

Prospective Memory and antiretroviral medication adherence in HIV

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Background e Obiettivi

Prospective memory (ProM) is a form of episodic memory. It enables “remembering to remember,” planning and storing intentions for the future, and then executing them later. It is essential for monitoring and executing behaviors based on internal or external cues in interfering contexts. It turns out to be an important feature for functional autonomy. People living with HIV (PLWH) may have difficulty managing daily activities. In this regard, the purpose of this study was to evaluate how ProM outcomes affect the management of medical aspects in PLWH, such as adherence to antiretroviral therapy.

Materials and Methods

This study evaluates ProM in a sample of 70 PLWH. Instruments used:

- Memory for Intentions Screening Test (MIST) for assessment of ProM
- Montreal Cognitive Assessment (MoCA) for the assessment of cognitive domains
- Self-reported therapeutic adherence over the past month
- Collection of demographic and clinical data.

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 Mean Values

VARIABLES	MEAN (SD)	MINIMUM	MAXIMUM
Adherence (on a scale of 0 to 10)	7.83 (1.58)	4	10
Memory for Intentions Screening Test (MIST)	35.27 (11.35)	12	48
Errors in the MIST	3.04 (2.42)	0	9
Montreal Cognitive Assessment (MoCA)	*26.51 (2.90)	21	30

*a score of 26 or higher is considered to be in the normal range

On a scale of 0 to 10, the mean adherence reported by patients was 7.83 (SD 1.58). The mean obtained in MoCA was 26.51 (SD 2.90). The mean obtained in the MIST was 35.27 (SD 11.35). The mean of errors emerged in the MIST was 3.04 (SD 2.42).

Results 3 Nonparametric tests: MIST and demographic and clinical variables

VARIABLES	NUMBER	MEAN RANK	p
Sex			
Male	64	36.46	0.202
Female	6	25.25	
Age, years			0.023
31-45	20	44.68	
46-55	26	35.42	
>55	24	27.94	
Education			0.058
Lower secondary school	12	22.88	
Upper secondary school	41	38.29	
Bachelors Degree	17	37.68	
Years from HIV diagnosis			<0.001
< 5 years	6	4.50	
5-10 years	16	15.69	
> 10 years	48	45.98	
Time from starting first ART regimen			<0.001
< 5 years	22	12.64	
5-10 years	9	43.67	
> 10 years	39	46.51	

Bold values represent significant p-value

PLWH older than 55 years, with low education level, in sickness and on treatment for 1 to 5 years, reported poor performance in ProM (p=0.023; p=0.058; p<0.001; p<0.001, respectively).

Results 4 Nonparametric correlations

Spearman's Rho	MOCA	MIST
Correlation coefficient	1,000	,286*
Sign. (two-tailed)	.	,016
Number	70	70
Correlation coefficient	,286*	1,000
Sign. (two-tailed)	,016	.
Number	70	70

*. The correlation is significant at the 0.05 level (two-tailed).

A positive correlation was found between MIST and MOCA (r=.286; p=0.016).

Results 5 MIST and Therapeutic Adherence

Model	Coefficients*						
	Non-standardized coefficients		Standardized coefficients	t	Sign.	95.0% Confidence interval for B	
	B	Error std.	Beta			Lower limit	Upper limit
(Constant)	-13.617	3.378		-4.031	,000	-20.358	-6.877
Adherence	6.245	,423	,873	14.764	,000	5.401	7.089

a. Dependent variable: MIST

A high MIST score was positively associated with high adherence to self-reported therapy (β 6.24; 95% CI 5.40/7.08; p<0.001).

	MIST ERRORS	NUMBER	MEAN RANK	SUM OF RANKS
Adherence p<0.001	Absence	10	65,50	655,00
	Presence	60	30,50	1830,00
	Total	70		

PLWH who made fewer errors in MIST reported better treatment adherence (p<0.001).

Conclusions

In conclusion, our results emphasize that performance in ProM is correlated with maintenance of therapeutic adherence and cognitive functioning in the normal range. Increasing age, decreasing educational level, shorter time since diagnosis, and shorter time spent in therapy appear to be factors related to lower performance in ProM. Therefore, the assessment of ProM should be considered in the clinical evaluation of PLWH. The analysis of the ProM may bring out difficulties that have an impact on the medical management of the health status of PLWH.

References

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