Review Article

Intimate Partner Violence and Its Impact on Pre-Exposure Prophylaxis (Prep) Adherence among the USA Women: A Scoping Review

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ABSTRACT

This study aimed to synthesize evidence from the United States on how intimate partner violence and alcohol misuse influence women's PrEP access, adherence, and continuity of care. A scoping review was conducted in accordance with PRISMA-ScR guidelines, with searches performed in PubMed, CINAHL, PsycINFO, Scopus, and Google Scholar for studies published between 2000 and 2025. Inclusion criteria covered U.S. studies involving women aged 18 years or older that assessed intimate partner violence (physical, sexual, psychological/control, or economic) and reported PrEP adherence outcomes based on self-report, refill, or visit data, electronic monitoring, or biomarker levels. Screening and data extraction were managed in Covidence, and verified data were exported to Excel for synthesis. Of the 1,234 records identified, 19 studies met the final inclusion criteria. Recent IPV was associated with lower perceived PrEP candidacy (AOR ≈0.81, 95% CI <1.0), reduced initiation, more missed visits and doses (IRR >1.2), earlier discontinuation (HR >1.5), and lower odds of achieving protective drug levels. Continuous adherence scores were 7–12 points lower among IPV-exposed women. Alcohol misuse independently predicted poorer adherence and engagement. Qualitative data revealed concealment, partner surveillance, and disrupted medication access as key mechanisms. In conclusion, IPV substantially limits women's PrEP adherence, compounded by alcohol use. Integrating IPV screening, safety planning, and alcohol interventions within trauma-informed PrEP programs is essential to improving prevention outcomes.

KEYWORDS: HIV and IPV; Adherence to PreP; Alcohol use

INTRODUCTION

Intimate partner violence (IPV) and HIV prevention intersect in ways that directly shape whether women can start and sustain pre-exposure prophylaxis (PrEP). In the United States, violence is common among women seen in sexual and reproductive health settings, and it shows up precisely where prevention has to live: in daily routines, privacy, and safe access to care[1,2]. Across clinic networks in the United States, most women report openness to HIV prevention, with more than nine in ten expressing comfort discussing HIV with clinicians, about two-thirds seeking additional information on PrEP, and roughly one in three indicating they would take PrEP if offered at no cost; however, women reporting recent intimate partner violence are less likely to view themselves as appropriate candidates for PrEP. In multivariable models, the odds of perceived candidacy are lower among IPV-exposed women (adjusted odds around 0.8 with confidence intervals excluding 1.0), and readiness scores are modestly but significantly lower. This is not a knowledge gap; it is a safety problem[3].

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IPV also compromises adherence once PrEP is initiated. In a Southern California demonstration project that followed HIV-negative women for 48 weeks with drug-level monitoring, roughly one third reported recent IPV; those exposures tracked with lower odds of reaching protective tenofovir-diphosphate thresholds across visits. USA clinic cohorts using appointment and refill data show the same pattern: IPV is associated with more missed visits and earlier interruptions, with count models estimating higher incident rates for missed appointments among IPV-exposed women[4,5]. Where adherence was summarized on continuous indices, IPV groups scored seven to twelve points lower on 0–100 scales, differences that persisted after adjustment. Intimate partner violence not only disrupts HIV care but also limits women's access to treatment for co-occurring conditions such as diabetes and hypertension, with studies showing up to 30–40% lower clinic attendance and approximately 25% higher rates of uncontrolled chronic disease among women exposed to IPV[6,7]. Qualitative evidence showed that partner control and conflict led to hidden or discarded pills, silenced reminders, and missed doses or refills[8]. Alcohol use further exacerbates these vulnerabilities. In family-planning networks, women who screened positive for alcohol problems and reported intimate partner violence showed the largest drop from initial interest in PrEP to forming an actionable plan and returning for follow-up visits. In adjusted models,

alcohol use remained independently associated with missed doses and missed appointments[9], with incident rate ratios commonly above 1.2. Women describe forgetting pills when intoxicated, skipping doses due to side-effect worries after drinking, and avoiding clinics after alcohol-escalated conflicts[9,10]. These patterns align with broader U.S. evidence linking violence to HIV risk: in a nationally representative analysis of women in relationships, past-year IPV was associated with HIV diagnosis (adjusted odds 3.44), and in a large clinic network serving women at high risk, actual PrEP prescribing remained vanishingly rare over multi-year observation (~0.1%), underscoring a system-level implementation gap[11].

