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Authors

Pem, Deki
Nidup, Tshewang
Wangdi, Ugyen
et al.

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Emergency contraceptive pills (ECP) knowledge, attitudes, and practices among women working in the entertainment industry and men in the trucking industry, Bhutan

Deki Pem[1], **Tshewang Nidup**[1], **Ugyen Wangdi**[1], **Dorji Pelzom**[2], **Ali Mirzazadeh**[3], and **Willi McFarland**[3]

[1]Khesar Gyalpo University of Medical Sciences of Bhutan, Faculty of Nursing and Public Health, Thimphu, Bhutan

[2]Policy and Planning Division, Ministry of Health, Thimphu, Bhutan

[3]Global Health Sciences, University of California, San Francisco, California, USA

Abstract

Emergency contraceptive pills (ECP) were recently made available over the counter in Bhutan. We evaluated knowledge, attitudes, and practices concerning ECP in 2 populations at risk for HIV and STI (sexually transmitted infections): entertainment women (*drayang*) and male truck drivers and helpers (truckers). Of 179 *drayang* and 437 truckers intercepted at venues, 73.7% and 21.1%, respectively, had heard of ECP; 47.0% of *drayang* had used them. Their concerns about ECP use included harm to the body, impact on future pregnancy, side effects, and HIV/STI risk. Education programs are needed in Bhutan to increase awareness of ECP for unplanned pregnancy and condoms to prevent HIV and STI.

Keywords

Emergency contraceptive pills; contraceptives; post-coital; *drayang*; truck drivers; Bhutan; sexually transmitted diseases

INTRODUCTION

Use of emergency contraceptive pills (ECP) can reduce unplanned pregnancies and, according to a recent review,[1] does not change condom use or sexual risk behavior. In 1999, Bhutan integrated an ECP (levonorgestrel) into the national family planning program, with dosage orally of 1.5 mg once or 0.75 mg twice, taken 12 hours apart, within 72 hours of

Corresponding author: Willi McFarland, MD, PhD; Global Health Sciences; University of California San Francisco; 550 16th Avenue, Mission Hall, third floor; San Francisco, CA USA 94158; +1 415 533 9882; willi.mcfarland@ucsf.edu.

Compliance with Ethical Standards:

Conflict of Interest: All authors declare that they have no conflict of interest.

Ethical approval: All procedures performed involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants included in the study.

unprotected sex. By 2012, a national survey found that 41% of women of reproductive age were aware of ECP.[2] To increase availability, over-the-counter ECP sale was allowed in 2012. Three years later, unplanned pregnancies remained high in the country.[3] Bhutan's population is young (56% are aged 10 to 24 years), and there is a high fertility rate among teenaged women and youth.[2] More than one fourth (26%) of women aged 15–49 years reported that they had their first pregnancy at age 18 or 19 years, with more than half (51%) having their first pregnancy by age 21 years.[2]

Although the weight of the literature does not find ECP availability to increase the risk for HIV and sexually transmitted infections (STI),[1] The use of ECP typically occurs after unprotected sex, and can thereby help identify populations in need of both contraception and HIV/STI prevention interventions. Currently, Bhutan has a low prevalence of HIV, estimated at less than 0.1% of adults.[4] However, an increase in STI has been noted in Ministry of Health reports, from 1243 cases in 2008 to 1745 cases in 2010.[5,6] The reports also suggested that a factor contributing to STI is the increasing number of persons with multiple sexual partners, as Bhutan continues to modernize and urbanize. These persons include direct and indirect female sex workers and mobile populations of men, such as long-distance truck drivers. These groups have been identified as "key populations" at risk for HIV in many parts of the world.[7,8] In countries with mature HIV epidemics and high HIV prevalence, key populations are disproportionately affected and present challenges to epidemic control, due to stigmatization and high mobility. In countries with low-level epidemics, such as Bhutan, key populations are often affected first. In this context, early interventions with such key populations may prevent further expansion of the epidemic.

