

# Association between emotional reactivity and Internalized Stigma among People Living with HIV

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## Background and objectives

Empathy is an important component of social cognition. It allows one to understand and adapt to the emotions of others and to enact prosocial behaviours. People living with HIV (PLWH) would tend to limit social relationships because of their illness, and that could be one of the causes of mood disorders and decline in quality of life. Social avoidance would arise from HIV-related internalized stigma. The objective of the following study was to assess an association between the ability to feel empathy and the degree of internalized stigma in our patients.

## Materials and Methods

This study assessed empathy in a sample of 70 PLWH. Instrument used:

- Interpersonal Reactivity Index (IRI). IRI consists of four subscales: Perspective Taking (PT); Fantasy (F); Empathic Concern (EC); Personal Distress (PD).
- Montreal Cognitive Assessment (MoCA) for the assessment of cognitive domains.
- 12-item HIV Stigma Scale (HSS-12)
- Exclusion criteria: difficulty with Italian language and PLWH < 18 years.

## Results 1 Demographic and clinical characteristics of the population (n=70)

VARIABLES	NUMBER (%)
Sex	
Male	64 (91.4)
Female	6 (8.6)
Age, years	
31-45	20 (28.6)
46-55	26 (37.1)
>55	24 (34.3)
Education	
Lower secondary school	12 (17.1)
Upper secondary school	41 (58.6)
Bachelors Degree	17 (24.3)
Years from HIV diagnosis	
< 5 years	6 (8.6)
5-10 years	16 (22.9)
> 10 years	48 (68.6)
Time from starting first ART regimen	
< 5 years	22 (31.4)
5-10 years	9 (12.9)
> 10 years	39 (55.7)

## Results 2 Nonparametric tests: IRI and demographic and clinical variables

### PT subscale

VARIABLES	NUMBER	MEAN RANK	P
Sex			<b>0.004</b>
Male	64	33.46	
Female	6	57.25	
Age, years			0.529
31-45	20	39.00	
46-55	26	35.87	
>55	24	32.19	
Education			0.099
Lower secondary school	12	24.75	
Upper secondary school	41	38.88	
Bachelors Degree	17	34.94	
Years from HIV diagnosis			0.131
< 5 years	6	45.80	
5-10 years	16	38.23	
> 10 years	48	32.30	
Time from starting first ART regimen			<b>&lt;0.001</b>
< 5 years	22	49.36	
5-10 years	9	38.70	
> 10 years	39	20.93	

Bold values represent significant p-value

### PD subscale

VARIABLES	NUMBER	MEAN RANK	P
Sex			0.256
Male	64	34.66	
Female	6	44.50	
Age, years			0.434
31-45	20	40.15	
46-55	26	32.27	
>55	24	35.13	
Education			0.978
Lower secondary school	12	34.50	
Upper secondary school	41	35.88	
Bachelors Degree	17	35.29	
Years from HIV diagnosis			0.085
< 5 years	6	48.05	
5-10 years	16	36.53	
> 10 years	48	32.37	
Time from starting first ART regimen			0.470
< 5 years	22	40.71	
5-10 years	9	32.94	
> 10 years	39	36.29	

Bold values represent significant p-value

### EC subscale

VARIABLES	NUMBER	MEAN RANK	P
Sex			<b>&lt;0.001</b>
Male	64	33.13	
Female	6	60.75	
Age, years			0.641
31-45	20	36.30	
46-55	26	37.71	
>55	24	32.44	
Education			0.286
Lower secondary school	12	29.25	
Upper secondary school	41	34.98	
Bachelors Degree	17	41.18	
Years from HIV diagnosis			0.075
< 5 years	6	48.35	
5-10 years	16	36.53	
> 10 years	48	32.30	
Time from starting first ART regimen			0.203
< 5 years	22	43.50	
5-10 years	9	34.91	
> 10 years	39	31.14	

Bold values represent significant p-value

### F subscale

VARIABLES	NUMBER	MEAN RANK	P
Sex			0.638
Male	64	32.00	
Female	6	35.83	
Age, years			0.424
31-45	20	40.15	
46-55	26	32.27	
>55	24	35.13	
Education			0.978
Lower secondary school	12	34.50	
Upper secondary school	41	35.88	
Bachelors Degree	17	35.29	
Years from HIV diagnosis			0.085
< 5 years	6	48.05	
5-10 years	16	36.53	
> 10 years	48	32.37	
Time from starting first ART regimen			<b>0.030</b>
< 5 years	22	35.14	
5-10 years	9	30.03	
> 10 years	39	44.86	

Bold values represent significant p-value

## Results 3 Stigma and IRI subscales

PLWH with higher stigma scale scores had higher scores in PD and PT subscales (p=0.001; p=0.002, respectively).

## Results 4 MOCA and IRI

Model	Coefficients*						
	Non-standardized coefficients		Standardized coefficients	t	Sign.	95.0% Confidence interval for B	
	B	Error std.	Beta			Lower limit	Upper limit
1 (Constant)	26.963	1.064		25.333	,000	24.839	29.087
IRI subscale PT	-.029	.065	-.054	-.447	.657	-.158	.100

a. Dependent variable: MOCA

Model	Coefficients*						
	Non-standardized coefficients		Standardized coefficients	t	Sign.	95.0% Confidence interval for B	
	B	Error std.	Beta			Lower limit	Upper limit
1 (Constant)	26.066	.886		29.080	,000	24.277	27.856
IRI subscale F	.033	.060	.066	.543	.589	-.088	.153

a. Dependent variable: MOCA

Model	Coefficients*						
	Non-standardized coefficients		Standardized coefficients	t	Sign.	95.0% Confidence interval for B	
	B	Error std.	Beta			Lower limit	Upper limit
1 (Constant)	25.541	.549		46.534	,000	24.446	26.637
IRI subscale PD	.111	.049	.263	2.249	.028	.012	.209

a. Dependent variable: MOCA

Model	Coefficients*						
	Non-standardized coefficients		Standardized coefficients	t	Sign.	95.0% Confidence interval for B	
	B	Error std.	Beta			Lower limit	Upper limit
1 (Constant)	26.443	1.654		15.986	,000	23.142	29.743
IRI subscale EC	.003	.077	.005	.044	.965	-.150	.157

a. Dependent variable: MOCA

## Conclusions

Our results showed that PLWH would tend to put themselves in the shoes of others and empathize with their suffering compared with men living with HIV (MLWH). Patients in therapy for less time would tend to put themselves in the shoes of others, and those in therapy for the longest time have a richer imaginative world. High internalized stigma was associated with the ability to put oneself in others' psychological point of view and personal distress. Cognitive resources were associated with the use of coping strategies in personal distress. Combating stigma turns out to be crucial in enabling PLWH to create a social network that contributes to the management of their health status. Therefore, in the clinical assessment it would be important to assess the degree of emotional reactivity and internalized stigma to provide PLWH with appropriate coping strategies for optimal adherence to their treatment course.

## References

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