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The Influence of Shared or Separate Partner Residence on HIV Testing among Latino Immigrants in the United States

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Abstract

Background: The relationship context is influential in shaping HIV risk and preventive behaviors. Yet, there is little understanding about how shared or separate residence of partners shapes perceptions that affect HIV prevention.

Methods: We explored how shared or separate residence from one's partner impacts HIV testing intentions among Latino immigrants in the United States. We analyzed data from 206 Latino immigrants residing in New York City, and examined three potential models to assess the relationships between partner residence, partner approval of HIV testing, and HIV testing behaviors.

Results: Results indicated that shared residence was associated with greater partner approval to test for HIV ($B=0.48$, 95% CI 0.01, 0.96, $p=.04$), and in turn, higher partner approval was associated with greater intention to test for HIV in the next 12 months ($B=0.38$, 95% CI 0.15, 0.62, $p<.01$).

Conclusions: Results suggest the need to consider partner residency as an important factor in shaping determinants of HIV testing behaviors. Conceptualization of couples as living separately, across national borders, is warranted for couple-based health interventions given the current socio-political climate in the United States. Future research focused on couple-based HIV prevention should examine strategies and policies to preserve or strengthen partner dynamics among couples living apart.

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Keywords

HIV testing; HIV prevention; partner residence; relationship context; immigrants

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Background

Migration can influence HIV-related behaviors and subsequent sexual health outcomes by linking individuals and networks of geographically distinct epidemics [1]. As migrants move from one place to another, their social contexts shift from entering new environments and separating physically from prior social networks. Prior research on migration and social contexts have demonstrated how separation from partners contributes to sexual risk behaviors through the formation of new sexual relationships [2–5]. This narrative indicates that migration can lead to increased sexual opportunities and facilitate HIV risk behaviors [6, 7]. There is less understanding about how separation from partners or shifts in sexual networks may shape protective behaviors, such as HIV testing, among migrant groups.

This gap is particularly relevant for HIV prevention efforts that seek to address the relationship context [8, 9]. As HIV transmission commonly occurs in the contexts of relationships, couple-based interventions present opportunities for HIV prevention [8]. The role of relationships in HIV prevention is critical as partners can exert mutual influence on the other's health behaviors [10, 11]. For example, one partner's beliefs and motivations about specific behaviors may influence the other partner's engagement in those behaviors [12].

Couple interdependence theory (CIT) asserts that couples may engage in social control strategies to shape the health behavior of the other partner [13]. Further, CIT offers a framework for which to understand how a couple (both partners jointly) engages in protective health behaviors [14]. For example, John, Starks, Rendina, Grov, and Parsons [15] examined the influence of social control in relationships and found that individuals would be willing to persuade their partners to adopt HIV prevention strategies. Several studies found that couples who work toward a shared goal (e.g., HIV prevention) are able to do so if the effect of the shared goal impacts the couple as a unit [15–18]. Despite our knowledge of how couples shape each other's behaviors, less is known about how, if at all, partners living in different residences can engage in protective behaviors, together.

Notably, extant frameworks engage a limited notion of couples that is often defined by marital status or cohabitation [19]. Migrants are often excluded in this research because they may reside in distinct countries from their partners or encounter political barriers to legal marriage. Yet, despite physical separation from partners, migrants may still experience the previously mentioned couple interactions that are influential in shaping preventive behaviors. Greater understanding of how shared or separate residence from partners shapes HIV preventive behaviors is sorely needed. With the growing number of international migrants that live outside of their country of birth, attention to couples' contexts among this population may elucidate opportunities for HIV prevention. This information is critical to end the AIDS epidemic and reach the UNAIDS 90-90-90 target to have 90% of people with

HIV diagnosed, 90% of people with HIV who know their status on treatment, and 90% of people on treatment virally suppressed [20].

This study engages a multilevel approach that integrates the structural impact of migration on the social context of partner perceptions. We sought to assess whether couple-based HIV prevention interventions would be a feasible strategy for migrants living in separate residences from their partners. Specifically, we explored how separate or shared residence with partners influences partner perceptions and HIV testing behaviors among Latino immigrants in the United States.

Methods

We used data collected from a cross-sectional survey of 306 Latino immigrants residing in New York City. Study participants were at least 18 years of age, were born outside of the United States, and identified as Latino. For this study, we analyzed data from individuals that indicated being in a relationship (n=206). Data collection occurred in a target West Queens neighborhood during the spring of 2017. A door-to-door approach was used to recruit participants. Surveys were conducted in Spanish or English based on the preference of the participant. All recruitment staff were bilingual in Spanish and English and were trained to work with the target population. Consent was obtained in the participants' preferred language prior to participation. The Institutional Review Board (IRB) at New York University approved the study and all procedures. See Lee and Yu [21] for detailed information regarding study methods.

