

## ABSTRACT

*Objectives.* This report examines intention to use the female condom among men and women in Lusaka, Zambia, who were exposed to mass-marketing of the female condom.

*Methods.* The study used data from a representative sample of consumers at outlets that sell or distribute the female condom and the male condom.

*Results.* In spite of a high level of awareness of the female condom, use of this method in the last year was considerably lower than use of the male condom. Intention to use the female condom in the future was highest among respondents who had used only the female condom in the last year.

*Conclusions.* The female condom is likely to be most important for persons who are unable or unwilling to use the male condom. (*Am J Public Health.* 2001;91:307–310)

# Intention to Use the Female Condom Following a Mass-Marketing Campaign in Lusaka, Zambia

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In previous studies that have examined the acceptability of the female condom, researchers either have asked participants for their spontaneous opinion of the female condom after showing them the contraceptive method or have supplied participants with the female condom and then, during a return study visit, asked about their experience with it.<sup>1–7</sup> Because of the manner in which respondents were selected in most previous studies, generalization of the findings of these studies beyond the study participants has not been possible.

The present study asked respondents in Lusaka, Zambia, who were exposed to mass-marketing of the female condom about their intention to use the female condom in the future. Intention to use a contraceptive method is an important predictor of future use of that method.<sup>8</sup> This study is unique for 3 reasons: the sample size is relatively large compared with those of previous acceptability studies, random selection procedures were used in selecting respondents, and the study was conducted after the female condom had been sold in the Lusaka commercial sector for about 1 year.

Population Services International and the Society for Family Health started social marketing of the female condom in Lusaka in October 1997. The female condom, supplies of which were donated to Population Services International and the Society for Family Health by the British Department for International Development, was marketed under the brand name Care and positioned as a disease and pregnancy prevention

method (C. Mwaba, Society for Family Health; written communication; February 1999). Women were the primary target for the campaign. Female peer educators played an important role in educating consumers about the method and its use by holding educational sessions at retail outlets, workplaces, and bars or nightclubs. The product was also promoted through posters, magazines, point-of-sale materials at retail outlets, and radio advertisements.

Because condom prices can be a barrier to their use,<sup>9</sup> the price of Care was heavily subsidized. Despite this subsidy (cost to the donor per female condom was US\$0.61 vs US\$0.035 each for Maximum, the male condom, not inclusive of shipping and packaging costs), its price to the consumer was twice as high: US\$0.19 for 2 Care condoms vs US\$0.15 for 3 Maximum condoms (G. Stallworthy, Population Services International; written communication; May 1999). Financial support was provided to Population Services International and the Society for Family Health by the US Agency for International Development (USAID) to cover distribution and marketing costs of both the male condom and the female condom.

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This brief was accepted May 17, 2000.

## Methods

### Data

The study used data from an exit survey of customers at retail outlets that sell the female condom. The specific outlets at which fieldwork was carried out were selected from a list of 154 retail outlets to which the Society for Family Health had sold female condoms between April and October 1998. The different outlet types that sold the female condom included pharmacies, drugstores, large supermarkets, small stores and groceries, bars, nightclubs, and private clinics and hospitals. After stratification by outlet type, 52 outlets were randomly selected from this list on the basis of a systematic sampling interval of 3. In addition, a few public sector and nongovernmental organization outlets in Lusaka also distributed the female condom. A list of 20 outlets that were known to distribute the female condom was stratified into government clinics and hospitals and nongovernmental organization clinics, and 8 outlets were selected on the basis of a systematic sampling interval of 2.

To ensure that a sufficiently large sample of female condom users was obtained, we decided to oversample female condom users. Specifically, the plan was to obtain a sample of 500 consumers who had ever used the female condom, a separate sample of 500 consumers who had ever used the male condom, and a sample of 500 nonusers.

