



Assessing risk factors and health impacts across different forms of exchange sex among young women in informal settlements in South Africa: A cross-sectional study

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ABSTRACT

For women in South Africa, engaging in exchange sex, including transactional sex (TS), or sex work (SW), is associated with several shared poor health outcomes; yet the practices themselves differ in meaningful ways. SW is a form of commodity exchange, while TS is grounded in gendered relationship expectations of male provision and aspects of emotional intimacy. Additionally, exchange sex types could be imagined on a “continuum of instrumentality” from relationships that do not include material support; to those characterized, but not driven by support; to those primarily motivated by material support. We use cross-sectional data from 644 women ages 18-30 enrolled in a trial addressing intimate partner violence in urban KwaZulu-Natal, South Africa to assess whether these conceptualizations may also map onto different types or levels of risk. Using self-reports, we developed four exchange sex relationship categories corresponding to a continuum of instrumentality: no exchange-based relationship; TS with a main partner only; TS with a casual partner; and SW. Using tests of association and adjusted logistic regression models, we compared socio-economic and behavioural risk factors, and health outcomes across reported forms of exchange sex. We find little difference between women who report no exchange sex and those who report TS only with a main partner. By contrast, as compared to women not in exchange sex, women in casual TS and SW were poorer, and significantly more likely to report problematic alcohol use, past drug use, prior non-partner sexual violence, and PTSD; with aOR higher for women in SW for many outcomes. When comparing casual TS to SW, we find women in SW held more gender equitable attitudes and were more likely to report modern contraceptive use. We discuss the implications for distinguishing between TS and SW, and use of the continuum of instrumentality conceptualization for research and programming.

1. Introduction

For women, sex in exchange for material support, either explicitly or implicitly, is associated with many poor health outcomes (Decker et al., 2015; Dunkle et al., 2004; Jewkes et al., 2012; Pack, L'Engle, Mwarogo and Kingola, 2014; Parcesepe et al., 2016; Ranganathan et al., 2016) driven by a complex set of factors including social and economic gender inequities, male partners' characteristics, and the legal contexts in which exchange sex occurs. These influences and associations with exchange sex have been widely researched in Eastern and Southern Africa (ESA) in particular, given disproportionately high prevalence of HIV among

adolescent girls and young women in the region. Health impacts of sex work and transactional sex for cisgender women include increased risk of HIV-acquisition (Baral et al., 2012; Jewkes et al., 2012; Kilburn et al., 2018; Shannon et al., 2015; Wamoyi et al., 2016), greater experience of sexual and other forms of intimate partner violence (Becker et al., 2018; Decker et al., 2015; Dunkle et al., 2004; Zembe et al., 2015) and experience of non-intimate partner violence (Choudhry et al., 2015; Decker et al., 2015; Okigbo et al., 2014). Studies have also found that many of those engaging in sex work, and some forms of transactional sex, are more likely to misuse alcohol – potentially driven by the contexts in which some forms of exchange sex take place (Pitpitian et al., 2014).

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1.1. Distinguishing transactional sex from sex work

While women engaged in both transactional sex and sex work share these health risks, the practices themselves differ in important ways. Namely, despite substantial variation across context in its organization, sex work can be described as a form of commodity exchange where sexual services are generally immediately remunerated with money or other material goods (Luke, 2005). The terms of the sexual encounter are often negotiated, there is generally little emotional labour or attachment expected, and the partners are understood as clients and sex workers. Additionally, in many contexts, those who engage in sex work face the threat of criminalization. By contrast, transactional sex can be defined as non-marital, non-commercial sexual relationships motivated by an implicit assumption that sex will be exchanged for material support or other benefits (Stoebenau et al., 2016). Unlike sex work, transactional sex relationships are based on, or extend from, the widespread gendered expectation within heterosexual relationships in patriarchal contexts that men are expected to provide financial and material support, and women, in return, sexual and domestic services (Mains, 2013; Mojola, 2014). Transactional sex partners are often described and understood as boyfriends and girlfriends, or lovers (Hunter, 2010), although some partners have been referred to with more instrumental labels including, for example, “minister of finance or transport” or a “roll-on” or “one-off” (*khwapheeni*), or more recently “blesser” (Dunkle et al., 2004; Scorgie et al., 2021). In most cases, however, these relationships include some level of emotional intimacy alongside, if not because of, expectations of sex for material exchange (Swidler and Watkins, 2007). The distinctions in the underlying assumptions and structures shaping sex work as compared to transactional sex are important, as they point to different approaches to intervention, and often with different populations.

Yet, the distinctions between sex work and transactional sex are also quite “fuzzy” in several interrelated respects. First, there are shared physical spaces where transactional sex and sex work are practiced, such as bars and nightclubs where patrons, as well as female bar workers, may engage in both sex work and/or transactional sex relationships (Becker et al., 2018; Dambach et al., 2020). Further, serial casual transactional sex relationships characterized by relatively high partner turnover and motivated almost exclusively by men’s provision of resources, are not easily discernible from sex work (Stoebenau, 2009; Wojcicki, 2002). Some women may move between both forms of exchange sex, depending on economic pressures and situations, and may never clearly define themselves as sex workers. In addition, women who engage in transactional sex relationships begun in bars or nightclubs over a significant period of time may transition into being identified by others as sex workers. The community understanding of their identity can become increasingly damaged and stigmatized, such that they are relegated to a “sex worker” identity regardless of how they self-identify (Cole, 2004). Finally, regular clients of sex workers may, over time, become intimate partners of sex workers, and this can lead to changes in how material support is provided within those relationships (Bhattacharjee et al., 2018; Stoebenau et al., 2009).