Measures

Surveys asked participants a variety of demographic, HIV-related, and health-related questions. Specifically, surveys were divided into five sections and took approximately one hour for participants to complete. For this analysis, we considered the demographic variables of age, sex, country of origin, education, and length of time in the United States.

We assessed partner perceptions of participants by first examining marital status (married or not married) and shared or separate residence with partner (living with partner or not living with partner). Then, we assessed partner approval of HIV testing with a question that asked, 'How much would your current partner approve or disapprove of you getting an HIV test in the next 12 months?' (1=strongly disapprove, 2=moderately disapprove, 3=neither, 4=moderately approve, 5=strongly approve).

HIV testing was a variable of interest as a covariate and as an outcome. We asked participants whether they had ever tested for HIV (yes/no). We controlled for having ever tested for HIV in the statistical models. The primary outcome variable was intention to test for HIV in the next 12 months. Specifically, participants reported how strongly they agreed or disagreed with the statement, 'I plan to get an HIV test in the next 12 months,' on a five-point Likert-type scale (1=strongly disagree, 2=moderately disagree, 3=neither, 4=moderately agree, 5=strongly agree).

Statistical Analysis

To explore the role of shared residence in shaping intention to test for HIV, we posited three potential models (Figure 1): 1) a model in which shared residency directly impacted HIV testing intention (direct effect); 2) a model in which the relationship between shared residency and HIV testing intention was conditional based upon partner approval (interaction effect); and 3) a model in which shared residency and HIV testing intention were associated by the mechanism of partner approval (indirect effect). All models were tested using SPSS v25 and the PROCESS macro for SPSS v3.2 [22]. Models controlled for age, gender, education, length of time in the United States, income, and ever testing for HIV. Missing data was minimal and treated as missing at random. The tests of the indirect effects were estimated using the model bootstrapping commands in the PROCESS macro for SPSS v3.2 [22].

Results

Table 1 presents the demographic characteristics of the sample. Among participants, 73.3% were living with their partner while 26.7% were living apart. The sample was approximately 57.2% female. The average age of participants was 39.17 years with a median age of 37 years. More than half of participants indicated having a high school diploma or greater (62.4%), and 62.1% of the sample indicated being married. The majority of participants (79.1%) reported having ever tested for HIV. More than half of participants (54.0%) reported having an annual household income of \$19,999 or less. The average length of time living in the U.S. among participants was 15.6 years. Two participants reported being HIV positive.

The primary outcome variable was intention to test for HIV in the next 12 months. The mean level of intention to test for HIV in the next 12 months was 3.53 across the total sample. The results of the three models predicting intention to test for HIV in the next 12 months are presented in Table 2. The direct effect model which hypothesized that shared residency directly impacted HIV testing intentions was non-significant ($p = .20$). Similarly, the model which hypothesized that the relationship between shared residency and HIV testing intentions was contingent upon a third interacting variable of partner approval was found to be non-significant ($B = -0.08$, 95% CI 0.57, 0.41, $p = .74$). The third model which tested the indirect effect of shared residence on HIV testing with partner approval as a mediator of the relationship was statistically significant. Specifically, the model indicated that shared residence was significantly associated with greater partner approval ($B = 0.48$, 95% CI 0.01, 0.96, $p = .04$), and in turn, higher partner approval was associated with greater intention to test for HIV in the next 12 months ($B = 0.38$, 95% CI 0.15, 0.62, $p < .01$). The total effect of this third model was significant (Total effect: $B = 0.85$, SE 0.34, $p < .05$) (Figure 1), suggesting that the relationship between partner residency and intention to test for HIV in the next 12 months was partially explained by partner approval to test for HIV.

Discussion

This study sought to determine whether shared residence plays a role in shaping partner perceptions and HIV testing among Latino immigrants. Model results indicated that shared residence does not directly influence HIV testing intentions. Rather, shared residence was

significantly associated with partner approval, and partner approval was significantly associated with intention to test for HIV. Hence, results demonstrated that shared residence indirectly shapes intention to test for HIV through the effect of partner approval.

