



Couples, alcohol use and experience of intimate partner violence among young women in urban informal settlements in Durban, South Africa: A mixed methods study

Andrew Gibbs^{a,b,c,d,*}, Smanga Mkhwanazi^b, Leane Ramsoomar^b, Samantha Willan^{b,f}, Rachel Jewkes^{b,e}

^a Department of Psychology, University of Exeter, Exeter, UK

^b Gender and Health Research Unit, South African Medical Research Council, Pretoria, South Africa

^c Centre for Rural Health, University of KwaZulu-Natal, South Africa

^d Institute for Global Health, University College London, London, UK

^e Department of Public Health, University of Witwatersrand, Johannesburg, South Africa

^f The School of Applied Human Sciences (Psychology), University of KwaZulu-Natal, Durban, South Africa

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ABSTRACT

Alcohol is recognized as a driver of intimate partner violence (IPV) perpetration and experience, but relatively little research has focused on the role of couples' drinking patterns, nor pathways between alcohol and violence. We draw on data collected among young (18–30 year old) people living in informal settlements who self-selected to enroll in an intervention trial to reduce IPV in Durban, South Africa to understand these dynamics. Between September 2015 and September 2016 quantitative data were collected from women, who reported on their own experiences of IPV and alcohol use, as well as their partner's own alcohol use. To contextualise and interpret the quantitative results, we use qualitative data from women and men (who were not in relationships with one another) to understand potential pathways through which alcohol use may shape conflict in relationships. All forms of IPV (physical and/or sexual, emotional and economic) were more common among women where either, they alone had problematic drinking levels, their partner was frequently drunk but they did not have problematic alcohol use, or they had problematic alcohol use and their partner was drunk frequently. Qualitative data suggested women and men in relationships rarely drank together. Three potential ways in which alcohol use increased conflict and IPV: disinhibition, with women and men more likely to get into arguments and speak 'badly' to one another; the impact of men's drinking on relationships, including economic provision and providing emotional support; and, the close association between alcohol consumption and infidelity, with women's public drinking being particularly stigmatized and male partner's seeing this as a challenge to their authority and control. Interventions addressing the alcohol-IPV nexus need to also address male patriarchal control and alcohol's close association with infidelity and the impact on finances, as well as reducing alcohol use.

1. Background

There is increasing evidence about the role of alcohol, particularly binge drinking or alcohol dependency (Foran and O'Leary, 2008), as a driver of intimate partner violence (IPV). Evidence shows men who drink alcohol are more likely to perpetrate IPV (Foran and O'Leary, 2008; Greene et al., 2017; Ramsoomar et al., 2021). Research also highlights a bidirectional relationship between women's alcohol use and experience of IPV, whereby women who experience IPV are more likely

to consume alcohol (and other substances) (Devries et al., 2014; Gibbs et al., 2023), to deal with the residual trauma of violence, particularly where mental health services are inadequate, and women who drink alcohol are more likely to experience IPV (Devries et al., 2014; Gibbs et al., 2023). Moreover, when couples both drink alcohol, violence is likely to be more frequent and more severe (Foran and O'Leary, 2008; Leadley et al., 2000). Studies also suggest a more consistent relationship between binge drinking, problematic alcohol use or dependency and IPV, rather than any alcohol use (Foran and O'Leary, 2008; Ramsoomar

* Corresponding author. Department of Psychology, University of Exeter, Exeter, UK.

E-mail address: a.gibbs@exeter.ac.uk (A. Gibbs).

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et al., 2021).

The causal relationship between alcohol consumption and IPV is confirmed through the growing evidence that interventions focused on addressing alcohol can reduce IPV in low- and middle-income countries (LMICs) (Giusto and Puffer, 2018). For instance, Murray et al. (2020) found in Zambia a brief, mental health and alcohol focused intervention reduced IPV perpetration (men) and experience (women). While a review of interventions in LMICs settings focused on mental health and transforming gender norms found modest evidence of intervention promise (Giusto and Puffer, 2018).

Less research, however, has examined pathways through which women's, men's and couples' alcohol use increases women's experiences of IPV. Some research has focused on individual impacts of alcohol consumption, including physiological effects of disinhibition (Gilchrist et al., 2019). This suggests that social cues are misread and arguments escalate more quickly (Murray et al., 2021). Other research focuses on how alcohol provides an opportunity for people (typically men) to disrupt their normal sense of self and what may be considered 'appropriate' behaviours (Gilchrist et al., 2019). This disruption of sense of self for men may lead to behaviours reflecting greater aggressiveness, and for women more argumentative, which contrast to, or over-exaggerates, dominant gender norms (Watt et al., 2012).

Another pathway between alcohol and IPV is the impact of men's spending on relationships. Studies suggest arguments around how money is spent with men prioritizing spending on alcohol rather than families, causing conflict (Gilchrist et al., 2019) or a more general sense that men are wasting money (Murray et al., 2021; Watt et al., 2012; Wechsberg et al., 2013). Measures of economic IPV may capture this, as these ask about perceptions of men spending money on alcohol when there is a not enough money at home.

Studies also identify how social norms around alcohol use can lead to IPV. Often, prevailing views suggest women's drinking is disreputable and violates social norms about what 'good women' do (Watt et al., 2012), particularly if women drink in public without their male partner (Wechsberg et al., 2013). Men may attempt to stop women's drinking through force and violence, as part of a broader attempt of men to control women (Gilchrist et al., 2019). Additionally, norms of masculinity may encourage men to drink heavily as visible demonstrations of masculinity (Rich et al., 2015), exacerbating the potential for conflict and arguments.

