

011.4 PLACE AND CORE TRANSMITTERS – IMPLICATIONS FOR THE TARGETED CONTROL OF STI TRANSMISSION IN URBAN AREAS

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Introduction Places are an important determinant of risk for STI transmission. We sought to identify places that are critical for targeted STI control activities. The objective of this study was to determine whether sex partner meeting places characterised by drug markets, sex markets and separately, drug and/or sex markets were more likely to have core transmitters as compared to other sex partner meeting places in one urban setting.

Methods In 2008–2009, heterosexual sex partner places or venues were identified in Baltimore, MD using a venue-based study approach. Core transmitters were defined by their sexual network connectivity and disease status, i.e. self-report of sexual concurrency and diagnosis of a current bacterial STI.

Results 1,334 participants aged 18–35 years were enrolled at 85 venues. 39 core transmitters were identified and 31% of venues had at least one core transmitter. In final age- and gender-adjusted models, core transmitters were significantly more likely to be identified at drug markets (OR 1.37; 95% CI 1.23, 1.53), sex markets (OR 1.27; 95% CI 1.14, 1.41) and drug and/or sex markets (OR 1.49; 95% CI 1.32, 1.68).

Conclusions This study identified key characteristics of venues, such as drug and sex market activity, which may be important in identifying places for the targeted control of STI transmission.

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011.5 INCORPORATING SPATIAL VARIABILITY TO GENERATE SUB-NATIONAL ESTIMATES OF HIV PREVALENCE

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Introduction The design and evaluation of national HIV programs often relies on aggregated national level data. However, there is often substantial geographical heterogeneity in the HIV epidemic within countries, which could be used to tailor programmatic responses to the specific local needs. Given this background, the study attempts to answer the question: Could environmental and socio-behavioural factors be used to generate sub-national estimates of HIV prevalence in sub-Saharan Africa?

Methods Data were obtained from Demographic and Health Surveys (DHS) conducted in Tanzania, Malawi, and Kenya. Associations between covariates and HIV prevalence were assessed using non-spatial logistic regression models. Covariates included life time number of sexual partners, percentage of condom use, wealth index, percentage of male circumcision (MC), distance to urban settings, distance to roads, and normalised difference vegetation index (NDVI). The prediction formula generated from the covariate analysis along with kriging interpolation techniques

were used to produce high resolution continuous surface maps of HIV prevalence.

Results Condom use, MC, distance to main roads, NDVI, poverty and wealth index were associated with HIV prevalence in Tanzania and Malawi, and were included to generate HIV prevalence maps in these countries. Conversely, only NDVI, poverty life time number of sexual partners and MC were associated with HIV prevalence in Kenya. All three maps illustrated substantial geographical variation of HIV prevalence within the country, and localised areas where HIV prevalence is concentrated.

Conclusion The HIV prevalence maps generated highlight the stark spatial disparities in the epidemic within a country, and localise areas where both the burden and drivers of the HIV epidemic are concentrated. These maps present an opportunity to apply differential local approaches to maximise impact by informing both planning and delivery of defined packages of services. Additional work is needed for routine incorporation of such strategies into existing national HIV estimation processes.

Disclosure of interest statement Nothing to declare.

012 - Sexual health of sex workers

012.1 TARA BANDU', SOCIAL VALUES AND SEX WORK: THE INTERPLAY OF TRADITIONAL JUSTICE, SOCIETY AND HIV/STI PROGRAMMING FOR SEX WORKERS IN TIMOR-LESTE

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Introduction As in many contexts, sex work in Timor-Leste occupies a delicate social, cultural and legal space which can be an impediment to sound human rights-based public health responses for sex workers. As part of a national size estimation of key populations at risk of HIV/STIs in Timor-Leste, this qualitative study explored the nature of these structural factors and their interplay with the implementation of HIV/STI programs for female sex workers (FSW).

Methods Drawing on ethnographic approaches, semi-structured interviews were undertaken using field notes, including recording of verbatim quotes, with 24 FSW and relevant secondary informants across Timor-Leste. Interviews covered the legal, cultural and social context for sex workers. Data were analysed with involvement of author three (a local researcher well-connected to the populations) using an inductive thematic analysis approach where common themes and discrepant cases were coded with attention to the participants' reported experiences and key events.