Outcomes are consistent with existing research that emphasizes the importance of partner perceptions in HIV prevention [10, 11]. Further, findings align with CIT, which highlights that couple-based motivations and decision-making can influence protective health behaviors [10, 14]. Results add to our knowledge about how physically living together or apart can affect partner perceptions that shape HIV testing intentions. Hence, findings have implications for couple-based interventions and HIV prevention efforts that aim to improve the health behaviors of immigrant couples who live in separate residences.

The role of living apart is an understudied mechanism that impacts immigrant couples' health behaviors. The extant literature that examines associations between couples and health outcomes has largely defined couples by marital status or cohabitation [19, 23]. Similar frameworks have been used to understand the impact of couple dynamics on child health and well-being [24]. Studies focused on couple's health behaviors have defined couples as dyads, sexual partners, married or cohabiting partners, and long or short-term partners [9]. Among couples living apart, military service, incarceration, and occupational or educational circumstances are commonly attributed to partner separation [25]. Further, the effects of couples who live in separate or shared residences have been studied in relation to health behaviors where the notion of habitation patterns are largely based on the assumption that partners reside in close proximity. Conceptualizations of couples as living separately, across national borders seldom occurs.

Admittedly, physical proximity or close interaction between an individual and their partner is an important aspect of a relationship. However, in the context of immigrant couples, such circumstances cannot be assumed. In the United States, the living circumstances and distances between unauthorized, legal, and mixed status immigrant couples can vary greatly. Immigration laws can present barriers that prevent partners in these situations from living with one another. It is likely that Latino immigrant couples of unauthorized or mixed citizenship status may be living apart, where one partner resides in the United States and the other partner remains in their country of origin [26]. The relationship dynamics among immigrant couples in these circumstances may be subject to increased challenges that are not often considered in current couple-based health interventions.

The physical separation of partners undoubtedly alters the contextual and cultural norms that shape the relationship. For example, communication, power, and family responsibilities have been shown to be critical in advancing health enhancing behavior changes among immigrant couples [27–29]. Yet, couples in separate residences may encounter difficulties in communication or fulfillment of family responsibilities due to the barrier of physical separation. As study results indicate that separate residence predicts lower partner approval to test for HIV than individuals with shared residence, they potentially reflect the greater challenges and lower levels of support and connection within separated couples.

Research suggests that couples engaged in long-distance relationships experience communicative strain, segmentation, and disconnect [30]. Couples where one partner has migrated may experience loss of emotional support, marital conflict, and changes in communication, post migration [31]. These strained relationship dynamics resulting from living in separate residences can lead to emotional distress, which has negative consequences for health-related behaviors and health outcomes [32]. Thus, findings highlight the need for greater attention on couple-based HIV prevention and intervention strategies that aim to increase partner support and strengthen intimate bonds among couples who live apart.

Integrative intervention models that are based on interdependence theory indicate that communal coping strategies and improvement of positive relationship and communication skills can lead to health enhancing behaviors [10, 14, 33]. Such efforts that target couples who reside in separate residences or are separated by national borders might consider the use of technology, travel, and long-distance strategies to strengthen partner dynamics. Given the growing immigrant population in the United States and the persistent legal challenges that may prevent shared residence among immigrant couples, separate-residence partnerships may continue to influence preventive health behaviors and have public health implications.

Further research is needed to better understand the effects that habitation patterns may have on partner dynamics and couple's health behaviors, particularly among immigrant couples who are living in separate households across national borders. Specifically, future studies should expand conceptualizations of partnership and habitation and include immigrant couples living apart. Moreover, attention to the sexual orientation of individuals and non-traditional partnerships are important considerations in understanding partner dynamics for HIV prevention. Additionally, research that examines couples that experience residential separation may consider circumstances associated with immigration. For example, immigration can affect structural barriers to HIV prevention such as health insurance or availability of health care services, and also lead to economic and financial shifts within the couple context. Without resources or access to services due to immigration related policies and barriers, individuals may not be able to seek or obtain health services regardless of their partners' approval to do so. Moreover, couples can be affected by enforcement of immigration policies such as detention or deportation that can not only strain the relationship context but exacerbate risk for HIV. These circumstances are important when developing and implementing couple-based HIV prevention strategies in the context of the United States or other settings where similar policies exist.

