# Unstable housing is mediated by social support leading to reductions in health-related quality of life among former or current IDUs on ART in Baltimore, Maryland

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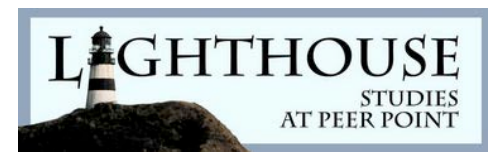
Background

- Housing stability likely has an effect on the health-related quality of life (HRQoL) of persons living with HIV (PLHIV) who are low-income, urban, former or current drug users (IDU) and primarily African American, living in Baltimore, Maryland.

- Recent research has demonstrated a growing interest in investigating the relationship between housing instability and HRQoL.

- In this study we examined multidimensional/structural equation model to understand the role of social factors in HRQoL.

We hypothesized that housing instability is associated with a decreased HRQoL for former or current IDUs on ART.

Methods

Data Source:

- Data were from the baseline data of the BEACON (Being Active and Connected) study, an observational study with assessments at three points in time, which examined social environmental factors associated with health outcomes and well-being among disadvantaged PHIVs and their informal caregivers (N = 366 care recipients).

Recruitment Site:

- Care recipients were recruited from clinic and community venues.

Selection criteria:

- Being adult, HIV seropositive, on HAART, living in Baltimore City, being either a current or former injection drug user, and being willing to invite one's main supportive tie(s) to participate in the study.

Data Collection:

- Data were collected using a combination of interviewer-administered and Audio Computer-Assisted Self-Interviews conducted at the study offices in Baltimore, MD from 2008-2012.

Methods

- **Data Analysis:** This study used a structural equation model regressing HRQoL on an observed variable measuring stable housing (i.e., living in an apartment or house that you rent or own vs. being homeless or living in transitional housing) and a variety of latent factors.

- **Primary Outcome:** quality of life comprised of general health, physical and mental health interference
  - Based on constructs and items from the SF-36, SF-12 and SF-8
- **Latent Factors:**

Latent Factor	Indicative Variables
Network support	Emotional support, social participation, physical assistance, health advice, material aid Based on an established network inventory
Negative support	Let you down, spent enough time, too much help, leave you out, unwanted advice, forget or ignore you, angry or upset Based on nine measured variables from Newsome's Social Exchange Scale
Stigma	Need to hide HIV, others blame you for HIV status, HIV is a punishment, uncomfortable, lose friends, fear family reject
Caregiver cessation risk	Defined as having a primary caregiver who acts hostile or complains about helping CG wished not help, CG complained, CG act hostile, You needed time away

Results

- While having stable housing was not directly associated with HRQoL, it had an direct effect on having supportive network members (β = .14, p < .001) and caregiving cessation risk (β = -.22, p < .01).

- Having supportive network members was directly associated with HRQoL (β = .12, p < .05), which indicates that stable housing had an indirect effect on HRQoL through having supportive network members (indirect effect = .02, p=<.10).

- There was a significant indirect effect between stable housing, cessation risk, negative support, and quality of life (indirect effect is 0.033, p<0.05)
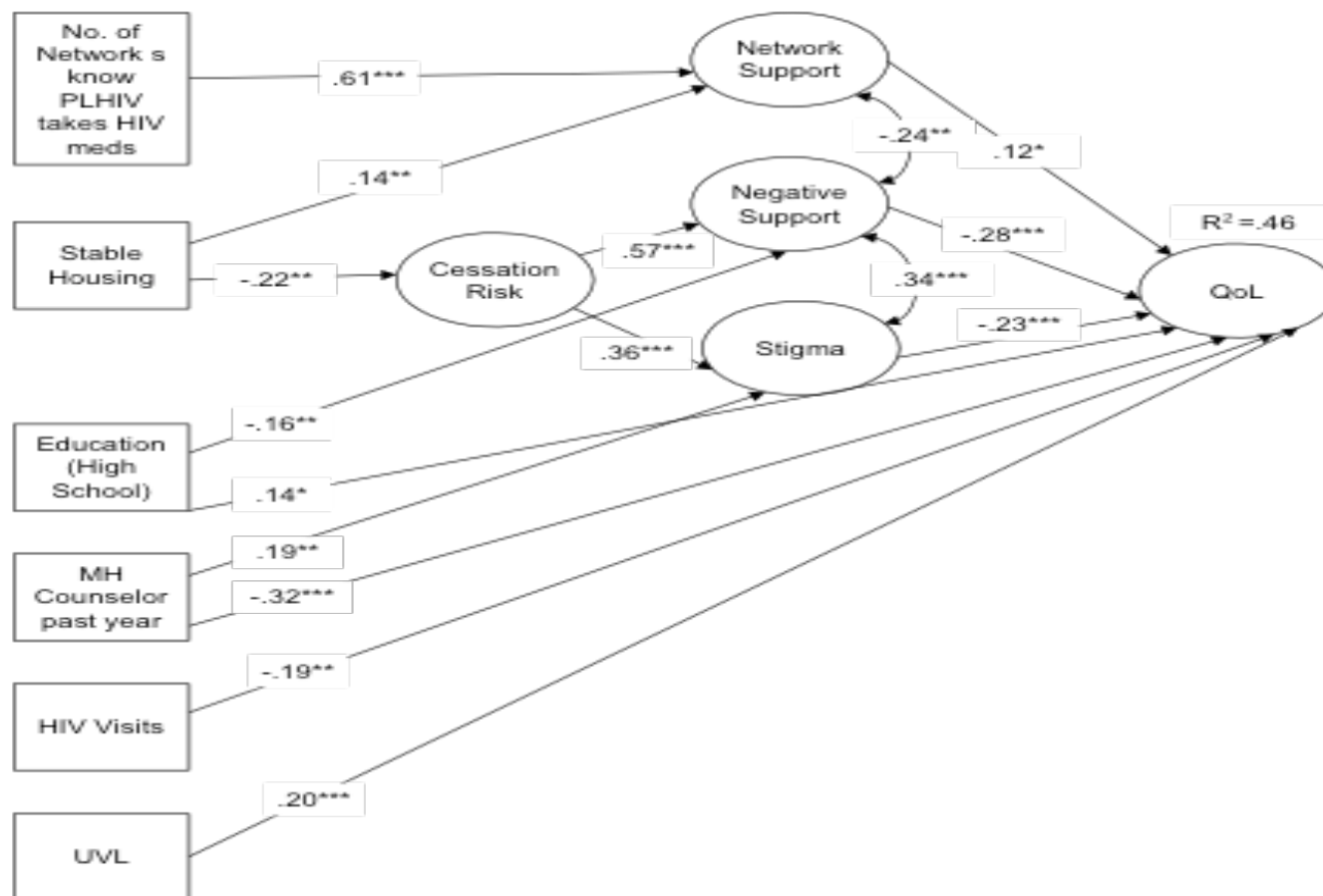
Results