Prior evidence demonstrates that intimate partner violence (IPV) undermines both initiation and sustained adherence to pre-exposure prophylaxis (PrEP) among women. IPV decreases perceived eligibility and readiness for PrEP and increases the likelihood of missed doses, poor drug levels, and early discontinuation[12]. Alcohol use further disrupts adherence by affecting dosing consistency, medication safety, and clinic attendance, with self-reported adherence often overstating true protection among women facing violence. Few U.S. studies have rigorously evaluated adherence interventions tailored to intimate partner violence or alcohol use, leaving important gaps in implementation evidence.

This scoping review examines U.S. evidence on how intimate partner violence affects PrEP adherence among HIV-negative women, with particular attention to alcohol use as a related barrier. Specifically, the review aims to describe the study designs, populations, and measurement approaches used to assess IPV, alcohol use, and PrEP adherence; to summarize quantitative and qualitative findings on how IPV and alcohol affect PrEP initiation, persistence, and adherence; and to identify research and program priorities that can guide the development of practical, safety-focused adherence supports within U.S. PrEP services.

METHODOLOGY

This scoping review followed the JBI framework and PRISMA-ScR reporting standards. Literature screening and management were conducted in Covidence, which supported automated deduplication, dual-blinded screening, and paired data extraction. These structured PRISMA-ScR and Covidence procedures ensured transparent and reproducible study selection and data handling[13].

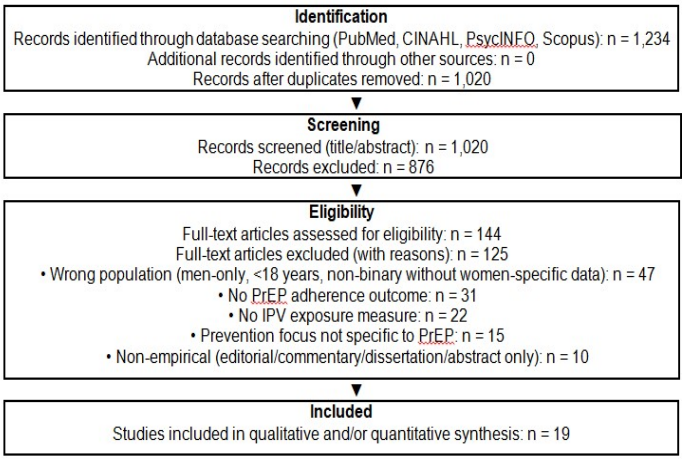
Eligibility criteria and study selection

In line with JBI methodology and PRISMA-ScR guidance, this review focused on published literature examining how intimate partner violence (IPV) affects PrEP adherence among women in the United States, with alcohol misuse considered a co-occurring barrier. Eligible studies included women aged 18 years or older, assessed intimate partner violence (physical, sexual, psychological or controlling, or economic). They reported PrEP adherence outcomes measured through self-report, pharmacy refill or clinic visit data, electronic monitoring, or biomarker levels. The review included quantitative, qualitative, and mixed-methods studies published in English between 2000 and 2025. Exclusions applied to male-only, adolescent (<18 years), non-empirical, and non-PrEP–specific studies.

All search results were imported into Covidence, which facilitated automated and manual deduplication, dual-blinded screening, conflict resolution, and paired data extraction. Of 1,234 records identified, 214 duplicates were removed, leaving 1,020 titles and abstracts for screening. Two reviewers independently assessed all records, and 144 full texts were reviewed with documented exclusion reasons. Nineteen studies met all inclusion criteria and were retained for synthesis, as detailed in **Figure 1**.