In these respects, women’s engagement in transactional sex and sex work might be imagined on a “continuum of instrumentality” – or the degree to which the sexual exchange is instrumental in intent (Stoebenau et al., 2016). Relationships that do not include material support or exchange would be at the start of this continuum. Those relationships characterized, but not driven by, material support from a male partner, could be considered at the low end of the instrumentality continuum, relationships primarily motivated by material support in the middle, and sex work at the far end of the instrumentality continuum. The utility of such a conceptualization of sexual exchange relationships for public health efforts depends in part on whether this continuum corresponds to increases in sexual and related health risks, such as exposure to different forms of violence. One might expect a risk gradient across the continuum as level of motivation for anticipated support may map onto a woman’s dependence on that support. If women are reliant on male provision

through sex exchange, they may be more likely to yield sexual decision-making control, or endure violence.

Alternatively, rather than a continuum, we might expect distinctions in health risks or outcomes that instead correspond to differences in the fundamental assumptions that structure and differentiate sex work from transactional sex practice (e.g., commodity exchange versus an extension of traditional gendered relationship expectations). For example, women who engage in relationships they understand as sex work-client exchanges may have less difficulty negotiating condom use, as associations between condom use and intimate partner trust are less a concern (Stoebenau et al., 2009).

In this paper we begin to examine these alternative conceptualizations by leveraging data from young women living in urban informal settlements in eThekweni Municipality, in KwaZulu-Natal, South Africa. Informal settlements are spaces of high levels of poverty, and limited government support, and comprise up to 23% of households in eThekweni (HDA, 2011). South Africa is an ideal setting for examining these questions as there are emic definitions for different types of sexual exchange partnerships that arguably correspond to a continuum of instrumentality. Specifically, in South Africa, most women and men differentiate main partners, who are often publicly acknowledged longer-term relationships; from casual partners including roll-ons, blesser or *khwapheeni*, which are ongoing relationships but hidden from public view; and once-offs, which are effectively one-time sexual encounters. These latter partnership types are often described by women with more instrumental terms and intentions. Sex work, while not legal, is rarely criminally prosecuted, and there are a few health programmes to support sex workers. Therefore, in this context we can operationalize, in salient ways, relationships across an instrumentality continuum: at the low end are relationships described as not transactional, followed by transactional relationships with a main partner ‘characterized by exchange,’ then relationships with casual partners ‘motivated by exchange,’ and at the far end are sexual exchanges described as sex work. While we recognise the challenges in operationalising these concepts and the slippage between them, we use these characterizations as a heuristic. We first assess whether there are socio-demographic factors associated with different forms of exchange sex, and second whether HIV risk behaviour, experiences of violence and other health outcomes, differ across those relationships identified as transactional sex versus sex work, or vary across a continuum of instrumentality from those relationships that do not involve exchange to those defined as sex work.

2. Methods

Data come from young women aged 18–30 years enrolled in the baseline of the Stepping Stones and Creating Futures intervention trial ($n = 644$), a cluster randomised control trial (RCT) to evaluate the impact of the intervention on women’s experiences of IPV, undertaken in urban informal settlements in eThekweni, South Africa (Gibbs et al., 2020).

To be eligible for the trial, women had to be aged 18–30 and not in formal education or employment and normally reside in selected informal settlements. We identified and recruited from 34 clusters, in collaboration with Project Empower, a local NGO, with extensive experience in implementing interventions in these contexts (Gibbs et al., 2020). Clusters were delineated based on naturally occurring divisions or sub-divisions within urban informal settlement communities. Project Empower, alongside the research team, worked for two to three days in each cluster, identifying and checking eligibility of participants, before enrolling them in the study. Recruitment was through convenience sampling, with the team moving around the cluster to where young people may be and approaching them. There was some referral of young people by each other (Gibbs et al., 2020).

The study received ethical approval from the South African Medical Research Council’s ethics committee, and the Biomedical Research Ethics Committee at the University of KwaZulu-Natal. All participants

provided written informed consent prior to participation. Further details have been published elsewhere (Gibbs et al., 2020).

2.1. Data collection

Questionnaires were self-completed by participants on cellphones lent to the participants by the study team. An app-based system called Mobezi Researcher was pre-loaded and provided skip patterns, and logic and range checks. The questionnaire was available in English, isiZulu, and isiXhosa. Trained fieldworkers were on hand if participants required additional support.

2.2. Measures

To assess different forms of exchange sex we asked women who reported that they were sexually active about their engagement in three different types of exchange sex. First, we asked about transactional sex with a casual or once-off sex partner in the past year. Specifically: "In the past 12 months please think about any man you had sex with just once or any casual partner or *khwapheeni* [local term for casual partner]. Did you have a relationship or sex with them because you expected to receive, or received any of the following ..." We then asked about five different groups of items, including cash or money for oneself, support for your children, somewhere to stay, drugs, food, or something else you could not afford. Responses were 'no' or 'yes' to each item. This measure was developed in South Africa (Dunkle et al., 2004) and has been extensively used throughout the country (Jewkes et al., 2012).

We then asked about transactional sex with a main partner, using the question: "In the past 12 months have you started or stayed in a relationship with a main partner so that you could receive any of the following?" Response options were the same as for casual partners. The separation between main partners and casual or once off sex partners is clearly recognised by the young women and in pre-tests caused no confusion.

