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ABSTRACT
Factors such as race, masculinity, and sexually transmitted infections have been documented to influence partner selection in men who have sex with men (MSM). Pre-exposure prophylaxis (PrEP) has received mixed evaluations as a responsible step in HIV prevention and as an enabler of riskier sexual practices. PrEP may consequently serve as an additional factor in partner choice. We examine the role that PrEP use and “promiscuity” play in affiliation and dating decisions by men who have sex with men with different HIV and PrEP status. We invited 450 MSM across the United States from a smartphone geo-locating sex application to complete a survey of which 339 successfully finished the task. The survey contained vignettes of fictional men who were promiscuous or monogamous and either taking PrEP or not. Participants provided responses on whether to affiliate with these characters in three social domains: as friends, dates, or sex partners. Neither PrEP nor promiscuity influenced friendship choices. There was a preference for dating monogamous characters. Critically, PrEP influenced sexual affiliations for HIV negative individuals who showed a preference for PrEP-using characters. The pattern of results provides quantitative evidence for PrEP-based sexual sorting aimed at reducing risk of HIV transmission.

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KEYWORDS
Pre-exposure prophylaxis; HIV; partner selection; risk reduction; PrEP sorting

There has been recent scholarly exposure of affiliative discrimination in the dating behavior of men who have sex with men (MSM). This form of discrimination involves advertising oneself as categorically un-attracted or unwilling to engage with men of certain races (e.g., Asian) (Callander, Holt, & Newman, 2012, 2015), with feminine or “camp” men (Miller, 2015), or men with a certain HIV status (e.g., serosorting) (Davis, Hart, Bolding, Sherr, & Elford, 2013; Eaton, Kalichman, O’Connell, & Karchner, 2009). There is also evidence that some traits are privileged over others such as “whiteness” (Han, 2007), masculinity (Downing & Schrimshaw, 2014; Miller, 2015), physical fitness (Hutson, 2010), and having no sexually transmitted infections (STI) (Balán et al., 2013; Blackwell, 2015; Goldenberg, Vansia, & Stephenson, 2016; Grov, Agymang, Ventuneac, & Breslow, 2013) often described as “clean”, which denotes that individuals with an STI or people living with HIV are considered to be “contagious” or “dirty”. Some factors above may only serve to exclude, for instance racial preferences are related to generic racist attitudes (Callander, Newman, & Holt, 2015), some may arise from internalized stigma such as masculinity preferences (Goldenberg et al., 2016), and others like STI aversion function as sexual risk-mitigating criteria in partner selection. While not empirically investigated yet, evidence from online dating profiles suggest that partner sorting may also be occurring on the basis of pre-exposure prophylaxis (PrEP) status, see Figure 1. We extend previous findings by testing whether PrEP is used for partner selection, especially in the context of online dating, and whether its primary function is mitigating sexual risk.

PrEP attitudes and partner selection
A fairly novel development relevant to MSM dating is bio-medical prevention. Known as viral sorting (e.g., an undetectable viral HIV load), partners and sexual practices can now be chosen based on the bio-medical status of one’s partner (Horvath, Smolenski, Iantaffi, Grey, & Rosser, 2012) as a highly effective way to reduce risk of HIV transmission (Rodger et al., 2016). Overall, this form of HIV prevention is generally evaluated as positive (Van Den Boom et al., 2013), although more critical evaluations have been reported as well (Holt et al., 2013). Yet the picture is less clear for another even more recent development within bio-medical prevention: The advent of pre-exposure prophylaxis
(PrEP, also known by brand name Truvada® by Gilead Sciences in Foster City, California), which has received mixed reception from MSM (Auerbach, Kinsky, Brown, & Charles, 2015; Ayala et al., 2013; Calabrese & Underhill, 2015; Collins, McMahan, & Stekler, 2017; Franks et al., 2017; Haire, 2015). Many herald it as an important step forward for sexual health in MSM communities, while others believe that it exacerbates sexual risk (Ayala et al., 2013), especially when bacterial and other viral STI are not prevented by PrEP (Scott & Klausner, 2016). The rationale for liking PrEP is because it greatly reduces HIV transmission risks, but the rationale for disliking PrEP is based on the assumption that it provides users with the opportunity to engage in riskier sexual behaviors (e.g., condomless anal intercourse, higher risk of bacterial STI, larger number of sexual partners) due to the sense of HIV-related safety it provides.