Two potential key populations in Bhutan are in particular need of information about ECP and HIV/STI prevention. Women known as *drayang* work in entertainment venues where they dance for and converse with customers. Although few surveys have been conducted among *drayang*, at least 1 study suggests that they participate in transactional sex.[9] Populations of mobile men, particularly long-distance truck drivers, have historically been affected early and identified as a factor in the dissemination of HIV in Africa and India.[10,11] According to a survey in 2 of the largest cities in Bhutan, approximately one third of truck drivers and their helpers in Thimphu and nearly half in Samdrup Jongkhar reported having sex with spouses or regular partners while also buying sex.[4] We conducted a survey of *drayang* to gauge knowledge, attitudes, and practices concerning ECP.

We collected similar information from male truck drivers and their helpers (collectively referred to as "truckers" from hereon), who may be at higher risk for HIV/STI and the unplanned pregnancies of their partners. The specific objectives of the study were descriptive, with overarching aims focused on determining what proportions of these key populations were aware of ECP, their sources of information, their understanding of ECP use, and their concerns about ECP use.

METHODS

The survey was conducted in two cities: Thimphu and Phuntsholing. Thimphu is the capital and largest city in Bhutan and has the largest number of *drayang*. Phuntsholing is the

second-largest city and main point of entry for cargo from India; therefore, it has a high concentration of truck drivers. The 2 cities also have the highest number of reported HIV cases in Bhutan.[5,6] *Drayang* were defined as women employed as entertainers (singers and dancers) who also might work as waitresses and bartenders in the same venues. Truckers included truck drivers and their assistants. To be eligible for participation in the survey, both *drayang* and truckers had to be aged 18 years or older and able to provide informed consent (eg, were not intoxicated).

Participants were recruited by consecutively approaching them at venues where *drayang* and truckers gather in concentrated numbers. A formative phase mapped *drayang* and truckers to venues where at least 10 could be found, which typically were bars and entertainment centers for *drayang* and parking lots for truckers. A sample size was chosen based on practical considerations, namely the recruitment of the most participants in a short period of time, to minimize duplicate enrollments. We targeted an enrollment of 10 *drayang* at each of the 21 mapped venues in 1 month (June 2015). Ultimately, we achieved a sample size of 179 *drayang*. For truckers, the fast turnover rate at a few parking areas allowed for the interviews of 437 in 1 month. *Drayang* were approached inside the entertainment venues and interviewed in private sections. Truckers were approached in parking lots and interviewed in nearby private areas. No payments were given, although refreshments were served (eg, tea and biscuits). The recruiters/interviewers were 10 public health nurses who were fluent in the local dialects and trained specifically in recruitment methods and standardized questionnaires.

The questionnaire was developed based on previous surveys of other sexually active populations.[4] The questionnaire was pilot-tested with informants from the target population, who provided feedback resulting in modifications to the wording of questions. The final structured questionnaire included the broad domain of sociodemographic characteristics as well as knowledge, attitudes, and practices concerning ECP. Specific questions measured awareness of ECP, knowledge of where to obtain ECP, sources of information, and concerns about ECP. Lifetime use was asked of *drayang* who answered that they were aware of ECP. Interviews typically lasted 45 minutes. Analysis for the present study is descriptive, presenting counts and percentages from the samples. The Research Ethics Board of Health in Bhutan approved the study protocol. Participants were aged 18 years and older, and they provided written informed consent.

RESULTS

A total of 179 *drayang* and 437 truckers were enrolled (Table 1). *Drayang* had a mean age of 22.5 years, and nearly all (99.4%) were Bhutanese. More than one third (36.3%) were divorced, separated, or widowed; 42.4% reported high school as their highest education level. In the sample of truckers, the mean age was 31.6 years, and the majority (93.8%) were Bhutanese. Most (73.9%) were currently married. Fewer than one in four (23.8%) had attended high school. Overall, 73.7% of *drayang* and 21.1% of truckers had heard of ECP.

Among *drayang* who had heard of ECP, the most common source of information was a friend (62.1%), followed by a health care worker (19.7%). More than three fourths (78.0%)

of *drayang* knew that ECP can be used after unprotected sex; however, fewer recognized that ECP can be used after condom breakage (15.9%) or rape (13.6%). The majority of *drayang* could give a correct dosage (71.2%) and correct time period after sex (58.3%) for using ECP. More than two thirds of *drayang* (68.9%) knew that ECP use does not prevent HIV and STI. Among *drayang* who had heard about ECP, 47.0% reported ever using them (34.6% all *drayang* in the survey).