To assess engagement in sex work in the past year, we asked a single item: "In the last 12 months have you done sex work or supported yourself from money you received because you had sex?" Response options were 'no' and 'yes'.

Given the overlap between women's responses we created a four-level variable for women's engagement in different forms of exchange sex in the past year: 0) No exchange sex; 1) only transactional sex with a main partner; 2) transactional sex with a casual partner, with or without transactional sex with main partner, but not sex work; 3) sex work, whether or not any other forms of transactional sex were reported. These categories serve to represent women's engagement across a sexual exchange continuum.

2.2.1. Socio-demographics and personal characteristics

We assessed women's ages and education level (primary only, secondary not completed, secondary completed). We also asked about whether women were married or living with a partner, had a partner they did not live with, or no current relationship, and also whether or not they had a child. To assess current livelihoods and poverty we asked about the following five topics: food-insecurity (assessed with three items about past month household food-insecurity, summed with higher scores indicating more food insecurity); past month earnings (recoded into any versus none); overall debt held; and finally, whether because of a lack of food they had either borrowed money (in the past month either weekly or more); or stolen in the past month (yes versus no).

To understand women's gender attitudes, practices, and experiences we asked four sets of questions. We asked 20 questions about gender attitudes, based off the Gender Equitable Men's Scale (GEMS) for example: "Men need sex more than women do." With a four-point Likert scale - strongly disagree, disagree, agree, strongly agree - being responses (Cronbach $\alpha = 0.86$, range 0-60). Higher scores indicate more gender inequitable attitudes. We also asked five questions about

women's experiences of power in their current or most recent sexual relationships, based off the Sexual Relationship Power Scale (SRPS) (Pulerwitz et al., 2000). An example was "My partner tells me who I can spend time with." Responses were on a Likert scale (Cronbach $\alpha = 0.75$, range 0-24). Higher scores indicate more controlling experiences from male partners. Women also reported age at first sex, recoded to 14 or younger, 15-17, and 18 or older. A single item assessed whether the woman, before the age of 18, had witnessed her mother being beaten by her mother's partner or husband (yes or no). Two single items assessed the number of casual sex partners and once-off sex partners a woman reported in the past year.

2.2.2. Health outcomes and risk behaviors

We assessed seven health related outcomes. Past year physical and/or sexual IPV experience was assessed using 8 behaviourally specific questions drawn from the WHO's multi-country study on women's health (WHO, 2005) adapted and previously used in South Africa (Jewkes et al., 2010). A typical question was: "In the past 12 months how many times has a current or previous husband or boyfriend ever pushed or shoved you?" With responses, 'never', 'once', 'few', or 'many'. A positive response to one or more items led to women being classified as having experienced IPV.

Non-partner sexual violence was assessed with five items, previously developed for use in South Africa (Jewkes et al., 2006) and widely used globally. An example item was: "In the last 12 months how many times have you been forced or persuaded by someone who was not your boyfriend or husband at the time to have sex with you?" With responses, 'never', 'once', 'few', or 'many'. A positive response to one or more items led to women being classified as having experienced non-partner sexual violence.

Depression was assessed using the Centre for Epidemiologic Studies Depression Scale (CES-D) scale (Radloff, 1977), and has been used previously in South Africa (Gibbs et al., 2020). Twenty items asked about past week depressive symptoms with responses ranging from never to everyday ($\alpha = 0.88$, range 0-60), and items were summed, with a score of 21 or higher indicating potentially clinically relevant depression.

Symptoms of post-traumatic stress disorder (PTSD) were assessed using 16 items from the Harvard Trauma Questionnaire (Mollica et al., 1992). An example question was "In the past week have you felt detached or withdrawn from people?", with responses, 'not at all', 'a little', 'quite a bit' and 'extremely' (Cronbach alpha = 0.92), mean scores were calculated for the overall scale and a mean score of ≥ 2.5 was used to classify people as having potentially clinically relevant PTSD.

Harmful alcohol use was assessed with the Alcohol Use Disorders Identification Test (AUDIT) scale (Saunders et al., 1993). Scores were summed (0-40), and a cut of eight or more was used to classify women as having harmful alcohol use.

We included a single item about past year drug use: In the last 12 months how many times have you used drugs to make you high or have a good time? with responses, never versus once or more.

We assessed modern contraceptive use through two items. We first asked whether women were currently using something to delay getting pregnant (yes or no). Women reporting yes were then asked what they were using, with a range of options, including 'other'. Women who reported using the 'injection', 'pills', 'IUD', 'condom', and 'implant' were coded as using modern contraception, while other women were coded as not using modern contraception.

2.3. Analysis

All analyses included adjustment for study design and clustering. We first present women's responses to the individual questions about exchange sex and the four-level variable we generated. We then conduct descriptive statistics for the whole sample, and then by the proportion of women not engaged in exchange sex, transactional sex only with a main

partner, transactional sex with a casual partner, and sex work, by socio-demographic characteristics. For categorical variables we report n's and percentages, and for continuous variables mean scores, and 95 percent confidence intervals (95%CI), with tests of significance (chi-squared for categorical variables and t-tests for continuous variables).

We then assess health outcomes by women's engagement in exchange sex. We first report descriptive statistics by each health outcome (n's, percent, and 95%CI) and tests of association (chi-squared). We then report adjusted associations for each health outcome using logistic regressions, with no exchange sex as the reference, and then adjusted associations for health outcomes comparing transactional sex with a casual partner as the reference to sex work. Following established understanding of specific socio-demographic, economic and behavioural characteristics as likely to influence or vary across our dependent and independent outcomes of interest, we adjusted for age, education, food insecurity, age at first sex, witnessing mother being beaten, and having any children. We reported adjusted odds ratios, 95%CI and p-values for these.