Urban informal settlements are rapidly growing globally including in South Africa (UN Habitat, 2015), where this study is set. Informal settlements are characterized by high levels of poor health, driven by factors including poverty, community violence and limited social support (UN Habitat, 2015). Studies in South Africa and elsewhere show high rates of harmful alcohol use, including binge-drinking in informal settlements (Pengpid et al., 2021). A significant focus of work in South Africa has been on the role of transactional sex and its intersection with alcohol and violence (Dunkle et al., 2007), with the transactional sex often being among more causal or hidden relationships, rather than primary relationships.

We use a mixed-methods approach to understand the role of alcohol in shaping women's experiences of IPV among young people living in urban informal settlements in eThekweni Municipality, South Africa. We draw on quantitative data from women who were recruited into the baseline of an intervention trial (Gibbs et al., 2020), who reported on their own experiences of IPV and alcohol use, as well as their partner's own alcohol use. To contextualise and help interpret the quantitative results, we use qualitative data from the same trial from women and men (who were not in relationships with one another) to understand the potential pathways through which alcohol use may shape conflict in relationships.

2. Methods

2.1. Quantitative

Cross-sectional data were collected between October 2015 and September 2016 forming the baseline for the Stepping Stones and Creating Futures (SSCF) cluster randomized controlled trial (Gibbs et al., 2020). Working with a local NGO we identified informal settlements where it was safe to work and created 34 clusters using naturally occurring boundaries (Gibbs et al., 2020).

Women were recruited with the assistance of the NGO (who later ran the intervention) if they were aged 18–30 years, normally resident in the settlement, not in formal work or education, and could provide written informed consent. Recruitment was via convenience sampling, with the NGO holding local community meetings and walking around approaching potential intervention participants and inviting them to meetings, where the study was explained and consent sought. Questionnaires were self-completed on cellphones lent to participants, with an app installed, which provided questions in English, isiZulu or isiXhosa, alongside range and logic checks and skip patterns. Same sex trained fieldworkers were available to support participants. Further information on the study is available elsewhere (Gibbs et al., 2020).

2.1.1. Sample

We asked about women's relationship status (currently married, living with partner, boyfriend but not living together, no relationship), and excluded all women who reported not having a current relationship.

2.1.2. Measures

To understand couples' alcohol use we derived a four-level categorical variable from items asked to women. Women's past year alcohol use was assessed with the 10-item Alcohol Use Disorders Identification Test (AUDIT). Higher scores indicated greater alcohol use (Cronbach Alpha 0.81) and scores were recoded into a binary whereby those scoring 8 or higher were classified as having problematic alcohol use (Saunders et al., 1993). We asked women a single item about the frequency they saw their partner drunk in the last year. Responses were 'never', 'less than once a month', 'once a month', 'weekly' and 'daily or almost daily'. We recoded this women's assessment of their partner's drinking as either: infrequent drunkenness ('never' or 'less than once a month') or frequent drunkenness ('once a month or more', 'weekly' and 'daily').

To create a four-level variable on couples drinking, we coded women as follows: Group 1 – Neither – where the woman was not classed as having problematic alcohol use and she reported her partner was infrequently drunk; Group 2 – Partner only - where the woman did not have problematic drinking, but reported her partner was frequently drunk; Group 3 – Self only – the woman had problematic alcohol use and she reported the partner was infrequently drunk; Group 4 – Both - the woman had problematic alcohol use and reported her partner was frequently drunk. We did not ask women to assess their own frequency of drunkenness.

Outcomes for women's IPV experience were drawn from the WHO Women's Health survey (Garcia-Moreno et al., 2006). We asked five items about past year experience of physical IPV (e.g. "In the past 12 months how many times has a current or previous husband or boyfriend ever pushed or shoved you?") and three items past year sexual IPV experience (e.g. "In the past 12 months, how many times has a current or previous husband or boyfriend ever physically forced you to have sex when you did not want to?"), responses for each item were 'never', 'once', 'a few times' or 'many times'. Women were classified as having experienced physical and/or sexual IPV if they responded positively to any of the eight items. We also created a severe physical and/or sexual IPV variable where women were classed as having experienced this if they responded 'a few times' to one item (or more) or 'once' to two or more items, or any more than this.

To assess emotional IPV we asked five items about past year experience (e.g. In the past 12 months how many times has a current or previous husband or boyfriend insulted you or made you feel bad about yourself?), and recoded this as two or more experiences to indicate severe emotional IPV. Similarly, for economic IPV we asked four items about past year experience (e.g. In the past 12 months how often did your partner throw you out of the house?) and also recoded this as two or more experiences.

We assessed a range of socio-demographic variables as confounders, specifically age (range 18–30, continuous). Education was coded into primary, secondary (not complete) and secondary (complete). Relationship status was recoded into married/cohabiting compared to having a boyfriend but not living together. Sexual relationship satisfaction with main partner as a proxy for relationship satisfaction was assessed, and we recoded this to very satisfied/satisfied compared to not satisfied/very unsatisfied. Women's work was assessed through a single item: "have you worked in the past three-months?" (yes/no). Past month food insecurity was assessed through three-items, recoded into low, medium or high levels of food insecurity (Coates et al., 2007). We asked about adverse experiences before the age of 18 using an adapted Childhood Trauma Questionnaire (Bernstein et al., 2003), where higher scores indicated more breadth/severity. Gender inequitable attitudes were assessed using a modified Gender Equitable Men's (GEMS) scale (Pulerwitz and Barker, 2008), where women were asked a series of statements about their personal gender attitudes. Items were summed and higher scores indicated more inequitable attitudes (Cronbach Alpha = 0.81). We assessed depressive symptoms using the Centre for Epidemiological Studies Depression (CESD) twenty-item scale (Radloff, 1977) asking about past 2 week depressive symptoms and was summed with higher scores indicating more depressive symptoms (Cronbach Alpha = 0.88). Given the bidirectional relationship between alcohol use, IPV and depression (Devries et al., 2014), and the different time periods for measures (alcohol and IPV past year, depression past two weeks) we treated depression as a 'collider' in models rather than a confounder.