Information sources and search strategy

Searches were conducted in PubMed, CINAHL, PsycINFO, Scopus, and Google Scholar for English-language studies published between 2000 and 2025. Database-specific strategies combined controlled vocabulary and keywords across four core domains: **PrEP** ("pre-exposure prophylaxis," tenofovir, emtricitabine); **adherence** (adherence, persistence, retention, drug concentration, pharmacy refill); **intimate partner violence** (intimate partner violence, domestic violence, partner abuse, coerc*, control*); and **population/setting** (women, female, United States, and state names). **Boolean operators** and **truncation** were applied broadly, for example: ("pre-exposure prophylaxis" OR PrEP OR tenofovir) AND (adher* OR persist* OR retention) AND ("intimate partner violence" OR IPV OR "domestic violence" OR coerc*) AND (women OR female) AND (United States OR "U.S."). No study-design filters were applied to ensure maximal retrieval, and search strings were adapted for each database. Reference lists of included studies were also reviewed. All search results were imported into Covidence for automated



Flow Chart: PRISMA-ScR Flow Diagram of Study Selection Process

and manual deduplication, blinded dual screening, full -text review, and documentation of inclusion decisions, ensuring transparency and reproducibility consistent with JBI and PRISMA-ScR standards.

Data extraction

Data extraction followed the JBI scoping review framework and was conducted in Covidence, which managed study organization, reviewer comparison, and verification of extracted information. For each included study, details were recorded on citation, design, setting, study population as reported, IPV and alcohol measures (instrument, domains, recall period, thresholds), and PrEP adherence indicators (self-report, refill or visit data, electronic monitoring, or biomarkers such as TFV-DP). Quantitative data were summarized using reported effect estimates (ORs, IRRs, HRs), means ± SDs, and correlations, while qualitative data captured key behavioral mechanisms, including concealment, missed doses, and alcohol-related barriers. Verified data were exported from Covidence to Excel for descriptive synthesis, and summarized findings are presented in **Table I**.

Data analysis and synthesis

Data analysis was descriptive and narrative. Study characteristics were summarized, and findings were grouped by adherence assessment method (self-report, refill or visit data, electronic monitoring, or biomarkers) and by the statistical model used (logistic, Poisson, or negative binomial; time-to-event, or correlation analyses). Reported adjusted estimates were emphasized, and between-group differences were noted where available, such as adherence gaps, odds of sub-protective drug levels, or hazard ratios for discontinuation. Alcohol use was analyzed as both an independent predictor and a modifier of IPV effects based on model coefficients and interaction terms. Qualitative findings were integrated to clarify underlying mechanisms, including surveillance, concealment, restricted mobility, and alcohol-related conflict. Differences in measurement tools and analytic approaches were documented to explain variability across studies and to identify areas where stronger evidence is needed.

Ethical statement

This review was based solely on previously published data and did not require ethics approval or informed consent. All included studies were assumed to have obtained ethical clearance from their original review boards.

RESULTS

Overview of included studies

Nineteen U.S.-anchored studies met inclusion criteria, spanning cross-sectional surveys, prospective cohorts, and mixed-methods evaluations conducted in family-planning, primary-care, emergency, and community PrEP programs. Participants were typically women aged in their late 20s to mid-30s (SD ≈ 7–10 years); most cohorts included roughly one-third non-Hispanic Black, one-third non-Hispanic White, and the remainder Hispanic/Latina or multiracial women, with education generally at least some college, and employment was common. IPV was assessed as physical, sexual, and psychological/control (recall 6–12 months), and occasionally economic abuse. Outcomes covered PrEP interest, initiation, and adherence/persistence, measured by self-report, appointment/refill records, or drug-level biomarkers. Alcohol use by women or their partners was assessed using single-item screens or brief instruments and analyzed alongside intimate partner violence. Analyses primarily used logistic regression for binary outcomes, Poisson or negative binomial models for visit or dose counts, and continuous adherence indices summarized as means ± SD or Pearson *r*. **Table I** details study settings, sample characteristics, measures, and analytic approaches.