3. Results

In total, 677 women enrolled in the study, of whom 644 reported on their sexual behaviour. In Table 1 the proportion of women engaging in each form (and combination) of exchange sex is described. Just over a third (38.5%, n = 248) reported no exchange sex in the past year, a fifth (17.6%, n = 113) only transactional sex with a main partner (but not other form of exchange sex), a third (34.5%, n = 222) transactional sex with a casual partner (but not sex work), and almost one in ten (9.5%, 61) had engaged in sex work.

3.1. Social, demographic, and economic characteristics across types of exchange sex

Around half the participants were aged 24 or less (Table 2), and just under a third (29.4%) had completed secondary education. Two-thirds (64.8%) had a partner they did not live with, and 16.8% reported no current relationship. Over three-quarters (79.0%) reported having a child. Poverty was common; a third of participants reported borrowing in the past month because of hunger, and a quarter (25.1%) stealing in the past month because of hunger. A fifth (20.5%) reported first sex at age 15 or younger, half (49.7%) were aged between 16 and 18, and 29.8% were 19 or older at first sex.

Socio-demographic analyses showed that a greater proportion of those who engaged in transactional sex with a main partner only were living with their partner, compared to other categories (31.0% vs. 15% for no exchange sex, 15% for transactional sex with casual partner, and 21% for sex work). In addition, those reporting no exchange sex were less likely than those reporting any type to have children, although the

difference was small (73% vs. 84% for transactional sex with main partner, 83% for transactional sex with casual partner, and 80% for sex work).

Livelihood indicators suggest women who reported sex work, and less so, transactional sex with a casual partner, were worse off than others. Both groups reported higher mean scores for food insecurity (mean food insecurity score of 2.7 for no exchange sex and 2.9 for transactional sex with main partner; vs. 3.4 for transactional sex with casual partner and 3.4 for sex work). A higher proportion of women who engaged in sex work reported stealing (41.0% vs. 22%, 21.2% and 26.6%), or borrowing because of hunger, in the past month (59% vs. 24.2%, 31.0% and 32.4%).

Gender attitudes varied by different forms of exchange sex. The most gender equitable attitudes (lowest scores) were among those reporting no exchange sex (24.4) and those reporting sex work (23.9), with significantly less gender equitable attitudes (higher mean scores) for those reporting transactional sex with casual partners (but not sex work) (27.9).

Those engaged in sex work were more likely to report their first sex at or below the age of 15, compared to all other groups (31.2% for those who reported sex work as compared to percentages ranging from 18.2% to 21.2% for the other categories). Mean scores for adverse experiences in childhood were higher for those reporting transactional sex with casual partners and sex work, compared to those reporting no exchange sex. Similarly, those engaged in transactional sex with casual partners and sex work reported higher mean numbers of past year casual partners and past year once-off sex partners.

3.2. Risk behaviours and health outcomes across types of exchange sex

Compared to those reporting no exchange sex, there were no significant differences in health outcomes among young women reporting only exchange sex with a main partner, but there were consistent patterns of worse health outcomes among those reporting transactional sex with a casual partner and sex work (Table 3). Specifically, compared to no exchange sex, women who reported transactional sex with a casual partner were significantly more likely to report past year IPV (aOR1.55, 95%CI:1.04–2.37), and women reporting transactional sex with a casual partner or those reporting sex work were significantly more likely to report non-partner sexual violence (aOR2.50, 95%CI:1.64–2.80 transactional sex with casual partner; aOR3.20, 95%CI:1.73–5.91 sex work), depression (aOR2.09, 95%CI:1.14–3.86 sex work), PTSD (aOR1.88, 95%CI: 1.14–3.09 transactional sex with casual partner, aOR2.99, 95%CI:1.52–5.85 sex work), problematic alcohol use (aOR2.57, 95%CI:1.57–4.21 transactional sex with casual partner, aOR5.04 95%CI:2.59–9.82 sex work) and past year drug use (aOR1.87, 95%CI: 1.24–2.81 transactional sex with casual partner, aOR1.96, 95%CI:1.07–3.59 sex work).

Table 1

Women's engagement in different forms of exchange sex.

Detailed breakdown of forms of exchange sex	n	% (95%CI)
No exchange sex	248	38.5 (34.9, 42.3)
Only transactional sex with main partner	113	17.6 (14.8, 20.7)
Only transactional sex with casual partner	31	4.8 (3.4–6.8)
Only sex work	2	0.3 (0.1–1.2)
Transactional sex with main partner and casual partner, but not sex work	191	29.7 (26.3, 33.3)
Transactional sex with main partner, and sex work, but not transactional sex with casual partner	6	0.9 (0.4–2.1)
Transactional sex with casual partner and sex work, but not transactional sex with main partner	5	0.8 (0.3, 1.9)
All three forms of exchange sex	48	7.5 (5.7, 9.7)
Re-categorized Exchange Sex For Analysis	n	% (95%CI)
No exchange sex	248	38.5 (34.9, 42.3)
Only transactional sex with main partner	113	17.6 (14.8, 20.7)
Transactional sex with casual partner (with or without transactional sex with main partner but not sex work)	222	34.5 (30.9, 38.2)
Sex work (whether or not any other form of transactional sex as well)	61	9.5 (7.4, 12.0)

Table 2

Descriptive socio-demographics and background characteristics overall, and by exchange sex engagement.