2.1.3. Analysis

We first provide a description of the sample with numbers and percentages, or means standard deviations as appropriate (excluding women reporting no current relationship). We then assess descriptive differences between different patterns of couples' drinking and the outcomes and socio-demographic factors. We use chi-squared tests for categorical variables and t-tests for continuous variables. A number of women in relationships did not report on partner drunkenness and we compare these to those who did as a supplementary analysis.

To assess if there is an independent association between couples' drinking patterns and women's IPV experience we first use unadjusted logistic regression models, reporting odds ratios (ORs), 95% Confidence Intervals (CIs) and p-values. Adjusted models include age, relationship type, sexual relationship satisfaction, education, work, food insecurity, gender attitudes, and childhood adverse events. A series of supplementary analyses repeat the analysis: i) only among women reporting alcohol use, ii) including depressive symptoms as a collider, iii) recoding women's report of men's drunkenness as 'daily, or weekly' compared to monthly or less.

2.2. Qualitative research

As part of the trial we conducted a parallel qualitative evaluation to understand processes of change. We identified and worked in two intervention clusters selected for accessibility and safety and approached all women and men recruited to see if they wanted to participate (~80 total approached, fewer agreed). Women and men, who agreed and provided separate informed consented, were interviewed twice at baseline, once at 12 months and again at 24 months. With women in one cluster we did additional light touch ethnographic observations, and in another cluster we did a form of photovoice (Willan

et al., 2019). Topic guides and the focus of photovoice was broad but included IPV, livelihoods, relationships between women and men, and children. Later rounds of data collection focused on participants' experiences of the intervention and how they felt their lives had changed. Alcohol use was not a central topic of inquiry although emerged throughout.

Data were collected by trained female and male research assistants. They conducted the interviews and group discussions in isiZulu. These were primarily conducted in the community where participants lived, in spaces where audio privacy could be assured. Photovoice was conducted in the centre of town in a community venue. Data were recorded on audio recorders and later transcribed and translated into English and the data were reviewed by another person to ensure quality.

Qualitative data were subjected to thematic analysis (Braun and Clarke, 2006). Transcripts were read and sections where alcohol was mentioned were extracted. Initial broad brush stroke coding emerged through a close reading of the data with no prespecified framework. This led to six main themes emerging (locations and patterns, violence, disinhibition, cheating, alcohol taking men away from families, wasting money). We then undertook internal coding on these six themes, organizing codes into theoretically and logical groups.

2.2.1. Ethics

This study received ethical approval from the South African Medical Research Council's and the University of KwaZulu-Natal's ethics committees. Separate written informed consent was provided for the quantitative and qualitative studies.

3. Results

3.1. Quantitative results

A total of 677 women were recruited into the baseline. Of this, $n = 124$ (18.3%) reported not having a current partner, and an additional $n = 55$ (8.1% of full sample) did not report on partner drunkenness (with no differences between those reporting on male drunkenness and those not – Supplementary Table 1). As such $n = 498$ (73.6%) reported on their partner's drunkenness and reported having a partner at baseline. Amongst those, just over half the women (55.4%) reported using alcohol in the past year, and a quarter (22.9%) of women had problematic alcohol use - as defined by the AUDIT scale (43.2% of those who drank), and half (49.4%) reported seeing their partner drunk frequently (once a month or more over the past year). When grouped by drinking patterns, 40.4% ($n = 201$) were in Group 1 ('neither'); a third (36.8%) were in Group 2 ('partner only'); one in ten (10.2%) were in Group 3 ('self-only'); and 12.7% were in Group 4 ('both').

Women in the sample had low socio-economic status. Less than a third (29.9%) had completed high school, and half (49.5%) reported moderate levels and 31.4% high levels of food insecurity. The majority reported having a boyfriend they did not live with (78.8%) and 83.9% reported either very satisfactory or satisfactory sexual relationship. Experiences of IPV were common, two-thirds (65.1%) reported past year physical and/or sexual IPV, 52.0% past year severe IPV, two-thirds (67.1%) severe emotional IPV and 44.8% severe economic IPV.

Descriptive differences (Table 1) with couple alcohol patterns suggested that mean age in Group 4 ('both') was higher than in Group 1 ('neither'). A greater proportion reported recent work in Groups 2, 3 and 4 compared to Group 1. Mean scores for adverse childhood experiences were higher among Group 3 and Group 4, compared to Group 1. Similarly, mean depressive scores were higher among Groups 2, 3 and 4 compared to Group 1. Mean scores for gender inequitable attitudes were higher in Group 2, compared to Group 1. Violence experience was patterned consistently, whereby the proportion of women reporting IPV (of any form) was higher among Group 2, 3 and 4, compared to Group 1.

Unadjusted and adjusted models (Table 2) showed a consistent pattern of increased likelihood of IPV experience with all patterns of

Table 1

Sample and descriptive relationship between alcohol use patterns and socio-demographic and violence measures – among those currently in a relationship and reporting on partner drunkenness.