PrEP use can be positively or negatively evaluated depending on the sexual “promiscuity” of the user and the evaluator’s own PrEP status (Martinez & Jonas, 2018). These disparate reactions suggest that concerns about sexual risk may underlie the potential for PrEP use to shape partner selection. Akin to the functional use of HIV serosorting (i.e., matching HIV status) by MSM as a risk-reduction strategy (Blackwell, 2015; Davis et al., 2013; Eaton et al., 2009; Grov et al., 2013), PrEP sorting may work in a similar fashion – pro-PrEP, if one believes that PrEP users are under close HIV and STI status monitoring and therefore responsible sex partners; anti-PrEP, if one believes that other men on PrEP engage in riskier behaviors and thus increase one’s own bacterial STI infection risk. In the latter case, it could seem advantageous to exclude them from sexual access to oneself. Critically, however, this preference might also impact other affiliations that may later become sexual, such as romantic dates or friendships (Epstein, Calzo, Smiler, & Ward, 2009). This is especially the case when meeting people through smartphone applications where the distinction between potential friends, dates, or sex is often blurred (Blackwell, Birnholtz, & Abbott, 2014).

One’s relationship intentions with another individual (i.e., sex) and how they interpret the risks involved will depend upon both individuals’ sexual health statuses and practices. Someone who is HIV negative, rather than someone who is living with HIV or taking PrEP, may worry more about perceived infection risks and their consequences (Balán et al., 2013). Medical treatment costs serve as an example. While PrEP has been shown to be cost effective on a population level (Alistar, Grant, & Bendavid, 2014; Koppenhaver, Sorensen, Farnham, & Sansom, 2011; Nichols, Boucher, van der Valk, Rijnders, & van de Vijver, 2016), viral and bacterial STI treatment costs have not been figured in in those computations yet. In this sense, individual level “cost-effectiveness” is one step ahead as it combines associated risks and costs. Individuals could make decisions based on HIV, viral (e.g., Hepatitis C), and bacterial STI (e.g., Syphilis, Gonorrhea and Chlamydia) risk jointly and conclude that PrEP-driven HIV protection advantages are outnumbered by increased viral and bacterial STI risks. Clearly, such considerations are prone to a multitude of other sexual practices and determinants as well, for example the number of sex partners, or population level HIV and STI prevalence.
**Current study**

To test the hypothesis that PrEP use is used as a basis for affiliative preferences, we measured affiliative intentions using a vignette-rating paradigm. This method is common for assessing attitudes in social sciences (Atzmüller & Steiner, 2010; Hughes & Huby, 2004) and has proven useful for HIV-related research (Hughes, 1998; Li et al., 2007). Such a sparse-information approach is also similar to the information depth available in the context of online dating. Participants read stories depicting gay male characters as either sexually promiscuous or monogamous and either taking PrEP or not. Participants then responded to whether they would be friends, date, or have sex with the characters. If PrEP sorting exists, we expect that the character’s PrEP use will have an influence on whether participants prefer to affiliate. Moreover, promiscuity may moderate PrEP’s influence on affiliation as suggested by research on social evaluations (Martinez & Jonas, 2018). Finally, identifying the specific domains (dating, friendship, sexual) and groups (PLHIV, Taking PrEP (TP), Not Taking PrEP (NTP)) for which PrEP use is a relevant affiliation factor will provide clues to the function behind this putative partner-selection strategy; PrEP sorting in sexual contexts and in high-risk groups would implicate risk reduction as a primary function.

**Method**

**Participants**

These data were obtained from the same sample and survey as Martinez and Jonas (2018) in accordance with the University of Amsterdam’s IRB. In brief, out of 450 responses to our advertisements to complete a survey on a smartphone geolocation MSM dating application for a chance to win an Apple watch or Amazon gift cards, 339 men (18–81 years old, 37yrs average age) completed the full survey. We sampled two days between July 11 and 18th of 2015 and across nine U.S. cities: Austin, TX; Columbus, OH; Hartford, CT; Miami, FL; Pittsburgh, PA; Sacramento, CA; San Diego, CA; Seattle, WA; and St. Louis, MO. Of those who completed the survey, 258 were HIV negative and not taking PrEP, 31 were HIV negative and taking PrEP, and 25 were living with HIV (PLHIV). The other 25 did not know their serostatus, or declined to answer. There were no age differences between the groups ($p = .16$). The race distribution consisted of 52.5% Caucasian, 25.4% Latino, 7.7% Asian, 7.4% African American, .6% Pacific Islander, .3% Native American Indian, and 6.2% Other. In terms of relationship status, our sample included 68.7% single men, 11.5% dating, 8.6% married or partnered, 10.6% in an open relationship and .6% who chose “other”. Finally, the sample held a wide range of annual income: 35.1% made less than $30,000, 30.7% made $31–50,000, 16.5% made $51–80,000, 8.5% made $81–110,000, and 9.2% made over $111,000.