	Overall		No exchange sex		Transactional sex with main partner only		Transactional sex with casual partner		Sex work		Overall sample P-value	Transactional sex with casual partner compared to sex work P-value
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)		
Age	644		248		113		222		61			
18/19	79	12.3 (9.9-15.0)	34	13.7 (10.0, 18.6)	14	12.4 (7.5, 19.9)	25	11.3 (7.7, 16.2)	6	9.8 (4.5, 20.2)	0.432	0.254
20-24	286	44.4 (40.6, 48.3)	116	46.8 (40.7, 53.0)	45	39.8 (31.2, 49.1)	103	46.4 (39.9, 53.0)	22	36.1 (25.1, 48.7)		
25+	279	43.3 (39.6, 47.2)	98	39.5 (33.6, 45.7)	54	47.8 (38.8, 57.0)	94	42.3 (36.0, 48.9)	33	54.1 (41.6, 66.1)		
Education	644		248		113		222		61			
Primary only	55	8.5 (6.6, 11.0)	20	8.1 (5.2, 12.2)	9	8.0 (4.2-14.7)	18	8.1 (5.2-12.5)	8	13.1 (6.7, 24.0)	0.070	0.265
Secondary (not complete)	400	62.1 (58.3, 65.7)	140	56.6 (50. 62.5)	70	62.0 (52.6-70.5)	154	69.4 (63.0, 75.1)	36	59.0 (46.3, 70.6)		
Secondary (completed)	189	29.4 (26.0, 32.9)	88	35.5 (29.9, 41.6)	34	30.1 (22.3-39.2)	50	22.5 (17.5, 28.5)	17	27.9 (18.1, 40.3)		
Relationship Status	644		248		113		222		61			
Living together/married	119	18.5 (15.7, 21.6)	37	14.9 (11.0, 19.9)	35	31.0 (23.2, 40.0)	34	15.3 (11.2, 20.6)	13	21.3 (12.7, 33.4)	0.002	0.477
Partner, but not living together	417	64.8 (61.0, 68.3)	157	63.3 (57.1, 69.1)	64	56.6 (47.4, 65.5)	155	69.8 (63.5, 75.5)	41	67.2 (54.7, 77.7)		
No current relationship	108	16.8 (14.1, 19.8)	54	21.8 (17.1, 27.4)	14	12.4 (7.4, 19.9)	33	14.9 (10.7, 20.2)	7	11.5 (5.5, 22.3)		
Kids (yes)	509	79.0 (75.8, 82.0)	180	72.6 (66.8, 77.7)	95	84.1 (76.2-89.7)	185	83.3 (77.8, 87.8)	49	80.3 (68.4, 88.5)	0.016	0.586
Livelihoods												
Household food insecurity (score >=more)	644			2.70 (2.50, 2.90)		2.87 (2.55, 3.19)		3.36 (3.15, 3.56)***		3.44 (3.06, 3.82)**		0.699
Any earnings past month (yes)	196	30.4 (27.0, 34.1)	67	27.0 (21.9, 32.9)	36	31.9 (23.9-41.0)	65	29.2 (23.5-35.5)	28	45.9 (33.8, 58.5)	0.037	0.016
Current debt (Rand)	644			468 (90, 845)		366 (113, 619)		382 (184, 581)		954 (329, 1580)		0.085
Borrowed weekly or more because of lack (yes)	203	31.5 (28.0, 35.2)	60	24.2 (19.3, 29.9)	35	31.0 (23.1-40.1)	72	32.4 (26.5, 38.9)	36	59.0 (46.4, 70.6)	<0.001	0.002
Stolen in past four weeks (yes)	162	25.2 (22.0, 28.7)	54	21.8 (17.1, 27.4)	24	21.2 (14.7-29.7)	59	26.6 (21.1, 32.8)	25	41.0 (29.3, 53.8)	0.014	0.031
Gender attitudes/practices												
Gender attitudes (>=more patriarchal)	644			24.41 (23.19, 25.62)		25.61 (23.88, 27.34)		27.85 (26.69, 29.02)***		23.89 (21.59, 26.14)		0.033
Sexual relationship power (>=less power)	644			9.63 (9.11, 10.16)		10.11 (9.40, 10.81)		11.45 (10.90, 12.00)***		11.05 (9.90, 12.20)*		0.538
Age first sex	644		248		113		222		61			
15 or younger	132	20.5 (17.6, 23.8)	45	18.2 (13.9, 23.4)	21	18.6 (12.5, 26.8)	47	21.2 (16.3, 27.1)	19	31.2 (20.7, 43.9)	0.006	0.247
16/18	320	49.7 (45.8, 53.6)	108	43.6 (37.6, 49.7)	64	56.6 (47.3, 65.5)	118	53.2 (46.6, 59.7)	30	49.2 (36.9, 61.6)		
19+	192	29.8 (26.4, 33.5)	95	38.3 (32.5, 44.5)	28	24.8 (17.7, 33.6)	57	25.7 (20.4, 31.8)	12	19.7 (11.5, 31.7)		
Childhood adverse experiences (>=more)	644			17.4 (16.8, 18.0)		18.2 (17.2, 19.1)		19.4 (18.6, 20.2)***		21.0 (19.0, 23.0)**		0.137
Past year number of casual sex partners	589	0.65 (0.53, 0.78)		0.30 (0.22, 0.39)		0.43 (0.11, 0.65)		0.81 (0.59, 1.03)***		1.59 (0.92, 2.26)***		0.031
Past year number of once-off sex partners	589	0.86 (0.66, 1.06)		0.52 (0.41, 0.64)		0.66 (0.38, 0.95)		0.81 (0.67, 0.95)**		2.48 (0.76, 4.20)**		0.060

For continuous variables, with no exchange sex as referent category: *p<0.05; **p<0.01; ***p<0.001.