Accordingly, during the first phase of the fieldwork, customers at retail outlets were screened for female condom use. Customers who had ever used the female condom were administered a detailed questionnaire, which included questions on the intention to use the male condom or the female condom. The screening questionnaire was designed to keep track of the probability of selection of users of the female condom. In the second phase, interviewers screened customers for male condom use and interviewed male condom users as well as nonusers. The final sample of consumers who completed interviews included 423 consumers who had ever used the female condom, 630 consumers who had ever used the male condom, and 536 nonusers of condoms. Researchers kept track of the probability of selection of male condom users and condom nonusers at each outlet by using the screening questionnaire.

Weights, calculated with data from the screening questionnaire, were designed to adjust the sample to match the distribution of the consumer population at each outlet type. (The distribution of the consumer population was obtained from the screening survey.) About 10% of those contacted for the in-

terview refused to participate in the survey. Most respondents who refused to be interviewed reported that they did not have time for an interview because of prior commitments. Although a 10% refusal rate is much higher than the 1% to 2% refusal rate normally obtained in household surveys in Zambia,<sup>10</sup> it is not high by the standards of this type of survey, in which respondents are contacted when visiting commercial outlets (as opposed to when they are at home). The adjustment for respondent refusal did not affect the findings of the study, and the final weights did not include an adjustment for refusal. Weighted proportions are presented in the tables, but the number of cases shown is unweighted. Chi-square tests of independence were conducted to assess the significance of relationships between variables at the bivariate level (not shown). To assess the net effect of independent variables on intentions to use the male condom and the female

condom, we conducted multiple classification analyses.

### Variables

Independent variables included age; sex; marital status; education; and knowledge, discussion, and use of condoms in the last year. To measure socioeconomic status (SES), we used the Amenities and Possession Index, a poverty/wealth indicator based on household access to 3 basic amenities (drinking water, toilet, and electricity) and 4 consumer durable possessions (radio, television, refrigerator, and car). (See Kishor and Netizel<sup>11</sup> for details of how this index was created.) The dependent variable, intention to use the male or female condom, was based on 2 separate questions: "Do you intend to use the female condom in the future?" and "Do you intend to use the male condom in the future?"

**TABLE 1—Percentage Distribution of the Sample Population: Lusaka, Zambia, 1998**

|   | % Distribution (n = 1589) |
|---|---------------------------|
| Sex   |                           |
| Female  | 46.4                      |
| Male  | 53.6                      |
| Age, y  |                           |
| 15–19   | 9.5                       |
| 20–24   | 29.8                      |
| 25–29   | 27.8                      |
| 30–34   | 19.4                      |
| 35–39   | 7.3                       |
| 40–49   | 6.2                       |
| Marital status  |                           |
| Married   | 51.2                      |
| Unmarried, regular partner in last year                                       | 38.1                      |
| Unmarried, no regular partner   | 8.5                       |
| Virgin  | 2.2                       |
| Education, y  |                           |
| None  | 0.0                       |
| 1–7   | 14.1                      |
| 8–12  | 50.8                      |
| 13 and higher   | 35.1                      |
| API   |                           |
| Low   | 3.9                       |
| Medium  | 61.1                      |
| Medium high   | 10.3                      |
| High  | 24.7                      |
| Ever heard of female condom   |                           |
| No  | 12.9                      |
| Yes   | 87.1                      |
| Discussed use of female condom with any partner in the last year <sup>a</sup> |                           |
| No  | 77.3                      |
| Yes   | 22.7                      |
| Use of condoms in last year <sup>a</sup>                                      |                           |
| Did not use any condom  | 37.5                      |
| Used male condom only   | 50.2                      |
| Used female condom only   | 1.5                       |
| Used both male condom and female condom                                       | 10.7                      |

Note. API = Amenities and Possession Index.

<sup>a</sup>Limited to sexually experienced respondents (n = 1557).

## Results

### Sample Characteristics

The distribution of sample characteristics is shown in Table 1. Slightly more than half (54%) of the respondents were men. Ten percent of respondents were aged 15 to 19 years and 58% were aged 20 to 29 years. About half (51%) were married, 38% were not married but had had a regular partner in the last 12 months, and 9% were not married and had not had a regular partner in the last 12 months. About 2% of respondents had never had sexual intercourse.