	Overall	Neither (Group 1)	Partner (Group 2)	Self-only (Group 3)	Both (Group 4)	
	n(%) / mean(sd)	n(%) / mean(sd)	n(%) / mean(sd)	n(%) / mean(sd)	n(%) / mean(sd)	p-value
Any alcohol use in past year	276(55.4%)	xx	xx	xx	xx	
Problem alcohol use (self)	114(22.9%)	xx	xx	xx	xx	
Seen partner drunk (once a month or more in past year)	246(49.4%)	xx	xx	xx	xx	
Pattern of alcohol problems	xx	201(40.4%)	183(36.8%)	51(10.2%)	63(12.7%)	
Age (mean)	24.1(3.6)	23.9(3.7)	24.0(3.4)	24.2(3.4)	25.0(3.8)*	
Education: Primary only	42(8.4%)	11(5.5%)	17(9.3%)	4(7.8%)	210(15.9%)	0.133
Secondary (not complete)	307(61.7%)	121(60.2%)	114(62.3%)	32(62.8%)	40(63.5%)	
Secondary (completed)	149(29.9%)	69(34.3%)	52(28.4%)	15(29.4%)	13(20.6%)	
Relationship: married/living together	107(21.5%)	44(21.9%)	43(23.5%)	8(15.7%)	12(19.1%)	0.641
Boyfriend - not living together	391(78.5%)	157(78.1%)	140(76.5%)	43(84.3%)	51(81.0%)	
Sexual relationship quality: very/satisfactory	418(83.9%)	164(81.6%)	154(84.2%)	44(86.3%)	56(88.9%)	0.534
Worked in past 3months (yes)	135(27.1%)	41(20.4%)	56(30.6%)	18(35.3%)	20(31.8%)	0.04
Food insecurity: Low	99(19.9%)	51(25.4%)	27(14.8%)	11(21.6%)	10(15.9%)	0.094
Medium	255(51.2%)	102(50.8%)	94(51.4%)	28(54.9%)	31(49.2%)	
High	144(28.9%)	48(23.8%)	62(33.9%)	12(23.5%)	22(34.9%)	
Childhood traumas (≥ more)	18.4(5.6)	17.8(5.2)	17.7(5.1)	20.5(6.0)**	21.0(6.9)***	
Gender attitudes (≥ more inequitable)	25.6(9.5)	24.7(9.6)	26.8(9.7)*	24.3(8.4)	26.2(8.9)	
Depression (≥ more)	21.2(10.9)	19.2(10.1)	21.4(11.2)*	24.3(11.7)**	24.4(10.7)***	
IPV experience						
Physical and/or sexual IPV (past 12 m)	324(65.1%)	111(55.2%)	123(67.2%)	37(72.6%)	53(81.1%)	<0.001
Severe physical/sexual IPV (past 12 m)	259(52.0%)	83(41.3%)	96(52.5%)	34(66.7%)	46(73.0%)	<0.001
Emotional IPV (2+ experiences, past 12 m)	334(67.1%)	116(57.7%)	127(69.4%)	42(82.4%)	49(77.8%)	<0.001
Economic IPV (2+ experiences, past 12 m)	223(44.8%)	66(32.8%)	85(46.5%)	30(58.8%)	42(66.7%)	<0.001

* <0.05; ** <0.01; *** <0.001 for continuous variables using a t-test with “neither” as comparison.

Excluded those not reporting a main partner at baseline.

Neither (Group 1): Woman no problematic drinking & partner infrequently drunk.

Partner (Group 2): Women no problematic alcohol use & partner drunk frequently.

Self-only (Group 3): Woman problematic alcohol use & partner drunk infrequently.

Both (Group 4): Woman problematic alcohol use & partner drunk frequently.

Table 2

Unadjusted and adjusted odds ratios assessing if there is an independent association between alcohol use and HIV-risk experience among young women, in a current relationship and reporting on partner drunkenness.

	Physical and/or sexual IPV (past 12 m)		Severe physical/sexual IPV (past 12 m)		Emotional IPV (2+, past 12 m)		Economic IPV (2+, past 12 m)	
	OR(95%CI)	p-value	OR(95%CI)	p-value	OR(95%CI)	p-value	OR(95%CI)	p-value
Neither (Group 1)	ref		ref		ref		ref	
Partner only (Group 2)	1.66(1.10, 2.52)	0.017	1.57(1.05, 2.35)	0.029	1.66(1.09, 2.53)	0.018	1.77(1.17, 2.69)	0.007
Self only (Group 3)	2.15(1.09, 4.23)	0.027	2.84(1.49, 5.42)	0.002	3.42(1.58, 7.40)	0.002	2.93(1.56, 5.52)	0.001
Both (Group 4)	4.29(2.06, 8.93)	<0.001	3.85(2.06, 7.17)	<0.001	2.56(1.33, 4.95)	0.005	4.09(2.24, 7.47)	<0.001
	aOR(95%CI)	p-value	aOR(95%CI)	p-value	aOR(95%CI)	p-value	aOR(95%CI)	p-value
Neither (Group 1)	ref		ref		ref		ref	
Partner only (Group 2)	1.62(1.03, 2.53)	0.035	1.58(1.03, 2.41)	0.035	1.64(1.05, 2.58)	0.03	1.96(1.23, 3.11)	0.004
Self only (Group 3)	2.23(1.08, 4.59)	0.029	2.69(1.37, 5.28)	0.004	2.91(1.29, 6.57)	0.01	2.73(1.34, 5.57)	0.006
Both (Group 4)	4.19(1.93, 9.10)	<0.001	3.46(1.80, 6.64)	<0.001	1.89(0.94, 3.80)	0.073	3.75(1.91, 7.37)	<0.001

Adjusting for: age, education, relationship status, relationship quality, food insecurity, recent work, adverse childhood experiences, gender attitudes, accounting for survey structure, excluded those reporting no main partner (sample size = 498).

Neither (Group 1): Women no problematic drinking & partner infrequently drunk.

Partner (Group 2): Women no problematic alcohol use & partner drunk frequently.

Self-only (Group 3): Woman problematic alcohol use & partner drunk infrequently.