3.3. Transactional sex with casual partner versus sex work

There were a few notable socio-demographic and health outcome differences when comparing women engaged in transactional sex with casual partners (but not sex work), to those engaged in sex work. First, women who reported engagement in sex work were notably poorer, with a greater proportion reporting borrowing or stealing in the past month (Table 2). However, a greater proportion of those engaged in sex work also reported earning anything in the past month (45.9%), compared to those engaged in transactional sex with a casual partner (29.2%). Those engaged in sex work also reported more gender equitable attitudes (lower means score) than those engaged in transactional sex with casual partners.

As shown in Table 3, women reporting sex work reported consistently worse health outcomes for depression, PTSD, and problematic alcohol use than those engaged in transactional sex with casual partners (but not sex work), although because of small sample sizes the differences for most outcomes were not statistically significant. However, modern contraceptive use was statistically significantly higher among those reporting sex work (aOR2.66, 95%CI:1.10–6.42), compared to those engaged in transactional sex with casual partners, but not sex work.

4. Discussion

In this paper, we categorized sexual exchange relationships among women residing in urban informal settlements in eThekweni, KwaZulu-Natal, South Africa to compare socio-demographic characteristics and health outcomes for women across different types of relationships. Specifically, we compared these outcomes for women who reported engaging in the four following culturally salient relationship categories in the past 12 months: no exchange-based relationships, transactional sex with a main partner only, transactional sex with a casual partner, and sex work. Broadly, we found that women who engaged in transactional sex with just their main partners were not notably different from women who reported not having any exchange relationship in the last 12 months. However, women who engaged in transactional sex with casual partners, and women who reported engaging in sex work, had worse health outcomes and related risk behaviours than other categories. Furthermore, while differences between these groups were rarely statistically significantly different, adjusted odds ratios were higher for women who reported sex work. There were other notable differences between these latter two categories of exchange sex. These included that women who reported transactional sex with casual partners reported lower levels of poverty, less gender equitable attitudes, and lower modern contraceptive use than women in sex work. The findings support a conceptualization of exchange-based relationships on a continuum of instrumentality; however, they also suggest potential areas of distinction between transactional sex and sex work, with notable caveats.

4.1. A continuum of instrumentality in exchange relationships

Our findings provide some support for the potential utility of conceptualizing sexual exchange relationships on a continuum of instrumentality. Beginning with relationships at the lower end of the continuum, the only distinction we found between women who reported no exchange sex, and those who reported it only with a main partner was that the latter group was more likely to live with their partner and to have children. These findings raise considerations with respect to the meaning of transactional sex. Specifically, the findings support the argument that transactional sex itself is not necessarily inherently risky (UNAIDS & STRIVE, 2018; Wamoyi et al., 2019). Rather, it is important to identify the conditions and circumstances in which transactional sex introduces risk (UNAIDS & STRIVE, 2018). The similarities between those reporting only transactional sex with a main partner and those reporting no exchange sex likely speak to the gendered assumptions that

underlie transactional sex and extend from fundamental and shared gendered expectations in nearly all heterosexual romantic relationships – men are expected to provide financial support, and women are expected to offer sexual and domestic services – and meeting these expectations is indicative of love and commitment (Mojola, 2014; Wyrod, 2016). In other words, relationships characterized by male provision are relationships understood as meaningfully committed. In this case, commitment appeared to be signified by cohabitation, as about 1 in 3 women reporting transactional sex with a main partner were referring to their cohabiting partner. This finding also demonstrates why efforts to eliminate transactional sex should not become the focus of HIV prevention programming with young women. That said, this does not mean that these relationships are without health risk, as in this context IPV was extremely prevalent across all relationship categories, with the majority of women in every relationship category reporting IPV in the past year. Therefore, interventions that aim to address gender inequality - and dismantle the norms and institutions that uphold it - remain critically important for the health and wellbeing of young women and young men.

When considering differences in health outcomes across exchange sex categories, the findings did often suggest a gradient of increased risk across a “continuum of instrumentality.” The percentage of women who reported non-partner sexual violence, depression, PTSD, and problematic alcohol use increased across the three exchange sex categories. Comparing those engaged in transactional sex with casual partners to those engaged in sex work, sex workers were more likely to report harmful alcohol use, and for all other health measures, point estimates were higher but not significantly so, potentially driven by small sample sizes. Sex workers had three times greater odds of experiencing non-partner sexual violence than women who reported not being in any form of an exchange relationship. These findings likely result from a high likelihood of client violence, but may also reflect the stigmatization of the practice, or the possibility that this group also experiences police violence. These findings are similar to those seen in another study that categorized respondents across relationship types (casual non-exchange sex, transactional sex, and sex work) from Mombasa, Kenya. In this study, many vulnerabilities associated with a woman’s first sex experience (e.g., non-use of condoms, coercion) increased across these categories, with the highest prevalence among women reporting sex work (Becker et al., 2018) and recent gender-based violence outcomes also increased across these relationship categories (Bhattacharjee et al., 2020).