**Stimuli**

All participants read through eight vignettes depicting men as monogamous or promiscuous and as using PrEP or not (NoPrEP) in a 2 (sexual behavior) × 2 (health behavior) within-subjects design. There were two vignettes per condition (Appendix Table A1). The monogamous characters were displayed as only having sex with their romantic partner while promiscuous characters regularly had sex with multiple men. None of the characters used condoms. Character names were displayed as a letter. Further manipulations included a friend condition not relevant to these analyses but can be seen in Martinez & Jonas (2018). After each vignette, participants answered Yes or No to three affiliation statements: “I would be friends with [letter]”, “I would date [letter]”, “I would have sex with [letter]”, in that order.

**Analyses**

The objective was to analyze participant’s binary choices and compare across conditions while controlling for idiosyncratic sources of variation from participants and vignettes (Barr, Levy, Scheepers, & Tily, 2013), therefore we used mixed effect logistic regressions using “lme4” in R, version 1.1.11. Towards the maximal model allowed by the data, within-subject variables and interactions were allowed to vary by participant while only the intercept varied for the vignettes. These models were carried out separately for each demographic group of interest: Participants not taking PrEP and HIV negative (NTP), participants taking PrEP and HIV negative (TP), and participants with an HIV infection (PLHIV). For each dependent variable and per demographic group, we created three models: one with the character’s sexual behavior or PrEP use as the sole predictor, both in Table 1 OR column, and the full model that included both predictors and their interaction, Table 1 AOR column. The groups were not directly compared due to large differences in sample size. Odds ratios and 95% confidence intervals are reported. To examine directionality in preferences, choices were averaged within conditions per participant and tested for differences from chance (50%) with two-sided t tests corrected using false discovery rate, Figure 2. Data and analyses can be retrieved from the following Open Science Framework archive: https://osf.io/czr5t/.
Results

Friendships

Overall, most participants in all three demographic groups reported that they would be friends with all the characters as shown by Figure 2, $ts > 4.226$, $ps < .001$. There was no significant effect of PrEP on friend decisions, $ps > .092$. NTP individuals and PLHIV preferred to befriend monogamous characters over promiscuous characters, $aOR_{NTP} = .02$, 95% CI (0, .23), $p = .001$, $aOR_{PLHIV} = 0$, 95% CI (0, 0), $p < .0001$, see Table 1.

Dating

We present the results by subgroup, individuals not taking PrEP (NTP), taking PrEP (TP) and PLHIV.

NTP individuals did not want to date promiscuous characters, $ts(257) > 14.28$, $ps < .0001$, see Figure 2. Instead, they preferred monogamous over promiscuous characters, OR = .02, 95% CI (.01, .05), $p < .0001$, aOR = .01, 95% CI (0, .05), $p < .0001$. PrEP use as a predictor was not significant ($ps > .119$).

