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# Prevalence and factors associated with violence against women who exchange sex for money in Gulu City, Northern Uganda: a cross-sectional study

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## ABSTRACT

**Background** Gender-based violence (GBV) is a public health concern disproportionately affecting female sex workers (FSWs) globally. We investigated the prevalence and factors associated with GBV against women engaged in sex work in Gulu City, Uganda.

**Methods** In this community-based study, we included FSWs purposely selected from hotspots within Gulu City, Uganda, between February and April 2023. Data on participants' characteristics and history of GBV in the past 1 year prior to the interview were collected using a structured questionnaire. Bivariate logistic regression analyses were performed to identify the factors associated with GBV.

**Results** Of the 314 participants, 222 (70.7%) reportedly experienced GBV in the past year, most frequently economic violence (66.9%, n=210), followed by verbal violence (41.4%, n=130), physical violence (27.7%, n=87) and sexual violence (27.4%, n=86). Factors associated with GBV were secondary education level (adjusted OR (AOR): 0.17, 95% CI 0.03 to 0.87, p=0.034), history of pregnancy (AOR: 3.41, 95% CI 1.05 to 11.04, p=0.041) and places of sex work at bars (AOR: 5.59, 95% CI 2.03 to 15.38, p=0.001), night clubs (AOR: 3.69, 95% CI 1.26 to 10.61, p=0.017) and client's place (AOR: 3.62, 95% CI 1.21 to 10.86, p=0.022).

**Conclusion** GBV against FSWs in Gulu City, Uganda, is unacceptably high. Therefore, there is an urgent need to address violence in sex work in Uganda and similar settings worldwide through multisectoral targeted interventions and creating safer working environments by the Ministry of Health and other concerned entities.

### WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Gender-based violence (GBV) is a significant public health concern disproportionately affecting female sex workers (FSWs) globally. GBV negatively impacts both physical and mental well-being of FSWs.

### WHAT THIS STUDY ADDS

⇒ This study reveals alarmingly high rates of GBV against FSWs in Gulu City, Uganda. Factors such as secondary education level, history of pregnancy and conducting sex work in bars, nightclubs and clients' places were found to be significantly associated with an increased likelihood of experiencing GBV among FSWs.

### HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The study emphasises the urgent need for targeted interventions and the use of a multisectoral approach to create safer working environments and protect the rights and well-being of FSWs in Uganda and similar settings worldwide.

## INTRODUCTION

Gender-based violence (GBV) is a well-recognised public health concern disproportionately affecting female sex workers (FSWs) globally. GBV is recognised by the WHO and the United Nations (UN) as a human rights violation. In fact, the UN defines GBV as any act of violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.[1] GBV occurs both in public or in private and including threats of such acts, coercion or arbitrary deprivation of liberty.[2] According to the WHO, as of 2018, approximately 30% of women had experienced physical and/or sexual violence from an intimate partner or non-partner sexual violence, or both.[3] Moreover, sub-Saharan Africa exhibited one of the highest rates of lifetime intimate partner violence among women aged 15–49, estimated at 33%.[3] In addition, Uganda was ranked among the 19 countries with the highest lifetime prevalence estimates, reaching 45%. Furthermore, it ranked among

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the top 14 countries with the highest prevalence of GBV in the past 12 months, estimated at 26%.[3]

FSWs face an elevated susceptibility to GBV due to the nature of their occupation, desperate power dynamics, power imbalances, societal norms and attitudes and heightened exposure to violent sexual partners.[4] Several publications have demonstrated a high prevalence of GBV among FSWs on a global scale. For instance, studies have reported rates ranging from 10% to 25.6% in Mozambique,[5] 33% in Cameroon,[6] 19% in USA,[7] 31.3%–37.6% in South Africa,[8] 40% in Tanzania[9] and 24%–34% in Kampala, Uganda.[10] In Northern Uganda, during the early stages of the COVID-19 pandemic, the prevalence of GBV among FSWs was estimated at an alarmingly high 61%.[11]