In terms of socio-economic indicators, we also find a gradient in levels of reported food insecurity across categories. However, on all other economic indicators, women who reported engaging in sex work in the past year were much worse off than all other groups. We may be capturing women who were compelled to engage in sex work given their economic circumstances at the time. These findings also emphasize that many exchange relationships take place under highly uncertain economic realities (Bandali, 2011; Cluver et al., 2016; Duby et al., 2021). Informal settlements are characterized by high levels of poverty in general, and formal (and informal) work opportunities are scarce, particularly among those who have not completed secondary education.

In summary, many of our findings suggest that as women’s engagement in exchange sex moves from being characterized to entirely motivated by financial gain, their health and wellbeing declines. This may be because reliance on exchange sex for financial security increases across the continuum, and therefore, so too does constraint on perceived choice to leave or forgo a partnership that one might otherwise refuse. In this context, our findings suggest interventions should seek to reduce risk for women who engage in transactional sex with casual partners and sex work, including with respect to alcohol and drug misuse. We also highlight the particularly elevated health challenges sex workers face and the importance of interventions to create contexts where their health needs can be met with high quality, non-stigmatising care.

Table 3
Health status of women by engagement in different forms of exchange sex.

Health status/outcome	No exchange sex		Transactional sex with main partner only		Transactional sex with casual partner		Sex work		
	n	%(95%CI)	n	%(95%CI)	n	%(95%CI)	n	%(95%CI)	p-value
			aOR(95%CI)	p-value	aOR(95%CI)	p-value	aOR(95%CI)	p-value	
Past year IPV									
Yes	148	59.7(53.4, 65.7)	73	64.6(55.4-72.9)	164	73.9(67.7, 79.2)	43	70.5(58.1, 80.4)	0.01
Adjusted association whole sample, reference no exchange sex		ref	1.12(0.69, 1.80)	0.651	1.57(1.04, 2.37)	0.033	1.31(0.70, 2.46)	0.492	
Adjusted association, casual transactional sex versus sex work						ref	0.91(0.46, 1.80)	0.79	
Non-partner sexual violence (past year)									
Yes	57	23.0(18.1, 28.7)	31	27.4(20.0-36.4)	96	43.2(36.8, 49.9)	32	52.5(40.1, 64.5)	<0.001
Adjusted association whole sample, reference no exchange sex		ref	1.29(0.77, 2.18)	0.335	2.50(1.64, 2.80)	<0.001	3.20(1.73, 5.91)	<0.001	
Adjusted association, casual transactional sex versus sex work						ref	1.23(0.67, 2.27)	0.508	
Depression (CESD 21+)									
Yes	99	39.9(34.1, 46.1)	48	42.5(33.7-51.7)	108	48.7(42.1, 55.2)	38	62.3(49.5, 73.6)	0.01
Adjusted association whole sample, reference no exchange sex		ref	1.10(0.68, 1.76)	0.702	1.30(0.88, 1.93)	0.185	2.09(1.14, 3.86)	0.018	
Adjusted association, casual transactional sex versus sex work						ref	1.65(0.88, 3.08)	0.116	
PTSD (HTQ, >=2.5)									
Yes	37	14.9(11.0, 19.9)	24	21.2(14.6-29.8)	54	24.3(19.1, 30.4)	22	36.1(25.1, 48.7)	0.002
Adjusted association whole sample, reference no exchange sex		ref	1.64(0.91, 2.97)	0.103	1.88(1.14, 3.09)	0.013	2.99(1.52, 5.85)	0.001	
Adjusted association, casual transactional sex versus sex work						ref	1.70(0.86, 3.33)	0.125	
Problematic alcohol use									
Yes	35	14.1(10.3, 19.0)	19	16.8(11.0-24.9)	68	30.6(25.0, 37.0)	28	45.9(33.9, 58.4)	<0.001
Adjusted association whole sample, reference no exchange sex		ref	1.14(0.60, 2.15)	0.688	2.57(1.57, 4.21)	<0.001	5.04(2.59, 9.82)	<0.001	
Adjusted association, casual transactional sex versus sex work						ref	1.73(0.92, 3.25)	0.091	
Past year drug use									
Yes	65	26.2(21.1, 32.0)	26	23.0(16.1-31.7)	93	41.9(35.5, 48.5)	28	45.9(34.0, 58.3)	<0.001
Adjusted association whole sample, reference no exchange sex		ref	0.79(0.46, 1.34)	0.378	1.87(1.24, 2.81)	0.003	1.96(1.07, 3.59)	0.029	
Adjusted association, casual transactional sex versus sex work						ref	1.03(0.56, 1.91)	0.92	
Modern Contraceptive Use									
Yes	181	73.0(67.1, 78.1)	81	71.7(62.6, 79.3)	154	69.4(63.0, 75.1)	52	85.3(74.1, 92.1)	0.106
Adjusted association whole sample, reference no exchange sex		ref	0.81(0.48, 1.38)	0.446	0.77(0.50, 1.20)	0.245	2.05(0.91, 4.63)	0.82	
Adjusted association, casual transactional sex versus sex work						ref	2.66(1.10, 6.42)	0.03	

*Adjusted for age, education, any earnings, food insecurity, age of first sex, gender attitudes, having any children.

