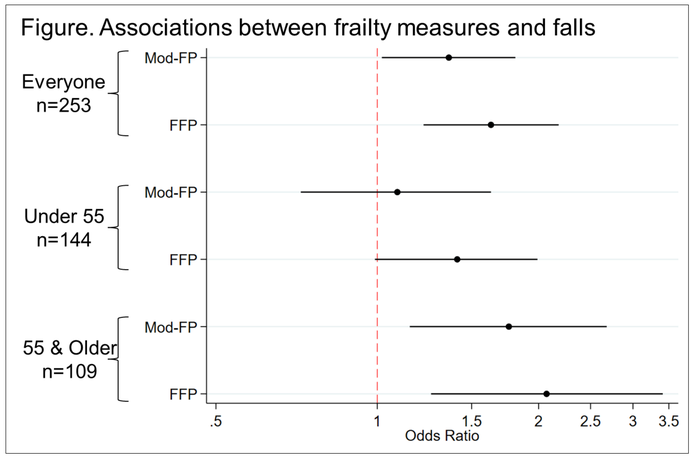
Table. Receiver operator characteristic (ROC) area under the curve (AUC) results for the classification of frailty and prefrailty by the Mod-FP compared to FFP.

FFP Stage	ROC AUC (95% CI)	Cut point (Mod-FP score)	Sensitivity	Specificity	Correctly classified
Frail	0.93 (0.91-0.96)	≥1	100%	57%	60%
		≥2	89%	83%	84%
		≥3	**62%**	**97%**	**94%**
		≥4	27%	100%	94%
Prefrail	0.86 (0.83-0.89)	**≥1**	**77%**	**92%**	**84%**
		≥2	33%	100%	65%
		≥3	6%	100%	52%

RESULTS CONT.

- Both Mod-FP and FFP estimated significant associations between additional frailty components and fall risk (Figure)
- Both were attenuated among younger (<55 years) PWH

Figure. Associations between frailty measures and falls



CONCLUSIONS

- The Mod-FP has good measurement properties for frailty as compared to FFP, in addition to its other positive features: high feasibility, low burden, fast completion, and entirely self-reported
- Cut points for classifying frailty status on the Mod-FP are the same as for FFP
- Using Mod-FP may lower burden and increase frailty ascertainment among PWH, a population that experiences a high burden of aging-related conditions

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