Both (Group 4): Woman problematic alcohol use & partner drunk frequently.

couples' alcohol use compared to Group 1, apart from for emotional IPV where Group 4 (both) was not significant in adjusted models. Notably, for physical and/or sexual IPV, severe IPV, and economic IPV the largest odds ratios were for Group 4. However, for emotional IPV the largest adjusted odds ratio was for Group 3 (self-only). In addition, the odds ratios were consistently larger for Group 3 (self-only), compared to Group 2 (partner only). However, in all cases there was overlap of 95% CIs between these.

Supplementary analyses showed similar patterns, though often attenuated relationships. Adjusted analyses only among women reporting drinking ([Supplementary Table 2](#)), found only significant differences for physical and/or sexual IPV for Group 4, for emotional IPV for Group 3, and economic IPV for Groups 3 and 4, compared to Group 1. Including depression as a potential confounder (rather than collider), led to attenuated associations, with physical/sexual IPV remaining significant for Group 3 and 4, emotional IPV for Group 3, and economic IPV

for Groups 3 and 4, compared to Group 1. Finally, with a more stringent male alcohol drunkenness score, a similar pattern was seen, with attenuated associations, with physical/sexual IPV remaining significant for Group 3 and 4, emotional IPV for Group 3, and economic IPV for Groups 3 and 4, compared to Group 1.

3.2. Qualitative results

Of the ~80 participants approached to participate in the qualitative study we received informed consent from, and interviewed 15 women and 19 men. At baseline they were aged between 19 and 29 years old (Table 3). None of the women had regular work, with a few reporting intermittent work, while men were more likely to report working, but primarily 'piece work' (short-term, daily or weekly work), such as unskilled building or factory work. Education levels were generally low. Data were collected from all at baseline, and follow up varied. Only women had observations and Photovoice data collected.

4. Contexts and patterns of alcohol use

In the qualitative data, women's and men's alcohol use (and their abstinence) came up frequently. A few women and men reported they did not drink at all: "... I don't drink, I'm not that type of person that is badly behaved, that worries family" (Jeje, male, baseline). Others reported drinking infrequently, particularly around holiday periods: "Me, I drink on happy occasions such as the December holidays, New Year and after New Year" (Nkanyezi, female, baseline).

Among those who reported drinking alcohol regularly there were two main places they reported drinking, at home (either their or a friend's home), or taverns. Many women spoke about drinking with

female friends in one of their houses: "We just hang out. If we feel like drinking, we contribute for the alcohol and drink indoors." (Nomvelo, female, baseline). While Ntombi reported that this was similar for her boyfriend: "Not a lot, he [her boyfriend] doesn't drink much, he doesn't tavern hop. He goes there to buy alcohol or when his friends ask to hang out and buy a few beers." (Ntombi, female, 24 m).

While drinking at home was common, some interviewees described having to hide their drinking from their family: "... they push the rural lifestyle which is that you don't drink in front of them [your parents]" (Welile, male, baseline). Others, particularly women, reported that their family members encouraged them to drink at home as they thought it was safer than drinking at the taverns:

Zoleka (female, Photovoice baseline 3): Well, we drink at Sthelo's. Her mother doesn't mind us drinking in front of her, she doesn't mind, but we have to drink inside the house. She has a problem if we go out to drink.

The other main place women and men described drinking was in taverns, and this was often around going out and 'having a party'. Women tended to talk about going to taverns with their female friends:

Thuleka (female, Photovoice baseline 3): I enjoy drinking and I have fun with my friends when we go out.

Ndoni: Taverns are fun.

Similarly, men often reported going drinking with other men in taverns, for fun and parties but also to watch sport.

There was little discussion of women and men drinking with their intimate partner whether at home or at a tavern, although Ndoni (female, endline) mentioned she sometimes went out drinking with her partner: "Most of the time he is there [at the tavern], and he gets to see that I

Table 3
Participants and data collected.

Name and age at baseline	Education	Baseline	12 m	18 m	Observations	PhotoVoice
Women						
Enhle (21)	Grade 10	X	X	X	X	
Olwethu (26)	Completed high school	X	X	X	X	
Ntombi (21)	Grade 3 (primary)	X	X	X	X	
Nkanyezi (unknown)	Only primary school	X			X	
Thembeke (29)	Grade 11	X	X	X	X	
Thobile (22)	Completed high school	X	X		X	
Sebenzile (28)	Grade 8	X	X	X	X	
Sthelo (26)	Grade 11	X	X	X		X
Noluvuyo (19)	Grade 11	X	X	X		X
Thuleka (18)	Grade 11	X				X
Ndoni (25)	Grade 8	X	X	X		X
Langa (22)	Grade 11	X	X	X		X
Khanyisile (22)	Grade 10	X		X		X
Nomvelo (21)	Grade 9	X	X	X		X
Zoleka (23)	Final year of high school, but not completed	X	X	X		X
Men						
Bafo, (26)	Completed high school	X	X			
Jeje, (20)	Completed high school	X		X		
Kay 2, (21)	Grade 10	X	X			
Kehla (22)	-	X				
Lihle (20)	Completed high school	X	X	X		
Matha (24)	Tertiary -in progress	X	X	X		
Njabulo (26)	Completed high school	X				
Nsimbi (24)	Final year of high school, but not passed	X	X	X		
Sam (27)	Completed high school	X	X	X		
Sanele (27)	Grade 10	X				
Sbo (23)	Completed high school	X	X			
Scelo (22)	Final year of high school, but not completed	X				
Sphiwe (23)	Final year of high school, but not completed	X				
Thabiso (21)	Grade 10	X				
Thula (21)	Grade 7	X	X	X		
Menzi (22)	Unknown	X				
Welile (22)	Completed high school	X	X	X		
Xolani (26)	Did not complete high school	X	X			
Nhlanhla (26)	Completed high school	X	X			

am only just drinking and having fun. You know people think when you go out drinking, you end being drunk and doing questionable things, but he gets to see that all I do is drink and have fun.” Typically, drinking was something that women and men in relationships did separately, particularly in public spaces.