Results While experiences varied across participants and districts, many FSW reported family- and community-level stigma, with 'shame' and loss of dignity often associated with sex work. In some districts, tara bandu (lit.: 'to place a ban'), a form of traditional law used to regulate 'undesirable' behaviours, had reportedly turned sex work further underground. One particular tara bandu (originally instated to protect women from discrimination and/or sexual abuse) had reportedly been applied to sex work, with social isolation and heavy financial penalties imposed on FSW. Despite the semi-legal status of sex work in Timor-Leste, informants in urbanised settings reported high levels of persecution from law enforcement.

Conclusion Even in a relatively small context such as Timor-Leste, a large variation was reported in the degree to which sex work was accepted. Ongoing social and law enforcement challenges for FSW highlight the need for continued investment in sex work advocacy and community building.

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012.2 UNDERSTANDING THE RELATIONSHIP DYNAMICS BETWEEN FEMALE SEX WORKERS AND THEIR INTIMATE PARTNERS IN KUMASI, GHANA

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Introduction Intimate partners (IP) of female sex workers (FSW) are a population of growing interest in Ghana. The study objectives were to: explore the emotional, financial, and power dynamics within these relationships; describe the sexual behaviours and HIV knowledge and vulnerabilities of both partners; and document the perceived availability and accessibility of social support and health services.

Methods In-depth interviews (IDIs) were conducted with 24 male IP of FSW. Two focus group discussions were conducted with 13 male IPs and three with 20 FSWs. The age range of IPs was from 20–60 years and FSWs from 18–50.

Results The IPs met their FSWs through introductions by close friends, patronising FSW's services and/or by FSWs going after the IPs. The nature of relationships ranged from the IP offering protection for financial support (transactional), meeting emotional needs (intimate) to consensual reciprocal relationships. Forty percent of IPs were monogamous with their FSW partner, and about 50% of IPs and FSW couples used condoms. Lack of condom use was considered a sign of intimacy. The majority of respondents had some knowledge of HIV transmission and consequences. All respondents understood that condoms offer protection against HIV infection, but many FSW respondents reported difficulty in convincing regular clients to use condoms. Over half of the men who participated in the IDIs had recently tested for HIV, and half the men knew their FSW partner's HIV status. Respondents showed varying levels of awareness of HIV testing options and pricing, and had suggestions for how to improve services.

Conclusion Study results show a nuanced picture of IP of FSW relationships, and these dynamics are important in the context of HIV and STI transmission prevention. Expanded community-based services for FSW and IP and initiatives that increase availability and acceptability of condom use should be pursued.

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012.3 MULTICULTURAL SURVEY – 20 YEARS ON: TRENDS IN CHINESE AND THAI FEMALE SEX WORKER DEMOGRAPHICS AND SEXUAL HEALTH IN SYDNEY

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Social policy, behavioural change, psychosocial or psychosexual issues related to sexual health.

Background Studies from Sydney Sexual Health Centre (SSHC) in 1993 and 2003 found changes in demographics and safe sex practices of culturally and linguistically diverse (CALD) sex workers attending SSHC over time. We aimed to establish if there are further changes in 2014.

Methods A cross sectional survey of CALD sex workers attending SSHC and parlours visited on outreach, was conducted from June 2014 to February 2015. The survey included questions from surveys conducted in 1993 and 2003, so trends could be identified. All studies used an anonymous questionnaire translated into Thai and Chinese. Results were analysed by pair-wise comparisons.

Results In 2014, 338 participants were included in the analysis, compared to 65 and 91 participants in 2003 and 1993 respectively. Comparing 2014 to 2003, there was a 91% ($p < 0.001$) increase in workers with <10 years of education, matched by a similar trend in poor levels of spoken English. Two thirds (66%) of workers were on student visas in 2014 compared to 26% in 2003. Workers who have been on contract decreased from 27% in 1993 to 9% in 2003 ($p = 0.0001$) and 8% in 2014 ($p = 0.67$).

Consistent condom use for vaginal sex increased by 49% ($p < 0.001$) in 2014 compared to 1993. However there was a 9% ($p = 0.038$) decrease between 2014 and 2003, with similar trends in consistent condom use for oral sex. The provision of free condoms has decreased from 63% in 1993 to 22% ($P < 0.001$) in 2014.

Conclusion From 2003 to 2014, there has been a decrease in the level of education and English proficiency among CALD sex workers, which may impact on the ability to negotiate sex work safely. There is increased consistent condom use in 2014 compared to 1993, but there has been a downward trend in the last 10 years. Education and access to health services remains crucial for CALD sex workers.

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