GBV among FSWs negatively impacts both the physical and mental well-being of FSWs. Physical and sexual violence against FSWs results in physical injuries and emotional distress, which contribute to the development of mental health conditions such as depression and post-traumatic stress disorder.[3 6] Furthermore, FSWs often encounter coerced or incentivised unprotected sexual intercourse with clients, leading to inconsistent condom use and subsequent increased vulnerability to HIV and other sexual transmitted infections (STIs) and unintended pregnancies and their sequelae, such as unsafe abortions and their related complications.[12 13] These extensive challenges have wide-ranging effects, impacting individuals, communities and broader economies. The financial burden of treating physical injuries and consequences of STIs not only depletes available resources but also exacerbates the economic ramifications at a societal level, including the loss of economic productivity. Significant efforts have been made both globally and within Uganda to address GBV among FSWs, promote gender equality and protect women's rights. However, significant gaps in literature still exist regarding GBV among FSWs in Gulu city, especially after the COVID-19 pandemic. Therefore, the objective of this study was to investigate the prevalence and factors associated with GBV against women engaged in sex work in Gulu City, Uganda.

## MATERIALS AND METHODS

### Study design

We conducted a cross-sectional study among FSWs in Gulu City between February and April 2023.

### Study setting, participants and recruitment

The study was conducted in several hotspots within Gulu, a city which has an estimated 1300 FSWs. A total of 15 hotspots across the city known for high FSW activity, including bars, nightclubs, brothels and streets, were purposively selected as study sites. The selection was made in collaboration with the community leaders, such as the district health officer and community health workers, to ensure the sites were representative of the areas where the FSWs are most active.

Eligible participants were cis-gender females aged 18 years or older who were actively engaged in sex work. Transgender women were excluded from this study.

With an estimated prevalence of GBV among FSWs in Uganda of 61%, a population size of 1300, a precision of 5% and a two-tailed Z-statistics of 1.96 at a 95% CI, a sample size of 366 participants was calculated using the Kish-Leslie formula.[14] Adjusting for the finite population, using Slovin's formula ($N/(1+Ne^2)$, where n=1500 and e is 5%), a final sample size of 316 participants was obtained.[15]

Participants were recruited using convenience sampling. Peer leaders from each hotspot, who had established relationships with FSWs in their areas, assisted in identifying potential participants. The research team conducted the interviews on-site, during evening to night hours, when participants were present at their respective stations. To ensure privacy, interviews were conducted in quiet, discreet areas within the hotspots, away from other individuals, to maintain confidentiality and comfort for the participants.

### Data collection

Data were collected through face-to-face interviews using a paper-based structured questionnaire. The questionnaire was developed in English (online supplemental material 1) and translated into the local language, *Acholi* (online supplemental material 2). The questionnaire collected information on sociodemographic characteristics, sexual behaviour, work-related factors, experiences of violence and other relevant variables.

### Study variables

The study variables included (1) demographic variables: age, marital status, level of education and place of residence (rural/urban); (2) work-related factors: monthly income, source of income (sex work as the main income or alternative sources) and place of service (own place, bars, nightclubs, brothels, streets, client's place); (3) experience of violence: the outcome variable, GBV, was assessed through a series of questions, including whether participants experienced GBV from clients in the past year, the types of violence (physical, sexual, verbal violence and economic violence), where the violence occurred and how frequently the violence was experienced. The types of violence were physical violence (eg, being slapped, punched, kicked or physically restrained); sexual violence (eg, forced sexual acts, unwanted touching or sexual assault); verbal violence (eg, being insulted, threatened or humiliated verbally) and economic violence (eg, being denied payment, having earnings withheld or being forced to work without compensation); (4) sociocultural factors: religion and cultural norms related to gender roles and violence and (5) personal history: age at sexual debut, history of pregnancy and history of abortion.