There was limited reflection on why people drank – likely as this was not a focus of the original study. One key ‘driver’ of drinking mentioned was fun. In the context of limited social activities in their immediate community beyond church, drinking was an easy and popular option. The challenging social context, particularly stress appeared occasionally as a cause of drinking as participants narrated their lives. For instance, Noluvuyo (female, baseline) reflected this in her understanding of why her male partner started drinking, it was at a time when things started going wrong in their relationship, including an unplanned pregnancy, and he was stressed about supporting her: *“because he’s not working there’s no one supporting him, I know the sadness going on in his family.”* The ways in which alcohol consumption could be a way to perform masculinity (Rich et al., 2015), was briefly touched on in the interviews as a form of bonding and socializing. More widely, although not directly discussed, alcohol may be used to address unresolved trauma linked to experiences of violence.

4.1. Alcohol and violence

Women and men described several links between alcohol and violence in relationships, and there was a widespread assumption that alcohol was a key cause of violence in relationships: *“If you are in love with someone who drinks you know you will there’s always be fighting, there’s going to be fights”* (Thula, male, baseline). Participants described a range of reasons that alcohol led to violence in a relationship, specifically disinhibition, the impact men’s drinking had on their ability to provide in relationships, and the wider view that drinking was inappropriate for women, particularly given its assumed close link to cheating.

4.2. Disinhibition

Women and men spoke about how drinking alcohol led to conflict in intimate relationships in terms of its disinhibiting effects. Many women described how when their boyfriends drank, their boyfriends tended speak to them rudely and aggressively:

... when he [her boyfriend] is drunk, he is the type of person ... he has the tendency to just talk anyhow, you know, without thinking about things. Without thinking about how you are going to receive that (Noluvuyo, female, 18m)

Some women also spoke about how when they drank, they tended to get into arguments more frequently with their boyfriend:

Sthelo (female, 18m): Mostly when I am drunk, I will be overwhelmed by alcohol sometimes a small thing [with my boyfriend] will become a big issue just because I am drunk it would turn into an ongoing issue and finally a fight.

Men also spoke about the disinhibiting effects of alcohol leading to arguments. Jeje (male, baseline), for instance, spoke how he lost his sense of correct behaviour: *“Once you drink your mind changes, you no longer have a conscience that will tell you about what you are doing.”* While Njabulo described how arguments were more likely to get violent after he had been drinking:

Njabulo (male, baseline1): When I talk about that problem with her she jumped and jumped, when I was drinking this thing was on my mind already.

Interviewer: Mmmm.

Njabulo: When I came back to her, I was so angry, and I beat her at that point.

4.3. Impact of drinking on the relationship

Women often discussed how men’s drinking impacted on men’s ability to provide and show attention to them. There was a strong expectation that men should provide financially for their partner (and any children), however, alcohol often stopped men doing this. One man, Xolani, described how his drinking lessened his ability to search for work:

Xolani K (male, baseline2): You see bro’, if I am tired on a Monday, maybe I had drunk on Sunday, it happens that I don’t wake up on Monday to go look for a job. I then start on a Tuesday until Thursday, because I just don’t go on a Friday as I know that other companies close early, people are on a rush to go. I just don’t go on a Friday. But if I slept on Sunday without having been drinking, I do go on a Monday until Thursday. I put in my CVs and sit down and wait [to be called].

The impact of not working, and spending money on alcohol, led women to describe instances when men had not provided for them. Langa, for instance, described how her boyfriend could not pay for her to travel to hospital when pregnant, but still had money to drink alcohol: *“It’s when I wanted the money to go to the hospital, I had to do scans and such. He has money to drink alcohol ...”* (Langa, female, 12m). Similarly, Sebzile also complained about her boyfriend’s drinking impacting on his ability to support her:

What can I say, I am happy when he [my boyfriend] is not drunk, he gets alright. What annoys me the most is the alcohol, it really doesn’t make me happy, because when he gets money, he has to also buy for his friends because they also sponsor his drinking, and then he forgets his responsibilities. (Sebzile, female, 12m)

Some women saw men’s drinking as something that took them away from focusing on their relationship, through not spending enough time with them, and rather prioritizing their friends:

Sthelo (female, 12m): Like when I tell him ... like since he drinks alcohol *“No, I don’t like this and that” ... “And these friends of yours ... I will not make you choose who to hang out with but try not to depend on your friends too much, don’t hang out too long with your friends”* like when he has a day off, he doesn’t do things like before, before he used to spend time with me.

Similarly, Sebzile reported her boyfriend’s drinking meant he showed little interest in her: *“He is never home with us, the only time he is home is in the morning and then his friends come over and they leave, and he comes back home late at night. He comes back, eats dinner and sometimes he leaves again; people who drink alcohol are always wandering about.”* (Sebzile, female, 12 m).

4.4. Social meaning of alcohol

Drinking alcohol also challenged social norms of respectability, particularly for women. Overall, there were mixed views about men’s drinking, many, if not most, simply saw it as something men did normatively, while a few emphasized the importance of men being able to hold their drink: *“... drinking alcohol is okay, but don’t go falling about because things like that make you lose your respect.”* (Jeje, male, baseline). Others, however, saw drinking in public as not respectable for men:

Interviewer: Those men who are not respected why are they not being respected?

Khehla (male, baseline): They drink, they smoke, they do bad things that are not done by people.

Women's drinking, particularly in public settings, in contrast to men's drinking, was looked down on by almost everyone: "*Like drinking alcohol if you do ... do it in your house not out and about at taverns*" (Sthelo, female, baseline). Men often contrasted 'good' women who did not drink with 'bad' women who did: "*Let me begin with my partner since I met her while I was drunk, she doesn't drink or use any form of drugs, she goes to church ...*" (Nsimbi, baseline, male).