TP individuals mainly rejected promiscuous characters for dating, $ts(30) > 4.22$, $ps < .0004$, see Figure 2, and preferred monogamous over promiscuous characters, OR = .03, 95% CI (0, .05), $p = .014$, aOR = .01, 95% CI (0, 1.2), $p = .059$. They also preferred to date PrEP using characters relative to NoPrEP characters, OR = .32, 95% CI (.12, .83), $p = .019$, but this difference was not significant when adjusting for sexual behavior, aOR = .15, 95% CI (.01, 1.61), $p = .118$.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Variables</th>
<th>Not taking PrEP</th>
<th>Taking PrEP</th>
<th>Groups</th>
</tr>
</thead>
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<tr>
<td></td>
<td></td>
<td>$N = 258$</td>
<td>$N = 31$</td>
<td>PLHIV $N = 25$</td>
</tr>
<tr>
<td>Friend</td>
<td>Sexual behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Mono</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
</tr>
<tr>
<td>Prom</td>
<td>.02***</td>
<td>.06</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(0, .23)</td>
<td>(0, 5.6)</td>
<td>(0, &gt;999)</td>
<td>(0, &gt;815)</td>
</tr>
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<td>PrEP use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NoPrEP</td>
<td>.98</td>
<td>.53</td>
<td>94</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>(.16, 6.1)</td>
<td>(.99)</td>
<td>(2, &gt;999)</td>
<td>(0, &gt;999)</td>
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<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mono:PrEP</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
</tr>
<tr>
<td>Prom:NoPrEP</td>
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<td>&gt;999</td>
<td>0.04</td>
<td>.04</td>
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<tr>
<td>Date</td>
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<td></td>
<td></td>
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<tr>
<td>Mono</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
</tr>
<tr>
<td>Prom</td>
<td>.02****</td>
<td>.01****</td>
<td>.03*</td>
<td>.01†</td>
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<td></td>
<td>(.01, .05)</td>
<td>(.05)</td>
<td>(.5)</td>
<td>(.1, 1.2)</td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
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<td>NoPrEP</td>
<td>.85</td>
<td>.54</td>
<td>.32*</td>
<td>.5</td>
</tr>
<tr>
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<td>(.11, 6.7)</td>
<td>(.25, 1.2)</td>
<td>(.2, &gt;83)</td>
<td>(.01, 1.6)</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mono:PrEP</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
</tr>
<tr>
<td>Prom:NoPrEP</td>
<td>2</td>
<td>&gt;999</td>
<td>.04</td>
<td>(0, &gt;999)</td>
</tr>
<tr>
<td>Sex</td>
<td>Sexual behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mono</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
</tr>
<tr>
<td>Prom</td>
<td>.03****</td>
<td>.18****</td>
<td>0†</td>
<td>0***</td>
</tr>
<tr>
<td></td>
<td>(.01, .08)</td>
<td>(.09, 37)</td>
<td>(0, 1.1)</td>
<td>(0)</td>
</tr>
<tr>
<td>PrEP use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NoPrEP</td>
<td>.24</td>
<td>0***</td>
<td>.11*</td>
<td>.07*</td>
</tr>
<tr>
<td></td>
<td>(.03, 1.6)</td>
<td>(.02, .76)</td>
<td>(.0)</td>
<td>(.01, .05)</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mono:PrEP</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
<td>REF</td>
</tr>
<tr>
<td>Prom:NoPrEP</td>
<td>28.9*</td>
<td>13.2</td>
<td>13.2</td>
<td>13.2</td>
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<tr>
<td></td>
<td>(1.745)</td>
<td>(.0, &gt;999)</td>
<td>(.0, &gt;999)</td>
<td>(.0, &gt;999)</td>
</tr>
</tbody>
</table>

Note: The OR column displays odds ratios for models with isolated variables (only one fixed effect). The aOR columns displays adjusted odds ratios for the full model with all variables and interaction included. Mono = monogamous. Prom = promiscuous. † = $p < .06$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$, **** = $p < .0001$. 

Table 1. Mixed effect logistic regression results by group and affiliative domain.
PLHIV individuals only showed a preference for dating monogamous characters using PrEP, $t(24) = 2.53$, $p = .030$, see Figure 2. They wanted to date monogamous over promiscuous characters, $OR = .08$, 95% CI (.01, .63), $p = .017$; $aOR = 0$, 95% CI (0, 1.01), $p = .050$. PrEP characters were descriptively preferred over NoPrEP but this difference was not significant, $aOR = 0$, 95% CI (0, 1.72), $p = .057$; $OR = .50$, 95% CI (.09, 2.7), $p = .419$.

**Sex**

NTP individuals mostly declined sexual affiliation with promiscuous and NoPrEP characters, $ts(257) > 4.213$, $ps \leq .0001$, see Figure 2. This was the only measure where sexual behavior moderated PrEP use, $aOR = 28.86$, 95% CI (1.12, 745), $p = .043$. Within the promiscuous condition, there was no difference if they were PrEP or NoPrEP characters, $aOR = 5.15$, 95% CI (.21, 125), $p = .314$. However, in the monogamous condition NTP individuals preferred to have sex with PrEP using characters, $aOR = .18$, 95% CI (.09, .37), $p < .0001$. Overall, monogamous characters were highly preferred over promiscuous characters, $OR = .03$, 95% CI (.01, .08), $p < .0001$, $aOR = 0$, 95% CI (0, 2), $p < .0001$.