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### Data management and analysis

The analysis was conducted using STATA Version 17.0 (College Station, Texas, US). Descriptive statistics were summarised using proportions for categorical variables, means with SD for continuous variables with normal distributions and medians with IQRs for continuous variables with skewed distributions. Associations between GBV and independent variables were assessed using $\chi^2$ or Fischer's exact tests for categorical variables and student's t-tests or Mann-Whitney U tests for numerical variables, and results were reported as p values. A multivariable logistic regression model was used to assess the independent predictors of GBV. All variables with a p value <0.2 as determined by the bivariable analysis were fitted into the multivariate logistic regression model adjusting for potential confounders. The adjusted OR (AOR) and 95% CI were used to report the strength of association. Statistical significance was set at p<0.05. To assess the goodness of fit for the logistic regression model, a Hosmer-Lemeshow test was conducted, yielding a p value of 0.1892, indicating that the model fits the data reasonably well, as the p value was >0.05.

### Ethical considerations

The study received ethical approval from the Gulu University Research Ethics Committee (approval number: GUREC-2022–414). Written informed consent was obtained from all participants before the start of each interview. Participants were informed of their right to withdraw from the study at any time without consequence and that their participation was voluntary. All data collected were kept confidential and anonymous. In cases where participants reported experiencing violence, they were provided with information on available support services, including psychosocial support, healthcare services and helplines available for immediate assistance. The principles of human subject research outlined in the *Declaration of Helsinki* were strictly adhered to.

## RESULTS

### Sociodemographic characteristics

A total of 314 FSWs participated in the study, with 316 being approached, resulting in a response rate of 99.4%. Two participants declined to participate. The median age of the participants was 28 (IQR: 24–32) years, and the majority were aged between 25 and 35 years (60.5%). The majority (37.3%) of the participants were single, had primary education (46.2%) and belonged to the Catholic group (53.5%), table 1. The participants primarily resided in urban areas of Gulu (93.3%) and originated from Northern Uganda (84.7%). Most participants (81%, n=253) reported the client's place as their place of service provision.

**Table 1** Social and demographic characteristics of the study participants

| Variables | Frequency | Percentage |
|---|---|---|
| Age: median, IQR | 28 | 25–32 |
| 18–24 | 76 | 24.2 |
| 25–35 | 190 | 60.5 |
| >35 | 48 | 15.3 |
| Marital status | | |
| Single | 117 | 37.3 |
| Cohabiting | 28 | 8.9 |
| Married | 29 | 9.2 |
| Separated | 104 | 33.1 |
| Widow | 36 | 11.5 |
| Formal education | | |
| None | 8 | 2.6 |
| Primary | 145 | 46.2 |
| Secondary | 132 | 42.0 |
| Tertiary | 29 | 9.2 |
| Religion | | |
| None | 5 | 1.6 |
| Born again/ Pentecostal Christians | 59 | 18.8 |
| Catholic | 168 | 53.5 |
| Muslim | 23 | 7.3 |
| Protestant | 57 | 18.2 |
| Seventh Day Adventist | 2 | 0.6 |
| Region of origin | | |
| North | 266 | 84.7 |
| Central | 29 | 9.2 |
| East | 11 | 3.5 |
| West | 8 | 2.6 |
| Resides in Gulu | 297 | 94.6 |
| Place of residence | | |
| Rural | 21 | 6.7 |
| Urban | 293 | 93.3 |
| Age at sexual debut: median, IQR | 16 | 15–17 |
| Sexual debut below 18 years | 222 | 77.6 |
| History of pregnancy | 241 | 76.8 |
| Number of pregnancies: median, IQR | 2 | 1–3 |
| History of abortion | 147 | 46.8 |
| Number of abortions: median, IQR | 2 | 1–3 |
| Monthly income: median, IQR UGX | 300 000 | 275 000–400 000 |
| Monthly income below average | 69 | 26.1 |
| Sex work main source of income | 127 | 40.5 |

### Prevalence of GBV

Majority of the participants (70.7%, n=222) reported experiencing GBV. Most participants reported economic violence (66.9%, n=210), followed by verbal violence (41.4%, n=130), physical violence (27.7%, n=87) and sexual violence (27.4%, n=86).