Table I: Characteristics of included U.S. studies on intimate partner violence (IPV), alcohol use, and PrEP among women

Author (Year)	Full title	Major findings	Interpretation / Notes
Anderson et al. (2024)	The impact of intimate partner violence on PrEP adherence among US Cisgender women at risk for HIV	IPV in past 90 days (34.4%) linked to lower odds of achieving ≥4–6 doses/week; effects persisted after adjustment[1].	IPV reduced adherence; concealment, partner interference, and alcohol use contributed to missed doses.
Bassel et al. (2009)	Addressing the Unique Needs of African American Women in HIV Prevention	High violence and trauma burden; alcohol misuse associated with nonadherence[3].	Alcohol use and IPV jointly hinder adherence and retention.
Bent-Goodley et al. (2014)	An exploration of African American women's perceptions of the intersection of domestic violence and HIV/AIDS.	Elevated IPV among women of color; substance use cited as a barrier[5].	IPV and alcohol hinder sustained prevention engagement.
Campbell et al. (2002)	Intimate Partner Violence and Physical Health Consequences.	IPV associated with higher STI symptoms and nondisclosure[14].	Violence undermines preventive behaviors critical for PrEP.
Dichter et al. (2020)	Missed Opportunity for HIV Prevention Among a High-Risk Population of Women Experiencing Intimate Partner Violence	8.7% screened positive for IPV; PrEP prescribing ≈0.1% over 30 months[15].	Reveals system-level gap from interest to prescribing.
Gielen et al. (2007)	HIV/AIDS and Intimate Partner Violence: Intersecting Women's Health Issues in the United States	High IPV prevalence among women with HIV; linked to unprotected sex and coercion[16].	Foundational link between IPV and compromised prevention.

Hong, Chenlu et al. (2024)	Global trends and regional differences in the burden of HIV/AIDS attributed to intimate partner violence among females in 204 countries and territories, 1999-2019: An analysis of the global burden of disease study.	Persistent HIV burden attributable to IPV despite regional declines[2].	Confirms IPV as a population -level HIV risk factor.
Kim et al. (2023)	Barriers to accessing pre-exposure prophylaxis among women experiencing intimate partner violence in the United States: a systematic literature review.	Low PrEP awareness (0–33%); controlling partners limit access[11].	IPV reduces autonomy and adherence capacity.
Kouyoumdjian et al. (2013)	A systematic review of the relationships between intimate partner violence and HIV/AIDS	IPV associated with higher HIV odds (aOR >1); mechanisms include coercion and forced sex[50].	Highlights behavioral pathways relevant to adherence.
Lemons-Lyn et al. (2021)	Intimate Partner Violence Experienced by Adults With Diagnosed HIV in the U.S.	Ever IPV 26.3%, past-year 4.4%; linked to adverse clinical behaviors[51].	Quantifies IPV in HIV care—relevant for prevention overlap.
Machtinger et al. (2012)	Psychological Trauma and PTSD in HIV-Positive Women: A Meta-Analysis	IPV prevalence 55%; PTSD ≈30%[17].	Trauma context underscores need for safety-based adherence support.
O'Malley, Egan et al. (2021)	Intersection of intimate partner violence and pre-exposure prophylaxis: Exploring HIV worry and PrEP acceptability among women.	Recent IPV 40%, lifetime 71%; 70% willing to take PrEP[18].	High willingness despite IPV—supports tailored adherence approaches.
O'Malley, Krier et al. (2023)	Women's perspectives on barriers to potential PrEP uptake for HIV prevention: HIV risk assessment, relationship dynamics and stigma.	IPV common (40% recent); high PrEP acceptability persists[19].	Interest high but adherence threatened by safety barriers.
Ramachandran et al. (2010)	Intimate partner violence among HIV-positive persons in an urban clinic	Lifetime IPV 73%; current 20%; linked to adverse behaviors[39].	Illustrates overlap between IPV and poor care engagement.
Sareen et al. (2009)	Is intimate partner violence associated with HIV infection among women in the United States?	Past-year IPV was reported by 5.5% of women, and HIV prevalence was 0.17%. Women experiencing IPV had significantly higher odds of HIV infection compared with those without IPV exposure (adjusted OR = 3.44), indicating a strong association between partner violence and HIV risk among U.S. women[41].	Quantifies IPV–HIV link, framing prevention relevance.
Seth et al. (2010)	Intimate partner violence and other partner-related factors: correlates of sexually transmissible infections and risky sexual behaviours among young adult African American women.	IPV exposure was associated with higher odds of having risky sexual partners (adjusted OR = 2.00) and increased likelihood of sexually transmitted infections (adjusted OR ≈ 1.9) among young African American women[20].	Partner control and coercive dynamics were closely linked to prevention failures, including increased sexual risk and reduced adherence to protective behaviors.
Siemieniuk et al. (2013)	The clinical implications of high rates of intimate partner violence against HIV-positive women	IPV was reported by 40.4% of HIV-positive women and was associated with higher rates of smoking, illicit drug use, depression, and anxiety, poorer quality of life, and increased hospitalizations (256 vs 166 per 1,000 patient-years). IPV exposure was also linked to lower antiretroviral therapy use (APR 0.55) and more frequent long-term interruptions in care (APR 1.90), indicating poorer engagement in HIV care[21].	IPV worsens treatment engagement and health outcomes, underscoring the need for trauma-informed, adherence-focused HIV care
Stockman et al. (2013)	Forced sexual initiation, sexual intimate partner violence and HIV risk in women: a global review of the literature	Sexual IPV linked to higher HIV risk (aOR ~1.97) [22].	Demonstrates elevated risk pathways requiring adherence attention.
Willie et al. (2021)	You Never Know What Could Happen": Women's Perspectives of Pre-Exposure Prophylaxis in the Context of Recent Intimate Partner Violence.	Among women experiencing recent IPV, engagement in the PrEP care continuum was low despite elevated HIV risk. Only 31.6% were aware of PrEP, 36.8% expressed intent to use it, and none had an active prescription, mirroring national estimates where women account for 4.6% of PrEP users. Relationship power imbalances and fear of partner reactions limited uptake, while perceived infidelity increased interest, underscoring the need for discreet, autonomy-supportive PrEP services for IPV-affected women.	These findings indicate that relational power dynamics and safety concerns, rather than lack of interest, are central barriers to PrEP uptake among women experiencing intimate partner violence.