On the basis of educational level, the sample had relatively high SES: 51% of respon-

dents had between 8 and 12 years of schooling, and 35% had more than 12 years of schooling. The Amenities and Possession Index showed that 4% of the sample had low SES, 61% had medium SES, 10% had medium-high SES, and 25% had high SES.

Most respondents (87%) had heard of the female condom. It is assumed (on the basis of the findings of the Demographic and Health Survey of Zambia) that 100% of respondents had heard of the male condom.<sup>10</sup> Nearly 23% of sexually experienced respondents had discussed the use of the female condom with a partner in the last year. Most sexually experienced respondents had used some type of condom in the last year. About 50% of respondents had used the male condom only, nearly 2% had

used the female condom only, and about 11% had used both types of condoms in the last year.

### Multivariate Analysis: Intention to Use the Female or Male Condom

Adjusted percentages of respondents who intended to use the female condom or the male condom are shown in Table 2. Overall, 40% of sexually experienced respondents reported an intention to use the female condom and 72% reported an intention to use the male condom. Several variables that were significantly associated with intention to use the female condom at the bivariate level (not shown)—such as sex, age, number of children, and marital status—no longer retained a significant association at the multivariate level. Education had a significant association with the outcome, with the most educated respondents being the least likely to report an intention to use the female condom: 35% of respondents with 13 or more years of schooling reported an intention to use the female condom, compared with 42% of those with 1 to 7 years of schooling and 43% of those with 8 to 12 years of schooling. Discussion of female condom use and experience with condoms were the most powerful predictors of an intention to use the female condom. About 50% of those who had discussed use of the female condom with a partner reported an intention to use this method, compared with 37% of others. About 33% of those who did not use any type of condom in the last year intended to use the female condom, compared with 43% of those who had used the male condom only, 63% of those who had used the female condom only, and 51% of those who had used both types of condoms.

With the exception of marital status and education, variables that were associated with intention to use the male condom at the bivariate level (not shown) remained significant at the multivariate level. Men reported a higher level of intent to use the male condom (76%) than did women (68%). Respondents with fewer children reported a stronger intention of using the male condom: 81% of those with no children compared with 56% of those with 4 or more children. Discussion of the male condom and prior use of any type of condom remained important predictors of intention to use the male condom. About 77% of respondents who had discussed using the male condom intended to use it, compared with 66% of others. Intention to use the male condom was reported by 55% of respondents who had not used any condom in the last year, 80% of those who had used the male condom only, 82% of those who had used the female condom only, and 93% of

**TABLE 2—Adjusted Percentages of Sexually Experienced Respondents Who Intend to Use the Female Condom or the Male Condom: Lusaka, Zambia, 1998**