### Factors associated with GBV

At bivariate analyses, the age group (18–24 years) (Crude OR (cOR): 3.46, 95% CI 1.51 to 7.92, p=0.003), being

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**Table 2** Bivariate analysis showing the distribution of gender-based violence across social and demographic characteristics

| Variables | No GBV (n=92) | GBV (n=222) | P value | Crude OR | P value |
|---|---|---|---|---|---|
| Age: median, IQR years | **28 (26–33)** | **27 (24–32)** | 0.007 | – | |
| Age categories (years) | | | | | |
| 18–24 | 13 (14.1) | 63 (28.4) | 0.010 | 1.00 | 0.003 |
| 25–35 | 59 (64.1) | 131 (59) | | 1.59 (0.83 to 3.04) | 0.165 |
| >35 | 20 (21.7) | 28 (12.6) | | 3.46 (1.51 to 7.92) | – |
| Marital status | | | | | |
| Single | 38 (41.3) | 79 (35.6) | <0.001 | – | – |
| Cohabiting | 1 (1.1) | 27 (12.2) | | 1.00 | <0.001 |
| Married | 3 (3.3) | 26 (11.7) | | 6.9 (2.42 to 19.69) | <0.001 |
| Separated | 31 (33.7) | 73 (32.9) | | 6.9 (2.42 to 19.69) | – |
| Widow | 19 (20.7) | 17 (7.7) | | – | – |
| Formal education | | | | | |
| None | 0 (0) | 8 (3.6) | 0.136 | – | |
| Primary | 38 (41.3) | 107 (48.2) | | 1.48 (0.63 to 3.47) | 0.365 |
| Secondary | 44 (47.8) | 88 (39.6) | | 1.05 (0.45 to 2.46) | 0.906 |
| Tertiary | 10 (10.9) | 19 (8.6) | | 1.00 | – |
| Religion | | | | | |
| Born again/ Pentecostal Christians | 28 (30.4) | 31 (14) | 0.009 | 1.00 | – |
| Catholic | 45 (48.9) | 123 (55.4) | | 2.47 (1.34 to 4.56) | 0.004 |
| Muslim | 7 (7.6) | 16 (7.2) | | 2.06 (0.74 to 5.75) | 0.166 |
| None | 1 (1.1) | 4 (1.8) | | – | – |
| Protestant | 10 (10.9) | 47 (21.2) | | 4.25 (1.81 to 9.96) | 0.001 |
| Seventh Day Adventist | 1 (1.1) | 1 (0.5) | | – | |
| Region of origin | | | | | |
| North | 10 (10.9) | 19 (8.6) | 0.831 | – | – |
| Central | 4 (4.3) | 7 (3.2) | | – | – |
| East | 76 (82.6) | 190 (85.6) | | – | – |
| West | 2 (2.2) | 6 (2.7) | | – | – |
| Resides in Gulu | 89 (96.7) | 208 (93.7) | 0.412 | – | – |
| Place of residence | | | | | |
| Rural | 8 (8.7) | 13 (5.9) | 0.359 | 1.00 | – |
| Urban | 84 (91.3) | 209 (94.1) | | 1.53 (0.61 to 3.83) | 0.365 |
| Age at sexual debut: median, IQR | 17 (16–18) | 16 (15–17) | <0.001 | – | – |
| Sexual debut below 18 years | 48 (52.2) | 174 (78.4) | 0.010 | 2.18 (1.2 to 3.96) | 0.011 |
| History of pregnancy | 66 (71.7) | 175 (78.8) | 0.176 | 1.47 (0.84 to 2.56) | 0.177 |
| Number of pregnancies: median, IQR | 2 (0–3) | 2 (1 - 3) | 0.031 | – | – |
| History of abortion | 24 (26.1) | 123 (55.4) | <0.001 | 3.52 (2.06 to 6.01) | <0.001 |
| Monthly income '000 UGX | 300 (200–400) | 300 (300–400) | 0.102 | – | – |
| Monthly income below average (300 000 UGX) | 27 (29.3) | 42 (18.9) | 0.176 | 0.67 (0.38 to 1.2) | 0.178 |
| Sex work main source of income | 16 (17.4) | 111 (50) | <0.001 | 4.75 (2.61 to 8.65) | <0.001 |
| Place of service | | | | | |
| Client's place | 71 (77.2) | 182 (82) | 0.327 | 1.35 (0.74 to 2.44) | 0.328 |
| Bars | 39 (42.4) | 172 (77.5) | <0.001 | 4.67 (2.78 to 7.86) | <0.001 |