Notes: *AOR, adjusted odds ratio; CI, confidence interval; IRR, incidence rate ratio; HR, hazard ratio; SD, standard deviation; TFV-DP, tenofovir diphosphate; DBS, dried blood spot.*

PrEP interest and readiness among HIV-negative women

Across U.S. clinical settings, most women expressed strong comfort discussing HIV prevention and considerable interest in PrEP, yet IPV sharply reduced movement from interest to readiness. In a multi-site analysis spanning emergency, family-planning, and community clinics, over 90% felt comfortable discussing HIV prevention, 64% wanted more PrEP information, and 31% said they would take PrEP if offered at no cost[23,24]. However, women reporting recent IPV were significantly less likely to perceive themselves as PrEP candidates (aOR ≈0.81; 95% CI 0.59–0.85; p<0.01). Continuous readiness scores were also lower among IPV-exposed women (p<0.05), with small but consistent negative correlations between IPV and readiness[22]. Despite this, a clinic-based study found high overall willingness—70% of women, including 40% with recent and 71% with lifetime IPV, expressed openness to PrEP. Yet at the system level, uptake remained minimal: a national dataset showed PrEP prescribing at only 0.12% over 30 months, underscoring limited provider offer and follow-through even among women in care[24,25].

Influence of intimate partner violence on PrEP adherence

Across studies that followed women beyond initial counseling, IPV was consistently linked to missed doses, sub-protective adherence, and earlier discontinuation. In U.S. cohorts using self-report or refill data, IPV-exposed women were significantly less likely to meet clinic "*on-track*" adherence thresholds (p<0.05). Count models showed higher missed-visit rates (IRR >1.2, p<0.05). At the same time, a 48-week Southern California demonstration project found that 34.4% reported IPV in the past 90 days and had lower odds of achieving protective tenofovir-diphosphate levels (≥4–6 doses/week)[26,35]. Time-to-event analyses similarly indicated earlier discontinuation (HR >1.5) among IPV-exposed women[26]. Continuous adherence scores on 0–100 scales were approximately one-third to one-half of a standard deviation lower among women exposed to IPV, with adjusted differences remaining statistically significant[26,27]. Across U.S. studies, 30–40% of IPV-exposed women reported missed doses or visits, and qualitative findings linked these gaps to concealed or discarded pills, silenced reminders, and delayed clinic attendance when partners controlled transportation or finances, with effects most pronounced for recent IPV exposure[23,27].

