EXPLORING THE MECHANISM OF SOCIAL ISOLATION ON APPOINTMENT ADHERENCE IN OLDER PERSONS LIVING WITH HIV

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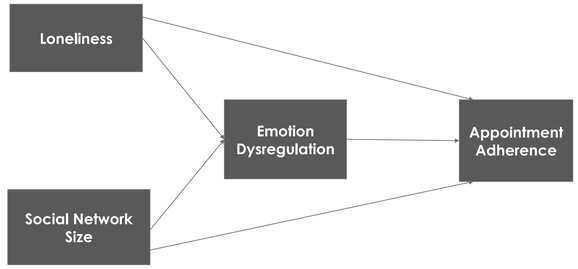
INTRODUCTION

- Successful management of the health of older persons living with HIV (OPLWH) requires consistent engagement in medical care.
- OPLWH are socially isolated (i.e., small social network size and report loneliness).
- Social isolation is associated with increased healthcare service use.
- The extent to which social isolation affects regular appointment adherence is less well-known.
- Guided by Theoretical Model of Loneliness, this study explored whether social isolation affects appointment adherence either directly or indirectly through emotion dysregulation in OPLWH (≥50 years of age).

Figure 1. Hypothesized *a priori* Model of Social Isolation on Appointment Adherence



METHODS

144 OPLWH enrolled in an outpatient HIV clinic in Atlanta, GA, USA, completed a baseline study survey.

Variables assessed at baseline

- Covariates: sociodemographic characteristics, disease status, emergent healthcare utilization, depression, HIV-related stigma, substance use, attitude towards providers, HIV-1 viral load, CD4+ T cell count
- Social network size: Social Network Index
- Loneliness: Short Form 8a PROMIS-Social Isolation
- Emotion dysregulation: Difficulties in Emotion Regulation Scale

Appointment data were abstracted from electronic medical records prospectively for 12 months post-baseline.

- Appointment adherence: the number of *attended* HIV appointments divided by the number of *total* scheduled visits ("attended" plus "missed" visits) x 100

ANALYSIS

- Appointment adherence was coded into: 0=*suboptimal* [≤85%], 1=*optimal* appointment adherence [>85%], as this was related to clinical outcomes (viral suppression, ≥200 cells/mm^3 CD4+ T cell count) in our sample
- SPSS and M*plus* version 8.1
- Descriptive, independent t-tests, Chi-square tests, logistic regression, & path analysis
- Model fit assessment: Non-significant χ^2 test, comparative fit index (CFI) & Tucker-Lewis index (TLI) >0.95, Root Mean Squared Error of Approximation (RMSEA) with a 90% confidence interval (CI) <0.08

RESULTS

Participants

- African American (86%), men (60%), single (59%)
- 12% (n=17) had previous homelessness
- Mean age=56±4.55, range=50-72
- Mean appointment adherence=81.17±25.93

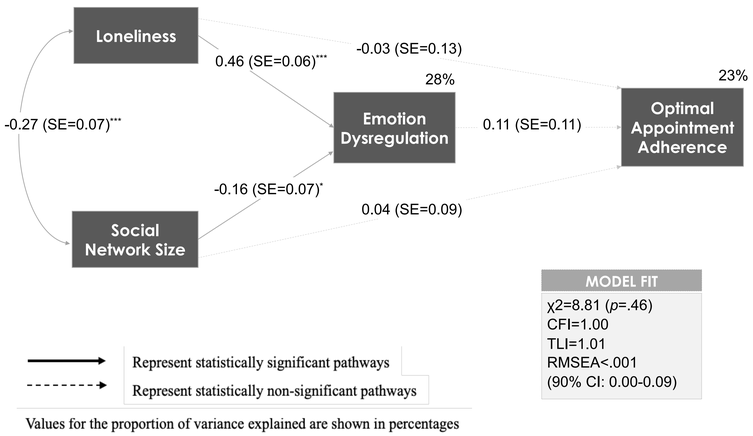
Table 1. Logistic Regressions on Optimal Appointment Adherence

	MODEL 1			MODEL 2		
	B	SE	OR	*B*	SE	OR
Monthly income						
≤ $1,000		*REF*			*REF*	
> $1,000	0.81	0.43	2.25*	0.80	0.44	2.23*
Viral load						
Detectable		*REF*			*REF*	
Undetectable	0.64	0.40	1.90	0.64	0.41	1.90
CD4+ T cell count						
<200		*REF*			*REF*	
≥200	1.49	0.73	4.46**	1.45	0.73	4.28**
Hospitalization						
Yes		*REF*			*REF*	
No	0.81	0.67	2.26	0.78	0.67	2.17
Alcohol use	-0.03	0.06	0.97	-0.03	0.06	0.97
Drug use	-0.27	0.12	0.77**	-0.28	0.12	0.76**
Attitude towards provider	-0.03	0.02	0.97	-0.03	0.02	0.97
Emotion dysregulation				0.01	0.01	1.01
Social network size				0.01	0.02	1.01
Loneliness				-0.01	0.02	1.00
χ^2	29.97, *df*=7, *p*<.001			30.55, *df*=10, *p*<.001		
Nagelkerke R^2	25%			26%		
Hosmer and Lemeshow test	*p*=.42			*p*=.43		
Classification accuracy (%)	72.2			73.6		

Notes: $^{*}p$ <.10; $^{**}p$ < .05; $^{***}p$ <.001; two-tailed.
Variables that had significant differences (*p*<.10) on optimal appointment adherence in bivariate level were entered in Model 1. The addition of exogenous variables in Model 2 did not change the results significantly.

RESULTS (cont.)

Figure 2. Final Path Diagram on Optimal Appointment Adherence



Notes. SE=standard error. Standardized path coefficients (SE) are reported. The analysis used robust weighted least-squares estimation method and adjusted for baseline CD4+ T cell count, monthly income, and drug use on optimal (>85%) appointment adherence. $^{*}p$<.05; $^{**}p$ <.01;$^{***}p$<.001; two-tailed.

CONCLUSIONS

Social determinants of health inequalities are closely linked to appointment adherence among OPLWH. Socioeconomically challenging environments such as lack of stable housing and having no or low income may trigger a cascade of stressors that may serve as underlying risk factors for suboptimal appointment adherence, including prioritizing on meeting the basic needs over adhering to scheduled medical appointments. More studies are needed to clarify the pathway of appointment adherence among those with current/past homelessness or with unstable housing and those with socioeconomic and structural inequities and to evaluate what interventions maybe helpful in improving engagement in care among OPLWH.

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