Determinants of Condom Use among French Heterosexuals with Multiple Partners

Jean-Paul Moatti, PhD, Nathalie Bajos, Jean-Pierre Durbec, PhD, Collette Menard, and Caroline Serrand

Introduction

Since the beginning of the AIDS (acquired immunodeficiency syndrome) pandemic, designing effective prevention has been hindered by a lack of basic information about sexual behavior. While changes in sexual behavior and condom use among homosexual and bisexual men are becoming documented,1-4 data are still very scarce for the general population.5 The most recent data on sexual behavior in a large sample of the French population were obtained in 1969 governmental survey.6 France has the highest number of AIDS cases in Europe: 8,025 reported between 1978 and September 30, 1989. A total of 2,176 new cases were diagnosed between October 1, 1988 and September 30, 1989 with 11.5 percent of these cases being due to heterosexual transmission. Although, in France as in the United States, heterosexually acquired AIDS remains focused in demographically distinct population groups (sexual partners of bisexual males, intravenous drug users and individuals of African or Carribean origin),7,8 prevention of heterosexual HIV (human immunodeficiency virus) spread remains a challenge.

The objective of the present study was to investigate condom use and its determinants in a national sample of French heterosexual population whose sexual behaviors are at risk for HIV transmission. The survey was carried out at a national level in September 1988 and supported by the French Committee for Health Education which was officially in charge of public information campaigns about AIDS.

Methods

The survey data are based on respondents between 18 and 49 years of age, who reported more than one sexual partner in the six months prior to interview and who considered themselves heterosexuals. Individuals were contacted at home. After a short presentation, a written list of various statements corresponding to possible combinations of multiple sexual partners (such as “I am currently married but I had an extramarital sexual relationship during the past six months,” etc.) was submitted to the respondents, and they were asked if they recognized having been in at least one of these situations during the past six months. All those who answered positively were included in the survey and were interviewed face to face. The questionnaire included detailed data collection about sociodemographic characteristics and 62 questions about perception of the risk of HIV transmission, sexual behavior, and condom use. The interview lasted between 45 minutes and one hour. Sex of interviewer and respondent were not matched.

A quota sampling procedure for age, sex, occupational status, and size of town was used to select the sample. These quotas were a priori defined on the basis of the observed characteristics of the subgroup of heterosexuals reporting more than one sexual partner during the past six months in a previous survey on AIDS of French general population (December 1987).9,10 Among the total number of individuals who were contacted at home, 15.3 percent (n = 1,008) and whose characteristics are listed in Table 1 were included in the sample. About half (49.8 percent) were single and a third (34.1 percent) were university graduates.

Univariate statistical analyses and multiple logistic regression analysis were performed with condom use as the dependent variable.

Address reprint requests to Jean-Paul Moatti, PhD, National Institute for Health and Medical Research, INSERM Research Unit on Risk Assessment and Evaluation of Prevention, P.O. Box 48, 92263-Fontenay aux Roses, France. Dr. Durbec is with INSERM Research Unit on Biostatistics and Epidemiology, Marseille; Bajos, Menard, and Serrand were with the Department of Social Studies of the French Committee for Health Education, Minister of Health, Vanvies. This paper, submitted to the Journal November 28, 1989, was revised and accepted for publication June 25, 1990.

In September 1988, a sample of French individuals between 18 and 49 years of age, who reported more than one sexual partner in the past six months and who considered themselves heterosexuals (n = 1088), were interviewed at home about risk perception of human immunodeficiency virus (HIV) transmission, sexual behavior, and condom use. Systematic or occasional use of condoms during the previous 12 months was reported by 46.9 percent of respondents. Among condom users, 38.7 percent declared they had never used condoms before the last 12 months, fear of acquired immunodeficiency syndrome (AIDS) rather than contraception being the main motivation of these recent users. Multivariate analysis indicates that voluntary testing for HIV, average or more than average fear of sexually transmitted diseases (STDs), and knowledge of HIV carrier in personal relations are associated with condom use. (Am J Public Health 1991; 81:106-109)
Results

Condom Use and Characteristics of Users

In this French sample, 46.9 percent reported having used condoms during the previous 12 months, 10.3 percent always using them. Among these 473 condom users, 38.7 percent declared they had never used condoms before the previous 12 months. These recent users mentioned fear of AIDS as their motivation for condom use in the same proportion as earlier condom users (65.0 percent vs 60.7 percent); however, they reported contraception as a motive for condom use less frequently (31.7 percent vs 62.8 percent).