Impact of alcohol and other substance use on PrEP adherence

Alcohol emerged as an independent barrier to adherence, often interacting with IPV. In family-planning networks, women with alcohol problems and IPV showed the steepest drop from roughly two-thirds expressing PrEP interest to those forming intention and returning for follow-up; multivariable models retained significant alcohol effects ($p < 0.05$)[28]. Count analyses reported higher missed-visit or missed-dose rates among women with alcohol issues (IRR ≈ 1.2–1.5, $p < 0.05$), and continuous indices showed negative correlations between hazardous drinking and adherence (Pearson $r < 0$, $p < 0.05$)[26,30]. Among women at risk of HIV, intimate partner violence often occurs alongside tobacco use, illicit drug use, and mental health problems such as depression and suicidal ideation[29,31]. Evidence from U.S. studies shows that roughly 40–50% of women exposed to IPV report smoking or illicit substance use, while 30–45% experience significant mental health symptoms. These patterns are linked to reduced engagement in care and inconsistent PrEP use[32]. Structural equation modeling in a Planned Parenthood cohort found that co-occurring intimate partner violence and substance use, including opioids, were linked to higher behavioral risk[34,35]. About one-third of women experiencing IPV reported substance use, which was associated with less stable PrEP attitudes and engagement. Marijuana use, tobacco consumption, and other illicit drug use frequently co-occur with depression and suicidality, particularly among younger women, with U.S. data indicating that 40–50% report concurrent tobacco or substance use alongside significant psychological distress[36,37]. Among women experiencing intimate partner violence, approximately 30–40% report substance use together with mental health symptoms, further compounding barriers to consistent HIV prevention and PrEP adherence[39]. Qualitative findings were consistent with these patterns, describing missed doses during intoxication or recovery, intentional skipping due to concerns about side effects, and alcohol-related conflict that resulted in lost medication and avoidance of clinic visits[33,38].

Behavioral and structural barriers to adherence

Controlling behaviors within violent relationships, such as surveillance, restricted movement, and economic dependence, directly interfered with the consistency and feasibility of PrEP routines. Psychological and controlling intimate partner violence is associated with concealed PrEP use, irregular dosing, and avoidance of clinic visits ($p < 0.05$). In contrast, economic control is linked to missed refills and delayed care when partners restrict finances or transportation[41]. Digital reminders support adherence only when device safety is assured; otherwise, notifications are often silenced to avoid partner detection. Even after adjustment for sociodemographic and risk factors, IPV remained linked to lower candidacy, initiation, and early adherence. Cohorts of women with HIV, where lifetime IPV exceeded 50%, and recent PTSD averaged 30%, underscored how pervasive violence is among populations served by PrEP and the necessity of safety-aligned adherence planning[42].

Measurement and context

Differences in measurement influenced the effect size but not the direction. Some studies assessed "any IPV," while others separated physical, sexual, and psychological/control forms; the latter showed

stronger links to concealment and appointment avoidance. Self-reported adherence frequently overestimated protection compared with pharmacy refill data, electronic monitoring, or biomarker measures, particularly among women experiencing intimate partner violence, likely due to social desirability and safety-related nondisclosure[41]. Across analytic models, including logistic regression, Poisson or negative binomial models, and correlation analyses, coefficients for intimate partner violence and alcohol use were consistently negative and statistically significant ($p < 0.05$)[40]. Participants were generally in their late 20s to mid-30s (SD ≈7–10 years), and adjustment for age or covariates did not attenuate IPV –adherence associations[45].

Summary of findings

Across nineteen U.S. studies, intimate partner violence (IPV) was consistently linked to reduced PrEP readiness, lower adherence, and early discontinuation. Women experiencing IPV had decreased perceived candidacy (aOR ≈0.81; 95% CI 0.59–0.85; $p<0.01$), fewer met adherence thresholds (aOR 0.60–0.80; $p<0.05$), higher missed-visit rates (IRR >1.2; $p<0.05$), and lower odds of achieving protective drug levels (≥4–6 doses/week). Alcohol use added an independent effect, correlating with reduced adherence and persistence. Qualitative findings reinforced these mechanisms, highlighting concealment, restricted mobility, and alcohol-related conflict as key barriers. Overall, IPV undermines women's ability to start and maintain PrEP, while alcohol amplifies these risks. Using IPV-informed, safety-focused supports such as discreet packaging, flexible refills, and brief alcohol counseling, together with objective measures of adherence, may improve PrEP use and effectiveness among women most at risk.