The social disapproval of women's drinking was linked to assumptions about cheating and other 'disreputable' behaviours:

Zoleka (female, baseline): They stab each other you see, and a girl loses her dignity when she hangs out at the tavern, we buy alcohol put it in the fridge and we sit down ...

Interviewer: Is that how girls that hang out in taverns perceived and treated?

Zoleka: It's like they are mad, they are not respected ...

Interviewer: They are not respected ...

Zoleka: When you drink in taverns you are perceived as loose ... it's like that ...

One male participant, Xolani, described how after his girlfriends had been out drinking without him, he could 'smell' they had cheated on him, and this led to him violently disciplining them:

Xolani (male, baseline): I have beaten two of my ex-girlfriends who use to drink alcohol, I use to beat them up with a belt.

Interviewer: What happened?

Xolani: They went to get a few drinks at a tavern, they had sex and they both came back smelling of condoms.

Throughout the narratives most women gave about men's behaviour towards them if they had been drinking, it was evident that men felt that when their girlfriend drank in public this was a challenge to their 'masculine identity', as it demonstrated they could not control their girlfriend:

Ntombi (female, baseline): 'R' [Zodwa's boyfriend] doesn't want Zodwa to go out to taverns, he said: "*I don't want her to go out, if she wants alcohol, she must tell me I will buy it for her and she can drink indoors because she is lowering my image in front of other men.*" What do I say to that? ... We told Sonakali that Zodwa was being beaten by 'R' and he said there was nothing he could do because Zodwa should listen to 'R'. We continued drinking and having fun. Zodwa came back after the incident, she was crying, we said 'sorry' and continued dancing.

Men sought to control their girlfriends around drinking to ensure that women aligned with men's identities and position. For instance, Thembeke described how her boyfriend told her to stop drinking:

Thembeke (female, baseline): Even the other guy I was seeing, he also didn't want me to drink, he said "*If I ever see you drunk, even if I am drunk, I will give you a slap, real bad*" and I asked him why and he said "*I do not involve myself with women who drink, I can drink and you also drink as well. When I am drunk I don't come to see you so I don't understand why you would be drunk*". So I thought to myself, obviously drinking isn't for me so let me continue not drinking.

While there were similar assumptions about men's drinking and their cheating there was no similar recourse for women who wanted to stop men drinking. Rather, the one-time Sthelo raised this with her partner it led to her being beaten for disrespecting him:

Sthelo (female, baseline): He would drink with his friends, and he would leave and say he was accompanying his friends to taverns ... he would not come back until the following morning. And when I ask him "*Hawu "B" why did you leave me alone in the house and you left the*

house with those girls, how are they going to look at me" and he would hit me and tell me not to count his wrongs as he is a man and I must not tell him what to do ...

5. Discussion

Among young people living in urban informal settlements quantitative and qualitative data highlighted the relationship between women's and men's alcohol use and women's experiences of violence from partners. Quantitative data reported by women, showed elevated rates of IPV when either they (women) had problematic alcohol use, or they reported their partner was drunk frequently, or both, and the combination of 'both' was associated with the largest odds ratios. This finding reflects other quantitative research that similarly describes increased levels of violence where either one or both parts of a couple use alcohol at high rates (Greene et al., 2017; Leadley et al., 2000).

Of note, and in contrast to much research on couples drinking (e.g. Gilchrist et al., 2019), it was not clear that partners drank together often, rather the data suggested they drank separately, particularly in public settings such as taverns, where they primarily drank with same-sex friends. This may partly be a function of relationships with few (21.5%) living with their partner and potentially seeing each other infrequently, but also associated with the strong social disapproval of women's public drinking and the implication that men could not control 'their' women. This is reflected in other South African research among co-habiting couples in the Western Cape, where there was disapproval of couples going out drinking together in public (Lesch and Adams, 2016). It may also be that more mundane forms of couples alcohol use, at home and not leading to conflict or violence, were not discussed by young people, given the focus of our research on partner conflict.

Data suggested a range of different paths through which young women and men saw alcohol as leading to violence in relationships. One path was the impact of alcohol on couples' communication patterns, particularly the disinhibiting effects of alcohol leading to greater and faster escalation of arguments. The focus on disinhibition reflects much research on the impact of alcohol as associated with greater conflict (Gilchrist et al., 2019), and reductions in 'positive' communication strategies (Woolf-King et al., 2019). The disinhibiting effects of alcohol may explain why in the quantitative data emotional IPV experience, which captured experiences such as being 'belittled' or 'humiliated', was associated with alcohol consumption.

A criticism of focusing on disinhibition is that this ignores how this is embedded in wider processes (Backe et al., 2021). In settings of poverty and stress such as those of informal settlements, alcohol use may well be linked to poor mental health and emotional dysregulation, and alcohol is used as a coping strategy (Backe et al., 2021). As such, it may be that poor mental health is a driver of both alcohol use and disinhibition.

Another pathway from alcohol use to conflict was the impact men's drinking had on their ability to provide financially for women and children. Previous research has described how men's alcohol use can undermine their ability to fulfil family obligations and economic provision leading to conflict (Gilchrist et al., 2019; Murray et al., 2021). In the quantitative data, the perception from women that men did not fulfil their obligations was captured in the measure of economic IPV, with 39% of women reporting their partner spent money on alcohol or tobacco when he knew they did not have enough money for essential household expenses. There was a strong normative assumption among young people that 'good' men should provide economically for their partner, even if they didn't cohabit or have children, and when men could not, this was strongly frowned upon (Gibbs et al., 2014). Men's drinking impacted on their ability to earn, as they could not look for 'piece work' on Monday mornings if they had been drinking on Sunday. Women saw a direct conflict between men spending money on alcohol and men's ability to achieve normative ideals of support and contested this and this may have been heightened in the context of extreme

poverty where small amounts spent on alcohol – not leading to drunkenness – could have led to conflict. Intervention research in Zambia has suggested one way in which alcohol focused interventions have successfully reduced IPV is through reducing men's spending on alcohol, leading to improved relationships (Murray et al., 2021).