There are several limitations of this study. First, only one partner in the relationship, namely, Latino immigrants residing in the United States at the time of data collection, were included in the survey. The lack of data from both partners may limit our understanding of partner perceptions in our sample. Second, we did not account for couple characteristics such as length of time in the relationship or type of relationship (e.g. monogamous vs. non-monogamous). We also did not assess the proximity of individuals' partners or frequency of meeting in person among participants reporting separate residences. Hence, some couples in separate residences may have been living in the same community or general area. Further, some couples may have had more frequent interactions than other couples. Additionally, the

HIV status of partners can shape perceptions of partners' risks and may influence partner approval. Only two participants reported being HIV positive in the sample, which limited analyses that accounted for HIV status in this study. These couple characteristics may affect the level of influence that a partner has on the other.

Also, important to note is that the vast majority (95.6%) of participants self-identified as straight or heterosexual. Given that HIV risk is particularly elevated among gay and bisexual men and people who are transgender [34], future studies may specifically target couples who are part of sexual and gender minority groups.

Additionally, the nuances of health enhancing motivations and behaviors can be challenging for participants to accurately self-report. While we assessed for socially desirable responding, survey responses may be subject to self-report bias and underreporting. Finally, contextual and environmental factors that can play a role in partner perceptions were not accounted for in the models. As demonstrated by the results of the total effect of partner residency on intention to test for HIV, several other factors may be at play. For example, stressors associated with migration, economic stress, employment status, type of health insurance, and ability to access services among this population may influence health behaviors despite partner approval and shared residence.

Conclusion

Despite study limitations, findings revealed that shared or separate residence can shape HIV testing intentions among Latino immigrants through the influence of partner approval. These results have implications for targeted HIV testing efforts, particularly among partnered immigrants, and suggest the need to consider partner residency as an important factor in shaping determinants of HIV testing behaviors. Conceptualization of couples as living separately, across national borders, is warranted for couple-based health interventions given the current socio-political climate in the United States.

Further, study findings have global relevance for immigrant couples that may be impacted by migration and immigration laws that prevent partners from living together. Future research focused on couple-based HIV prevention should examine strategies and policies to preserve or strengthen partner dynamics among couples living apart. In addition to habitation patterns, future research on couple-based health interventions should consider the role of cultural norms and contextual factors (e.g. gender roles, communication, fidelity) in enhancing HIV preventive behaviors among couples in unique and diverse circumstances.

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Figure 1.
 Models predicting intention to test for HIV

Table 1.

Demographic characteristics (N = 206)

	<i>n</i>	%
Partner residence		
Shared residence	151	73.3
Separate residence	55	26.7
Sex		
Female	118	57.2
Male	88	42.7
Education *		
< High school	77	37.5
High school or more	128	62.4
Immigration status *		
Documented	142	70.0
Undocumented	61	30.0
Legal marriage		
No	78	37.9
Yes	128	62.1
Ever tested for HIV		
No	43	20.9
Yes	163	79.1
Annual household income *		
\$0-\$9999	54	27.0
\$10000-\$19999	54	27.0
\$20000-\$29000	39	19.5
\$30000-\$39999	29	14.5
\$40000 and above	24	12.0
	<i>M</i>	<i>SD</i>
Age (years)	39.17	11.28
Time living in the U.S. (years)	15.58	10.00

* Sample sizes not equal to 206 due to missing data

Table 2:

Results of Tested Models Predicting Intention to Test for HIV

	1. Direct Effect Model			2. Interaction Model			3. Indirect Effect Model		
	HIV Testing Intention			HIV Testing Intention			Partner Approval		HIV Testing Intention
	B	95% CI	P	B	95% CI	P	B	95% CI	P
Partner Approval (PA)	-	-	-	0.43	0.05, 0.81	.03	-	-	0.38
Shared Residence (SR)	3.29	-0.18, 0.84	.20	0.59	-1.61, 2.79	.59	0.48	0.01, 0.96	.04
SR X PA	-	-	-	-0.08	-0.57, 0.41	.74	-	-	-
Covariates									
Age	0.00	-0.03, 0.02	.71	-0.00	-0.02, 0.02	.93	0.00	-0.02, 0.02	.99
Gender	0.48	0.03, 0.92	.04	0.37	-0.08, 0.81	.11	0.30	-0.17, 0.77	.21
Education	0.14	-0.33, 0.61	.56	0.10	-0.37, 0.58	.67	0.23	-0.23, 0.68	.32
Time in the U.S.	0.01	-0.02, 0.03	.67	0.00	-0.02, 0.03	.76	0.01	-0.12, -0.03	.64
Income	.011	-0.05, 0.28	.16	0.11	-0.05, 0.28	.16	0.09	-0.07, 0.25	.27
Ever Tested	1.36	0.82, 1.91	.00	1.20	0.66, 1.74	<.01	0.39	-0.09, 0.87	.12