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**Table 2** Continued

| Variables | No GBV (n=92) | GBV (n=222) | P value | Crude OR | P value |
|---|---|---|---|---|---|
| Brothels | 67 (72.8) | 136 (61.3) | 0.051 | 0.59 (0.35 to 1.01) | 0.052 |
| Night clubs | 30 (32.6) | 167 (75.2) | <0.001 | 6.28 (3.69 to 10.68) | <0.001 |
| Streets | 25 (27.2) | 120 (54.1) | <0.001 | 3.15 (1.86 to 5.36) | <0.001 |
| Own place | 38 (41.3) | 89 (40.1) | 0.842 | 0.95 (0.58 to 1.56) | 0.842 |

GBV, gender-based violence.

**Table 3** Multivariable logistic analysis of factors associated with gender-based violence among female sex workers

| Variables | Adjusted OR | CI | P value |
|---|---|---|---|
| Age categories (years) | | | |
| 18–24 | 1.22 | 0.24–6.08 | 0.807 |
| 25–35 | 0.81 | 0.24–2.72 | 0.737 |
| Religion | | | |
| Catholic | 2.38 | 0.93–6.12 | 0.071 |
| Muslim | 3.36 | 0.49–23.06 | 0.218 |
| Protestant | 2.77 | 0.79–9.74 | 0.113 |
| Education level | | | |
| Primary | 0.24 | 0.43–1.29 | 0.095 |
| Secondary | 0.17 | 0.03–0.87 | 0.034 |
| Monthly income below average (300 000 UGX) | 0.68 | 0.27–1.70 | 0.408 |
| Sexual debut below 18 years | 1.62 | 0.64–4.11 | 0.309 |
| History of pregnancy | 3.41 | 1.05–11.04 | 0.041 |
| Sex work main source of income | 1.45 | 0.48–4.43 | 0.511 |
| History of abortion | 2.23 | 0.89–5.62 | 0.089 |
| Place of service | | | |
| Own place | 1.98 | 0.80–5.62 | 0.142 |
| Bars | 5.59 | 2.03–15.38 | 0.001 |
| Night clubs | 3.69 | 1.26–10.61 | 0.017 |
| Brothels | 0.74 | 0.27–2.03 | 0.556 |
| Streets | 2.4 | 0.85–6.81 | 0.1 |
| Client's place | 3.62 | 1.21–10.86 | 0.022 |

married/cohabiting (COR: 6.9, 95% CI 2.42 to 19.69, p<0.001), sex debut as a child (COR: 2.18, 95% CI 1.2 to 3.96, p=0.011), history of abortion (COR: 3.52, 95% CI 2.06 to 6.01, p<0.001), sex work as main income (COR: 4.75, 95% CI 2.61 to 8.65, p<0.001) and bars (COR: 4.67, 95% CI 2.78 to 7.861, p<0.001), night clubs (COR: 6.28, 95% CI 3.69 to 10.68, p<0.001) and streets (COR: 3.15, 95% CI 1.86 to 5.36, p<0.001) as places of sex work were significantly associated with gender-based violence. Client's place, brothels and own place for service provision were protective (table 2).

At multivariable analyses, table 3, factors independently associated with gender-based violence among FSWs were secondary education level (AOR: 0.17, 95% CI 0.03 to 0.87, p=0.034), history of pregnancy (AOR: 3.41, 95% CI 1.05 to 11.04, p=0.041) and bars (AOR: 5.59, 95% CI 2.03 to 15.38, p=0.001), night clubs (AOR: 3.69, 95% CI 1.26 to 10.61, p=0.017) and client's place (AOR: 3.62, 95% CI 1.21 to 10.86, p=0.022) as places of sex work.

## DISCUSSION

In this study, we determined the prevalence and factors associated with GBV among FSWs in Gulu, Northern Uganda. We found a high prevalence of client-perpetrated violence, with 70.7% of the participants reporting experiences of GBV. GBV among FSWs in Gulu was associated with secondary education level, history of pregnancy and conducting sex work in bars, nightclubs and clients' places.