The wider social context of alcohol use also led to violence, driven by norms around women's respectability, and the close association between women's and men's alcohol use and cheating. Women who drank in public were seen by many men as contesting their partner's authority and ability to control their girlfriend's sexuality, given the alcohol-cheating link (Murray et al., 2021). Prior research in similar settings has suggested when men's control was challenged, they drew on violence to reassert their authority (Gibbs et al., 2014). This conflict, and perceptions of women's public drinking as being disreputable may be associated with alternative conceptualizations of femininity, with women embodying a more 'modern' urban femininity, while men continued to seek a more conservative rural femininity, where alcohol use was shunned (Bhana and Pattman, 2011). Indeed, this may explain the high levels of emotional IPV experienced (84.8%) by women who were classed as having problematic drinking, but reported their partner did not get drunk frequently: men were angry because women were 'disrespectful' and had broken the wider social prohibition about women's (public) drinking. As such, it was the social meanings ascribed to women's alcohol consumption and how this intersected with young men's masculinity that led to violence being associated with alcohol rather than alcohol consumption per se.

For men, qualitative data highlighted the strong association in young people's minds between men's alcohol use and infidelity, however this did not necessarily lead to violence unless women challenged their partner, which could lead to male violence (Backe et al., 2021). There was a strong acceptance of men's drinking as part of a youthful masculinity (Gibbs et al., 2014), and men's infidelity was often tacitly accepted as long as it was done in secret.

This study has several limitations. Quantitative data were cross-sectional and the relationship between alcohol use and IPV is bidirectional (Devries et al., 2014; Gibbs et al., 2023), and as such we cannot be sure of the temporal ordering of these relationships. The sample was a self-selected convenience sample, and thus may bias the estimates. Women reported on their male partner's drunkenness, and as such are likely to be biased, though in what direction is unclear and we did not ask women about their own drunkenness. Moreover, it was unclear what frequent drunkenness was capturing – binge drinking, alcohol dependence – and there may well be different relationships between men's drinking and IPV perpetration, depending on styles of drinking, and the overall level of alcohol consumption (Foran and O'Leary, 2008; Ramsoomar et al., 2021). In the quantitative research, we did not ask men about their partner's drinking, and men and women in the study were not in intimate relationships with one another. The qualitative data were not collected to answer this question and while alcohol was discussed, less information came from men, compared to women. As such, it is likely we could have missed out patterns of drinking and factors linked to alcohol and violence suggesting the need for further research.

This study has implications for interventions addressing the intersection of alcohol and IPV among young people. First, addressing alcohol use as a path to reducing couple conflict could well be a promising approach, and previous interventions in other settings have demonstrated the benefit of alcohol-focused violence prevention interventions (Giusto and Puffer, 2018; Murray et al., 2020), and that these work through multiple pathways, including reducing alcohol consumption, reducing conflict over finances and improving relationships (Murray et al., 2021), all pathways described in this data. Second, targeting couples where both drink may be important, given women reported the highest prevalence experience of IPV, although all women who drank heavily experienced high rates of IPV. Third, while alcohol interventions often focus on individual level strategies, such as addressing poor mental health and limiting alcohol intake (Giusto and

Puffer, 2018; Murray et al., 2020), working with male partners on their response to women's drinking may be important, as it was often accusations of cheating and attempts to control women's sexuality, that increased women's risk of IPV. Fourth, work with couples on alcohol and IPV would also need to address questions of infidelity in relationships, with women and men connecting alcohol use to cheating. More widely, given the social context in which heavy alcohol use occurred, of poverty, thwarted futures and lack of social activities, considering how alcohol-IPV interventions could work to address these broader factors is important. For instance, cash transfers have reduced IPV and alcohol use (Baranov et al., 2021), while the Stepping Stones and Creating Futures intervention trial in which this study is embedded, found men in the intervention reported reduced IPV perpetration, alcohol use and strengthened livelihoods (Gibbs et al., 2020). All suggesting opportunities to embed focused alcohol interventions within wider social and structural interventions.

Among young people living in urban informal settlements in eThekweni, South Africa, alcohol use was common and where heavy alcohol use was present in relationships, was associated with higher rates of women's experience of IPV. Women and men described both 'direct' pathways linking alcohol to conflict in relationships, namely through disinhibition as well as men being unable to fulfil obligations of support to women, as well as indirect pathways through the association between alcohol, respectability and cheating, and young men's attempts to control their female partner. Addressing the social meanings attached to alcohol, as well as men's masculinities, will be important in addressing the alcohol-IPV nexus.

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Ethics statement

The South African Medical Research Council and the Biomedical Research Ethics Committee at University of KwaZulu-Natal provided ethics approval, at University of KwaZulu-Natal provided ethics approval. Participants provided written informed consent to participate in this study. [Not Available in CrossRef].

CRediT authorship contribution statement

Andrew Gibbs: Writing – original draft, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Smanga Mkhwanazi:** Writing – review & editing, Project administration, Investigation, Data curation. **Leane Ramsoomar:** Writing – review & editing, Formal analysis, Conceptualization. **Samantha Willan:** Writing – review & editing, Project administration, Methodology, Conceptualization. **Rachel Jewkes:** Writing – review & editing, Supervision, Methodology, Funding acquisition, Conceptualization.

Data availability

Data will be made available on request.

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Appendix A. Supplementary data

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