TP individuals wanted monogamous PrEP characters as sexual partners, $t(30) = 3.376$, $p = .0035$, and mostly rejected promiscuous NoPrEP characters, $t(30) = 2.344$, $p = .041$, see Figure 2. They preferred to have sex with PrEP over NoPrEP characters, $OR = .11$, 95% CI (.02, .76), $p = .025$, $aOR = 0$, 95% CI (0, 0), $p < .0001$, and monogamous over promiscuous characters, $OR = 0$, 95% CI (0, 1.07), $p = .052$, $aOR = 0$, 95% CI (0, 0), $p = .0003$.

PLHIV individuals only preferred sex with monogamous PrEP characters, $t(24) = 3.934$, $p = .0011$, see Figure 2. Correspondingly, there was a preference for monogamous relative to promiscuous characters, $OR = .07$, 95% CI (.01, .85), $p = .037$, $aOR = .01$, 95% CI (0, .23), $p = .003$. However, there was no significant effect of PrEP ($p > .421$).

**Discussion**

This study examined the role that PrEP use and sexual behavior play in MSM’s decisions to befriend, date, or have sex with males described as story characters in a vignette study. PrEP use and promiscuity played a minor role in the decision to befriend the characters with over 70% of participants agreeing to be friends in every condition. Promiscuity diminished the desire to affiliate in dating and sex for all groups whom instead preferred monogamous characters. Lastly, preferences for PrEP use differed by participants’ sexual health status and affiliative domain. For dating, participants in the TP and PLHIV groups showed some preference for PrEP users and, for sexual encounters, HIV negative participants (TP and NTP) desired PrEP users as partners.

**PrEP affects partner selection**

Partner selection informed by PrEP can be seen as functionally related to sero- or viralsorting. One functional difference from sero- or viralsorting is that people are not matching HIV or PrEP status, or selecting partners with an undetectable viral load, but rather sorting for PrEP use. While friendships can become sexual
(Blackwell et al., 2014; Epstein et al., 2009), our data showed that this possibility was not enough for our sample to sort possible friends by PrEP status. Similarly, while dating can also involve sexual actions, PrEP sorting only received tentative support in this domain and not by the predicted NTP group. However, when it came to sex, the NTP and TP group showed interest in the PrEP using characters and the PLHIV group did not, consistent with our hypothesized risk-mitigating function of PrEP sorting. The same holds true for the consistent rejection of promiscuous characters in both dating and sex.

**Cautionary implications**

With the use of PrEP as a factor in filtering sexual partners, research on serosorting can help illuminate some possible consequences of this selection criterion. Studies show that accurate knowledge of both self and other’s HIV status is crucial for HIV serosorting between HIV negative MSM to have positive benefit. This level of knowledge is often lacking due to factors such as virus latency periods, infrequent check-ups, and dishonest or missing status disclosure (Blackwell, 2015; Eaton et al., 2009). The same holds for viral sorting (Horvath et al., 2012). Imperfect knowledge of PrEP status may also derail the intended risk reduction consequences of PrEP sorting as adherence to the daily PrEP regimen is a concern (Pérez-Figueroa, Kapadia, Barton, Eddy, & Halkitis, 2015) and a problem that can reduce the efficacy of the drug (Donnell et al., 2014). Investigations into these issues are pertinent as recent actions by popular phone dating applications now allow communicating PrEP status on individuals’ profiles. Crucially, this feature may have unintended negative consequences since information from online profiles is used by MSM to filter sexual partners for HIV and now potentially PrEP too (Davis et al., 2013). Future studies should examine the health and social consequences of these actions in conjunction with MSM sexual behavior as related to PrEP sorting, prevalent PrEP use regimes (daily, event-driven) and cultural differences. For example, informal PrEP users in areas where PrEP is officially not available may not have the institutional support for medical check-up regimens or to afford continuous medication, which can result in non-optimal conditions for PrEP sorting MSM who rely on an optimal adherent PrEP use regime with their partners. PrEP sorting operates on the assumption that individuals are aware and open about their serostatus and HIV prevention approach. Failing this assumption, MSM who rely on it, may actually be at greater HIV risk than intended.