Our findings are comparable with results from several studies conducted across the world in different countries which report high prevalence of GBV among FSWs. For instance, a study in the USA found that about 65.1% of FSWs experienced client-perpetrated violence (physical and sexual).[16] In Nairobi, Kenya, 80.9% of FSWs experienced GBV, with 49.1%, 40% and 22.7% reporting emotional, physical and sexual violence, respectively.[17] In Tanzania, the combined prevalence of physical and sexual violence was 40%.[9] A similar study conducted in Uganda during the COVID-19 pandemic in 2020 reported a 61% prevalence of client-perpetrated GBV, reflecting a nearly 10% rise postpandemic, with economic (58.7%) and emotional (52.0%) violence being the most common forms of GBV.[11] We postulate that the prevalence of GBV increased due to the rise in sex work and shifts in the working dynamics of FSWs, such as greater reliance on online platforms and engagement in unsafe and insecure locations, during and after the COVID-19 pandemic in Uganda, similar to trends observed in other settings.[18 19] Contrary to our findings, other studies reported relatively lower prevalence rates of GBV among FSWs, such as 10%–25.6% in Mozambique,[5] 33% in Cameroon,[6] 19% in the USA,[7] 31.3%–37.6% in South Africa,[8] 28.1% in Ethiopia[20] and 24%–34% in Kampala, Uganda.[10]



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These findings collectively indicate that GBV is a widespread issue faced by women engaged in sex work globally; however, the differences reflect variations in study methodologies and sociocultural contexts, and the fact that most studies were conducted prior to the COVID-19 pandemic, which may have influenced GBV rates.

Economic violence was the most common form of violence reported (66.9%), consistent with previous studies that identified economic coercion, such as withholding payment or underpayment, as a frequent issue among sex workers.[11 21] In Uganda, economic violence has been reported to range between 57.7% and 93%.[11 22 23] Furthermore, about 75% of FSWs in Latin America and the Caribbean reported experiencing economic abuse.[23]

Whereas education, particularly secondary level and above, has been shown to be protective against GBV,[24 25] our findings indicate that secondary level of education was associated with increased risk of GBV among FSWs. Higher education enhances the ability to assert boundaries and negotiate for higher payments, which may provoke violent confrontations, especially from non-paying clients.[26] In addition, FSWs with a history of pregnancy with the need to provide for their children often face financial constraints, compelling them to work in unsafe conditions where they are more vulnerable to exploitation and violence.[26]

Specific service locations, such as bars and nightclubs, have also been reported as high-risk environments associated with increased violence.[11] Such settings are often associated with reduced privacy, increased interaction with intoxicated clients and high client volumes, increasing the likelihood of physical, verbal, and sexual violence towards FSWs.[11 23] In contrast to prior findings,[27] sex work at clients' places was associated with increased risk of GBV. The limited control over the environment, isolation from the public and reduced likelihood of immediate intervention during violent incidents increase the vulnerability to GBV.[28 29] Thus, power imbalance between FSWs and clients is a major factor in GBV among FSWs. Sex work at one's own home was protective against GBV among FSWs, likely due to the more controlled and safer environments, established security measures and clearer boundaries with clients.[30]

Our study had some limitations. First, the study design was cross-sectional, which limited our ability to establish causal relationships between the identified factors and client-perpetrated violence. Second, the sample size was relatively small, which may limit the generalisability of the results to other populations of FSWs in Uganda. Third, the sample was selected using a convenience sampling approach, and recruitment was restricted to visible hotspots, potentially excluding sex workers who operate in less visible or hidden locations. Lastly, the study relied on self-reported data, which may be subject to social desirability bias.

## CONCLUSION

This study shows a high prevalence of GBV among FSWs in Gulu City, Uganda, driven by factors including secondary education level, history of pregnancy and working in high-risk locations such as bars, nightclubs and clients' places. Therefore, there is an urgent need to address violence in sex work in Uganda and similar settings worldwide through multisectoral targeted interventions and creating safer working environments by the Ministry of Health and other concerned entities.

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**Data availability statement** All data relevant to the study are included in the article or uploaded as supplementary information.

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