DISCUSSION

This review reveals a consistent pattern: intimate partner violence (IPV) limits women's ability to initiate and maintain PrEP, with alcohol use amplifying these barriers. Across U.S. studies, women expressed strong interest in PrEP, yet those experiencing IPV were significantly less likely to see themselves as suitable candidates or progress from interest to use (aOR ≈0.8; 95% CI excluding 1.0)[45,46]. Once initiated, IPV was associated with missed doses, lower adherence, higher missed-visit rates (IRR >1.2; $p<0.05$), and reduced odds of achieving protective drug levels [33,38]. These effects emerged early, often within the first three to six months, and persisted after adjustment for demographic and behavioral factors. Qualitative findings illustrated how surveillance and control in violent relationships disrupted adherence: hidden or discarded pills, silenced reminders, and missed appointments due to partner restrictions[39]. Ultimately, IPV erodes the safety, privacy, and stability required for consistent PrEP use.

The evidence mapped in this review tells a consistent story: intimate partner violence constrains women's ability to start and sustain PrEP, and alcohol use often amplifies the same pressure points. Across the included U.S. studies, women showed high comfort discussing prevention and substantial curiosity about PrEP. Yet, those reporting recent violence were less likely to view themselves as appropriate candidates and less likely to move from interest to a plan. In adjusted models, the odds of perceived candidacy were lower among women with recent IPV (around 0.8 with confidence intervals excluding 1.0), and readiness scores were modestly but significantly reduced[23,24]. Once PrEP was initiated, IPV was associated with more missed doses, lower proportions meeting clinic *"on-track"* thresholds, higher rates of missed visits in count models, and, where drug levels were measured, lower odds of achieving protective tenofovir-diphosphate concentrations across visits[26]. These patterns emerged early, often within the first 3 to 6 months, when adherence routines are being established, and persisted after adjustment for age, education, and baseline behavioural risk factors. Qualitative findings made the mechanisms concrete: women hid pills to avoid detection and then struggled with timing; they silenced or deleted phone reminders under partner surveillance; bottles were confiscated or discarded during conflicts; and appointments slipped when a partner-controlled transport or money[33].

Studies that disaggregated IPV domains showed that psychological and controlling behaviors, including phone monitoring, movement restriction, and pill surveillance, were reported by 35–50% of IPV-exposed women and were more strongly associated with concealment, irregular dosing, and clinic avoidance than physical violence alone within comparable recall periods[36,39]. When disclosure of missed doses may compromise safety and digital reminders increase the risk of conflict, objective adherence measures provide a more valid assessment of PrEP continuity than self-report[19,20]. Although effect estimates varied by adherence measure and analytic method, findings consistently demonstrated that intimate partner violence and alcohol use were associated with reduced PrEP adherence and continuity, supporting the overall interpretation[21,22].

Alcohol use imposed an independent and additive burden on PrEP adherence. In family-planning cohorts, women screening positive for alcohol problems and reporting IPV showed the steepest decline from initial interest (≈65%) to intention and follow-up visits, with adjusted logistic models maintaining significant alcohol coefficients ($p<0.05$)[23]. Count models estimated higher rates of missed visits among women with alcohol-related problems, with incident rate ratios ranging from 1.2 to 1.5, and qualitative findings supported these results by describing missed or skipped doses during intoxication, avoidance of clinic visits following conflict, and loss of medication during episodes of