|   | Intend to Use Female Condom |      | Intend to Use Male Condom |      |
|---|-----------------------------|------|---------------------------|------|
|   | %                           | n    | %                         | n    |
| Sex   |                             |      |                           |      |
| Female  | 38.4                        | 568  | 68.2**                    | 568  |
| Male  | 41.6                        | 989  | 75.9                      | 989  |
| Age, y  |                             |      |                           |      |
| 15–19   | 43.8                        | 118  | 73.0**                    | 118  |
| 20–24   | 39.3                        | 448  | 70.0                      | 448  |
| 25–29   | 41.6                        | 446  | 73.2                      | 446  |
| 30–34   | 37.6                        | 312  | 80.1                      | 312  |
| 35–39   | 43.6                        | 132  | 69.7                      | 132  |
| 40–49   | 36.1                        | 101  | 56.5                      | 101  |
| No. of children   |                             |      |                           |      |
| 0   | 44.4                        | 433  | 81.4**                    | 433  |
| 1   | 41.6                        | 434  | 76.3                      | 434  |
| 2   | 38.5                        | 300  | 69.7                      | 300  |
| 3   | 36.2                        | 174  | 61.7                      | 174  |
| ≥4  | 33.0                        | 216  | 55.7                      | 216  |
| Marital status  |                             |      |                           |      |
| Married   | 39.4                        | 839  | 72.4                      | 839  |
| Unmarried, regular partner in last year                               | 35.1                        | 586  | 73.9                      | 586  |
| Unmarried, no regular partner   | 42.2                        | 132  | 71.8                      | 132  |
| Education, y  |                             |      |                           |      |
| 1–7   | 42.3*                       | 216  | 68.9                      | 216  |
| 8–12  | 43.2                        | 770  | 71.8                      | 770  |
| ≥13   | 34.8                        | 571  | 74.4                      | 571  |
| API   |                             |      |                           |      |
| Low   | 43.5                        | 61   | 78.0                      | 61   |
| Medium  | 39.9                        | 927  | 72.1                      | 927  |
| Medium high   | 40.7                        | 169  | 73.0                      | 169  |
| High  | 40.1                        | 400  | 71.6                      | 400  |
| Discussed use of particular condom type with any partner in last year |                             |      |                           |      |
| No  | 37.3**                      | 1012 | 65.6**                    | 842  |
| Yes   | 49.8                        | 545  | 76.7                      | 715  |
| Use of condoms in last year   |                             |      |                           |      |
| Did not use any condoms   | 32.5**                      | 504  | 55.4**                    | 504  |
| Used male condom only   | 42.8                        | 578  | 80.3                      | 578  |
| Used female condom only   | 63.3                        | 73   | 81.5                      | 73   |
| Used both male condom and female condom                               | 51.2                        | 402  | 92.7                      | 402  |
| Total   | 40.1                        | 1557 | 72.3                      | 1557 |

Note. API=Amenities and Possession Index.  
\* $P < .05$ ; \*\* $P < .01$ .

those who had used both the male condom and the female condom.

## Discussion

A national survey has shown that nearly all Zambians have heard of the male condom.<sup>10</sup> In this study of customers at female condom outlets in Lusaka (a high-SES sample), we found that 61% of respondents had used the male condom in the last year and 72% intended to use it in the future. About 87% of respondents in this sample had heard of the female condom, 12% had used the female condom in the last year, and 40% reported an intention to use this method in the future.

A small proportion of respondents (2%) had used only the female condom in the last year, whereas a larger proportion (11%) used both the male condom and the female condom. The intention to use the female condom in the future was highest (63%) among the former group. Among those who had used both the female condom and the male condom in the last year, nearly half (49%) did not intend to use the female condom in the future. These findings suggest that the female condom is likely to be most important for a subgroup of the population who are unable or unwilling to use the male condom. For these people, the most important effect of the population-based introduction of the female condom may be to provide additional barrier-method protection. These findings also suggest that the male condom is likely to remain the primary method of protection for condom users.

Besides experience with using the female condom, discussion of the female condom with a partner was an important predictor of inten-

tion to use it. About 50% of respondents who had discussed use of the female condom reported an intention to use it in the future, compared with 37% of others. Because the female condom is a new and relatively difficult method to use, the ability of couples to discuss it could be an important factor in its future use.

Higher education was associated with a lower intent to use the female condom; this may be a reflection of the greater ability of more educated persons to implement use of the male condom (and hence their lower level of interest in other barrier methods). Previous research has shown that education increases the likelihood of success in implementing male condom use in Zambia.<sup>12</sup>

The absence (after adjustment) of associations between sex, age, number of children, and intention to use the female condom suggests that its first year of introduction was a period of trial use, when men and women of all ages were willing to try out another barrier method. Over time, it is possible that a more distinct age and sex profile of persons who intend to use this method may emerge. However, at present, these findings show that women are as likely as men to intend using the female condom. □

## Acknowledgments

This study was made possible through financial support by the Joint United Nations Programme on HIV/AIDS and by USAID. Additional support was provided by Population Services International, which has core support from the British Department for International Development.

This report benefited from suggestions made by Dominique Meekers, T. Kusanthan, Chilufya Mwaba, Guy Stallworthy, Josselyn Neukom, Lisa Lackey, and Brad Lucas.

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