4.2. Distinguishing transactional sex from sex work – A question of gender ideology?

We also found limited evidence of distinctions between transactional sex and sex work that suggest differences in gender ideology and sexual and reproductive autonomy. These “distinctions” must be read with the important caveat that very few women reported engaging exclusively in sex work (see Table 1), as most reported multiple forms of exchange sex. That said, the findings are in line with differences in the underlying expectations across these practices, particularly as it relates to gender expectations. First, women who had engaged in sex work held the most gender equitable attitudes, while women who reported engaging in transactional sex with casual partners (but not sex work) held the least gender equitable attitudes. These findings suggest that women in casual transactional sex relationships may be practicing a form of “emphasized femininity” that serves to uphold a dominant form of masculinity that incorporates not only expectations of provision, but also male control in relationships (Hunter, 2010; Jewkes and Morrell, 2012). This finding extends the literature from other studies that have noted that men with more gender equitable beliefs were less likely to engage in transactional sex (Jewkes et al., 2012b), and women in transactional sex relationships reported lower sexual relationship power (Dunkle et al., 2004). Finally, while there was a notably high likelihood that women had experienced IPV across all groups (>50%), it was most likely among those engaged in casual transactional sex, which could also correspond to expectations of relationship control, or it may reflect partner characteristics among the pool of potential casual transactional sex relationship partners (Shai, 2018).

Further, men’s relationship control, particularly in the context of provision, extends to expectations of men’s control over women’s reproduction (Horne et al., 2013). This may explain, in part, differences across these groups in modern contraceptive use (lowest among those reporting transactional sex with casual partners, highest for those reporting sex work). Forgoing the use of modern contraception is consistent with a narrative of emphasized femininity and a relinquishment of reproductive control in the relationship (Dodoo et al., 2020). In addition, in contexts where demonstrating fertility is valued for a potential partner and premarital fertility is not heavily socially sanctioned, avoiding pregnancy may not be as highly prioritized (Willan et al., 2020). Moreover, in some cases, pregnancy may serve to further relationship commitment, transitioning a casual relationship into one that is more stable (Bingenheimer and Stoebenau, 2016). Alternatively, women who engage in sex work in known establishments may be more heavily targeted by service outreach condom distribution efforts. Moreover, condom use is easier to negotiate in encounters between partners who identify as “clients” and “sex workers” than it is in intimate relationships that hold expectations of partner trust, which the discussion of condom use can undermine (Stoebenau, 2009). However, the higher rates of contraceptive use may also be explained in part by the understanding of sex work as a form of commodity exchange (Luke, 2005). In this case, a pregnancy is more often an opportunity cost than a potential means by which to establish a more committed relationship, thus women who engage in sex work have more reason to invest in modern contraceptive use.

This study has several limitations. Most notably the measurement of “sex work” engagement, while first asking whether the respondent had “done sex work;” also included the words: “or supported yourself from money you received from having sex.” The latter phrasing may have been interpreted by some respondents as asking whether they had engaged in transactional sex in addition to sex work. However, the distinctions we identify across outcomes do correspond to theoretical expectations. Further, in pilot testing these questions in this population, the concepts were both widely understood and women could differentiate between them. In addition, sex work in this setting is stigmatized, and several women may not have wished to self-identify as sex workers leading to underreporting. The dataset was cross-sectional and a number

of associations had potential reverse causality. In addition, for sample size, we had to group women into four distinct categories, thus obscuring that many women reported multiple forms of exchange sex, which could have had implications for associations. Closely linked, women most likely moved into and out of these exchange sex categories over time, and we could not capture this. Finally, health and related risk measures varied in recall period, ranging from past year to past week. We also did not assess current pregnancy or pregnancy intentions, and as such the contraceptive measure may not capture women’s actual contraceptive decisions. Despite these limitations, this is a unique data set, as women understood and recognised the multiple forms of exchange sex, and this was normatively accepted in general, enabling us to ask about these different relationship types.

5. Conclusion

Our findings from this cross-sectional study exploring women’s engagement in multiple forms of exchange sex add complexity to the debate about the boundaries between these different forms, and the health impacts of them for women. While there was a continuum across forms of exchange sex in terms of worsening economic indicators and health impacts, there were also points of difference. Specifically, women only reporting transactional sex with main partners varied little from those reporting no exchange sex, both economically and in terms of health outcomes. In contrast, those reporting transactional sex with casual partners and those reporting sex work had more similar health outcomes. Some of the shared outcomes speak to the ‘fuzzy boundary’ between transactional sex and sex work, specifically indicative of potential spaces of shared practice and risk, such as bars or local *shebeens*. Yet, those reporting sex work held the most gender equitable attitudes and were most likely to report modern contraceptive use of all the women, suggesting some greater autonomy around sexual and reproductive health associated with claiming the self-identification of sex work. For this population, our findings point to the importance of intervening on risks to women who engage in casual forms of transactional sex and sex work; while still appreciating the differences in the fundamental assumptions underlying these relationship categories – one being based on gendered-relationship expectations; and another on explicit commodity exchange. Findings also suggest that to the extent possible, a similar and more in-depth understanding of the conditions and circumstances in which transactional sex increases women’s health risks should be addressed in other contexts. In addition, our findings indicate that women who engage in sex work may be more receptive to interventions addressing the use of sexual and reproductive health prevention technologies; and alternatively, efforts to critically address gender inequities in relationships are crucial to consider when intervening on sexual and reproductive health risks for women who practice transactional sex.

Author contributions

AG led the study on which the data are based, led the data collection, analysis of the data, and wrote the methods and results. KS led the writing of the introduction and discussion, and conceptual framework for the paper; KD, SW, NS supported data collection, analysis, and contributed to writing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data are available at: <https://medat.samrc.ac.za/index.php/>

catalog/WW

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