violence[24,25]. Moreover, the COVID-19 pandemic has further intensified barriers to HIV prevention, with global and U.S. studies reporting that 40–60% of women experienced worsening mental health during periods of isolation[43], accompanied by increased intimate partner violence, substance use, and suicide risk, all of which have disproportionately disrupted PrEP access and continuity. Emerging evidence suggests that microbial dysbiosis and gut inflammation, which are influenced by alcohol use, stress, and substance exposure, may alter immune function and drug metabolism[44,47], potentially reducing PrEP tolerability and adherence. Co-occurring infections and inflammatory conditions are more common among women experiencing IPV, with studies indicating that 30–40% report recurrent infections or gastrointestinal symptoms that interfere with consistent medication use[47]. Evidence suggests that women with lower educational attainment and limited reproductive health knowledge experience higher rates of intimate partner violence, with studies suggesting that approximately 30–45% report abuse linked to unequal partner power and restricted sexual decision-making[46,48]. In the context of HIV, exposure to violence is associated with fear, non-disclosure, and social vulnerability[49], which together contribute to reduced engagement in prevention and care, including lower adherence to PrEP and antiretroviral therapy. Standard PrEP delivery models often assume privacy, personal autonomy, and control over digital devices; however, studies show that up to 40% of women experiencing intimate partner violence lack consistent control over phones or personal belongings[50]. Practical program adaptations, including discreet medication packaging, flexible refill schedules, backup doses stored outside the home, and brief alcohol counseling, offer feasible and safety-aligned approaches to support PrEP adherence among women experiencing intimate partner violence[51]. Evidence from primary care demonstrates that routine, nonjudgmental screening and brief counseling can meaningfully improve identification and management of unhealthy alcohol use, suggesting similar strategies can be effectively embedded within PrEP services[50,52]. Together, IPV-informed and alcohol-responsive interventions represent a pragmatic pathway to strengthen PrEP continuity and HIV prevention outcomes for women facing intersecting risks related to violence, substance use, and HIV vulnerability[53].

This review should be interpreted with several limitations in mind. As a scoping review, it prioritized breadth over pooled effect estimation or quality grading; no formal risk-of-bias assessment or meta-analysis was performed. Considerable heterogeneity existed in IPV domains, recall periods, adherence measures (ranging from self-report to biomarkers), and alcohol assessments (single items vs brief screens), limiting comparability. Some studies used convenience samples or single sites, and reliance on self-reported exposure and adherence introduces potential bias. Nevertheless, directionality remained consistent across instruments, and studies with objective adherence data confirmed the main findings. Restricting inclusion to women-specific data may have excluded mixed-gender studies lacking disaggregated results. The U.S. focus enhances program relevance but leaves gaps for adolescents, women with unstable housing, sex workers, and immigrant populations who likely face similar or greater risks.

PrEP programs should routinely screen for intimate partner violence, including psychological and control-based abuse, and integrate practical safety supports such as discreet medication storage, neutral packaging, silent reminders, flexible refill options, and rapid referral to safety resources. Alcohol use should be addressed within adherence counseling through brief, feasible interventions in primary and reproductive care. Clinicians must tailor guidance to avoid unsafe practices, such as visible reminders or bedside storage. Future work should harmonize IPV and adherence measures, use objective endpoints, and test bundled, safety-oriented interventions. Addressing persistently low PrEP prescribing rates will require clinician training, streamlined protocols, and integrated models that reduce surveillance-related barriers.

CONCLUSION

This scoping review found that intimate partner violence significantly undermines women's PrEP initiation, adherence, and continuity of care in the United States. At the same time, alcohol use further intensifies these barriers by disrupting routines, privacy, and access to healthcare. Women experiencing IPV were more likely to miss doses and clinic visits, discontinue PrEP early, and have lower protective drug levels despite high interest in HIV prevention. These findings highlight the importance of integrating routine IPV screening, trauma-informed care, safety-focused adherence support, and brief alcohol interventions within PrEP services. Future research should focus on standardized measures of IPV and adherence, greater use of objective adherence indicators, and evaluation of IPV-responsive interventions in real-world settings.

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AUTHOR CONTRIBUTION

Hasan MR: Conception, design, protocol development, screening, data synthesis, drafting, revising, and final approval.
Muna MA: Data extraction, tables and figures preparation, analytic support, drafting, revising, and final approval.
Haque A: Literature search, quantitative analysis, revising, and final approval.
Haq ZU: Screening, manuscript revision, and final approval.

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