Baseline associations between network- and individual-level variables with care recipient quality of life. (N = 366).
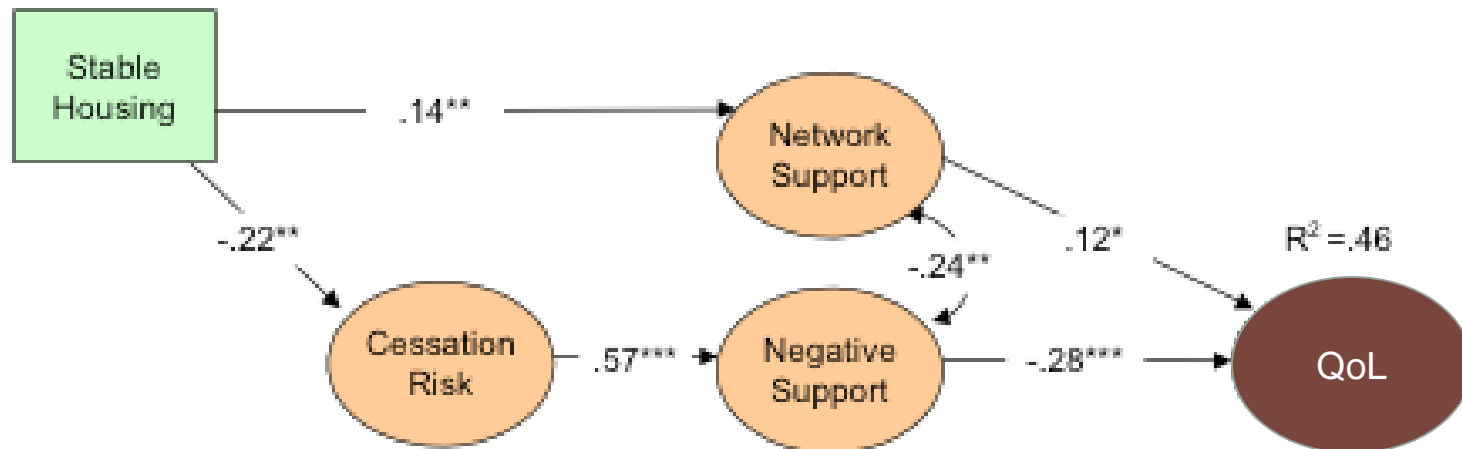
Model fit: CFI = .96, RMSEA = .03. ; * $p < .05$, ** $p \leq .01$, ,*** $p \leq$ .001.; QoL = Quality of Life; UVL = Undetectable viral load

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Conclusions

- The effect of unstable housing (homelessness and transitional housing) on quality of life is mediated by cessation risk and negative support, among former or current IDUs on ART.

- The mediation role of cessation risk and negative support highlights the importance of social factors such as negative interactions with others, network members who can be counted on for a variety of different types of support, perceived stigma, and PLHIV's perceptions of the caregiver potentially ceasing to provide needed care (cessation risk).

- Many of our findings with regard to social support are congruent with previous findings regarding emotional and instrumental social support being associated with HRQOL among PLHIV (Bekele et al., 2013).

- Interestingly, current drug use fell out of the model (i.e., its effects on QOL were explained by other variables in the model).

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Conclusions: Limitations

- Given the cross-sectional nature of the design, the study team is unable to establish causality between the factors.

- There is a possibility that other models might fit the data as well or even better than the proposed model

- We chose to use a universal measure of HRQOL rather than a disease-specific measure, which would have possibly improved the quality of the measure.

- There may be limited generalizability as this study population is specific to East Baltimore.

Conclusions: Future Interventions

- Future interventions to improve HRQoL should seek to address both housing instability and social support, especially health-related social support.

- These interventions should focus on alleviating problems with negative social network interactions and mental health issues rather than focusing on the positive factors to improve HRQoL.

- Such interventions may consider targeting dyads in which caregivers are also either HIV positive and/or using substances.

- Further research is needed to test potential interventions suggested by these results.

- Follow-up studies should consider using longitudinal data to further solidify conclusions regarding antecedents and mediators of HRQOL.

Acknowledgements and Conflicts of Interest

- **Conflicts of interest**: None.