Among truckers who had heard of ECP, 68.5% received information from a friend and 26.1% from a health care worker. More than half (56.5%) could give a correct dosage, but fewer (27.2%) knew the correct time period after sex for using ECP. A majority of truckers (73.9%) knew that ECP use does not prevent HIV and STI.

Many *drayang* (79.9%) had concerns about ECP harming their bodies. Specifically, the most common concerns were effect on future pregnancy (76.1%), side effects (70.2%), and increased risk for HIV/STI (69.4%). Majorities of *drayang* (72.6%) and truckers (66.3%) felt comfortable buying ECP over the counter. Only 24.6% of *drayang* and 12.8% of truckers preferred ECP to condoms; 46.2% of *drayang* and 54.4% of truckers were concerned that over-the-counter access to ECP may reduce condom use.

DISCUSSION

Three years after ECP were allowed to be sold without a physician prescription, nearly three fourths of women working in the entertainment industry in Thimphu and Phuntsholing were aware of their availability. This level of awareness was higher than in the general population of Bhutanese women in 2012.[2] In neighboring India, by comparison, only 11.2% of female employees at a medical college were aware of ECP.[12] Use of ECP among *drayang* (34.6% of those in the sample) was also relatively high. In the Indian survey, only 1.2% of women had ever used ECP. The higher awareness of ECP among *drayang* may stem from their likelihood to engage in transactional sex through employment in the entertainment industry.[9]

We recognize many limitations in our study. First, the instrument was brief and did not include detailed measures of sexual behavior risk. We also measured only lifetime use of ECP, which cannot assess the impact of the recent policy change on over-the-counter availability and use. Second, measures were subject to social desirability response bias and recall bias. For example, some *drayang* might have underreported ECP use to avoid acknowledging not using a condom. Third, our study populations were thought to be at higher risk for HIV/STI and thus are not representative of other groups in Bhutan.

Nonetheless, these specific populations may benefit most from targeted educational interventions. Our data can support and guide recommendations to provide health education on the indications, correct timing and dosing, and side effects of ECP so that these key populations can make informed decisions. At present, most *drayang* receive information about ECP from a friend rather than from a health care worker. Having accurate information was moderately high among survey participants, but there were notable gaps, such as ECP use after condom breakage and rape. While peers may promote awareness of ECP,

professionals could better address any misperceived harmful effects. Health care workers could also use this opportunity to reinforce the need for condoms to prevent HIV and STI.

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Table 1

Sociodemographic characteristics and emergency contraceptive pills (ECP) knowledge and use among women in the entertainment industry (*drayang*) and men in the trucking industry, Thimphu and Phuntsholing, Bhutan, 2015.

	Drayang **N (%) (n=179)**	**Truck drivers/helpers N (%) (n=437)**
Age in years (mean ± SD)	22.5 ± 3.4	31.6 ± 7.9
Bhutanese national	178 (99.4)	410 (93.8)
Marital status		
Single, never married	30 (16.8)	70 (16.0)
Living together	10 (5.6)	14 (3.2)
Married	74 (41.3)	323 (73.9)
Divorced/separated/widowed	65 (36.3)	30 (6.9)
Education level (of 177 responding)		
No education	49 (27.7)	161 (36.8)
Primary	34 (19.2)	145 (33.2)
High school	75 (42.4)	104 (23.8)
Monastic school	0 (0)	19 (4.4)
Nonformal education	19 (10.7)	8 (1.8)
Ever heard of ECP	132 (73.7)	92 (21.1)
Of those who had heard of ECP:		
Source of information on ECP		
Friend	82 (62.1)	63 (68.5)
Health care worker	26 (19.7)	24 (26.1)
ECP knowledge		
Can be used after unprotected sex	103 (78.0)	67 (72.8)
Can be used after condom breakage	21 (15.9)	13 (14.1)
Can be used after rape	18 (13.6)	7 (7.6)
Available as oral pill	99 (75.0)	61 (66.3)
Correct number of pills and intervals for use	94 (71.2)	52 (56.5)
To be used after sex	85 (64.4)	56 (60.9)
To be used within 72 hours after sex	77 (58.3)	25 (27.2)
Does not prevent HIV/STI	91 (68.9)	68 (73.9)
Does not cause abortion	47 (35.6)	25 (27.2)
Ever used ECP	62 (47.0)	na
Appropriate use, among those who used ECP	57 (91.9)	na