Some patterns within these data should be given consideration. Contrary to expectations, responses from the NTP group showed that PrEP was not important for dating selection. This means that PrEP plays a different social role in direct sexual affiliations compared to more involved romantic relationships. One possibility is that NTP individuals are ignoring the use of PrEP when choosing dating partners to their detriment, if PrEP sorting proves an effective method of reducing HIV transmission. Another possibility is that condoms play a main role in long term romantic affiliations curbing the need for taking PrEP use into consideration, although consistent condom use continues to be a problem in various relationship configurations between MSM (Brady, Iantaffi, Galos, & Rosser, 2013).

Another effect to note is the discrepancy on the importance of PrEP for HIV positive individuals between the statistical models and the tests against chance. While the models did not show a reliable effect of PrEP on partner choice in dating or sex, Figure 2 shows that monogamous PrEP characters were highly preferred unlike the other characters. One explanation is since the viral load of the participants was not measured, if they themselves were undetectable, a potential partner’s PrEP use may be deemed irrelevant. It is also the case that not every PLHIV is aware of or discloses their serostatus, uses a condom, or is virally suppressed to avoid HIV infections in others. On the other hand, the preference for the combination of monogamy and PrEP use coincides with research showing that these are seen as the most responsible and trustworthy behaviors (Martinez & Jonas, 2018). It suggests a strategy beyond sero- or viral sorting that HIV positive individuals use to negotiate sexual risk-preference for HIV negative men who take PrEP. In this interpersonal context, there may be less pressure to disclose their HIV status or viral load with novel partners, a known source of stigma (Przybyla et al., 2012).

Due to small samples in TP and PLHIV groups, we did not statistically compare the groups directly, as such our statements on group differences is more qualitative and should be considered as preliminary. Another issue is our use of fictitious characters which did not lead to any consequences for our participants, as would occur in real life decisions to affiliate. Lastly, while these data were collected in 2015, this study represents an initial quantitative investigation on the topic and an important future question is whether these patterns continue to hold.

**Conclusion**

Our study provides initial evidence of PrEP sorting, a partner selection strategy, especially relevant in the
context of online dating. This strategy seems to be used primarily when choosing sexual affiliations and by individuals who are HIV negative and therefore are at risk of infection, suggesting it is meant to mitigate sexual risk. While our data do not capture the effectiveness of this strategy, research on serosorting provides clues that there could be negative consequences due to imperfect knowledge about individuals’ PrEP status, especially when adherence to PrEP is a problem. This research informs calls for using the biopsychosocial model as the dominant framework for HIV prevention (Halkitis, Wolitski, & Millett, 2013) by delineating how bio-medical intervention (PrEP use) influences sexual partner selection and perceptions of other MSM. PrEP sorting should be considered in future epidemiological assessments of social networks on HIV transmission (Amirkhanian, 2014), as well as in the formulation of PrEP intervention messages where emphasis should be placed on both if and how people are using PrEP.

**Note**

1. We use the term promiscuous in the text to describe an individual with many casual sexual partners with no conferred value judgment but rather used as a reference to a common stereotype of men who have sex with men (Calabrese et al., 2018).

**Disclosure statement**

No potential conflict of interest was reported by the authors.

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Kai J. Jonas https://orcid.org/0000-0001-6607-1993

**References**


Appendix

Table A1. Eight vignettes used for the study.

<table>
<thead>
<tr>
<th>Sentence</th>
<th>PrEP</th>
<th>Sexual behavior</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 X takes Truvada and likes to go to circuit parties and have tons of unprotected sex. He tells his good friend B that he is safe enough with the pill. X and B cook dinner for their friends once a week.</td>
<td>PrEP</td>
<td>Promiscuous</td>
<td>Food</td>
</tr>
<tr>
<td>2 V and his good friend D host a movie night every weekend. V uses Truvada and loves to sleep with as many bareback gays at the local bath house.</td>
<td>PrEP</td>
<td>Promiscuous</td>
<td>Leisure</td>
</tr>
<tr>
<td>3 T and his boyfriend fuck raw and take Truvada daily for safety. T's good friend, often goes on road trips with him.</td>
<td>PrEP</td>
<td>Monogamous</td>
<td>Travel</td>
</tr>
<tr>
<td>4 R's boyfriend loves when R uses spit to slide deep into him during sex. They take Truvada to be safe. R's friend H has been trying to convince him to join his running team for a while.</td>
<td>PrEP</td>
<td>Monogamous</td>
<td>Fitness</td>
</tr>
</tbody>
</table>

(Continued)