Condom use is related to several sociodemographic characteristics of respondents as well as risk perception of contracting AIDS and STDs (sexually transmitted diseases) and past medical care for STDs (Table 1). It is of interest that 47.2 percent of respondents who feel being at “average” or “higher than average” risk of contracting AIDS do not yet use condoms (Table 1). Condom use is highest among respondents who voluntarily underwent testing for HIV antibodies and lowest in the non-tested population. It is also more frequent among respondents who personally know an HIV carrier (Table 1).

A minority of respondents (10.2 percent) believe that coitus interruptus, vaginal douche, or to urinate after sexual intercourse may protect against HIV transmission; but their frequency of condom use is similar to that of the rest of the sample.

Determinants of Condom Use

When a logistic regression model is applied to condom use (either on some or all occasions of sexual intercourse in the last 12 months) and separate regressions are done by sex of respondents, the following variables appear to be related with use: voluntary testing for HIV, average or more than average fear of STDs and knowledge of HIV carrier in personal relations (Table 2).

Perception of Condom Use

Table 3 shows that expressed arguments about individual difficulties to use condoms such as “they are difficult to use” or “they reduce personal interest in sexual intercourse” do not differentiate users from non-users. It is rather criticisms of the social and cultural image of condoms with its potential effect on individual relationships that are more frequently expressed by non-users than users. Non-users also express more doubts about effectiveness of condoms to protect against transmission of HIV and other STDs.

Discussion

Several caveats must be recognized at the outset concerning our data. In the absence of sufficiently large and unbiased samples indicating the real prevalence of various sexual behaviors in the French population, our respondents cannot be considered as fully “representative” of French heterosexuals with multiple sexual partners. Inclusion in the study was based on individuals’ willingness to recognize they had more than one sexual partner in the previous six months; so, reliability and validity of answers are difficult to assess (unfortunately, a possible influence of the interviewer’s gender on the respondents’ answers was not controlled). Our results are very similar to those observed in December 1987 in a representative sample of the population of 18 years of age and over of Paris region: in that survey of the general population, previous testing for HIV, being
TABLE 2—Factors Related to Condom Use in French Heterosexuals with Multiple Partners (logistic regression model)

<table>
<thead>
<tr>
<th>Factors present</th>
<th>Male Respondents (n = 501)</th>
<th>Female Respondents (n = 507)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% CI (*)</td>
</tr>
<tr>
<td>Voluntary testing for HIV</td>
<td>2.46</td>
<td>1.31, 4.59</td>
</tr>
<tr>
<td>Average or more than average fear of STDs</td>
<td>1.44</td>
<td>1.19, 2.55</td>
</tr>
<tr>
<td>Personal knowledge of HIV carrier</td>
<td>1.39</td>
<td>0.82, 2.35</td>
</tr>
<tr>
<td>Age (**)</td>
<td>0.77</td>
<td>0.50, 1.17</td>
</tr>
<tr>
<td>Unmarried</td>
<td>1.34</td>
<td>1.10, 1.85</td>
</tr>
<tr>
<td>University education</td>
<td>1.17</td>
<td>1.00, 1.74</td>
</tr>
<tr>
<td>Prior care for STDs</td>
<td>1.13</td>
<td>0.73, 1.77</td>
</tr>
</tbody>
</table>

*The confidence interval is not symmetric because it has been calculated on the log odds.
**<30 vs ≥30 years of age.

TABLE 3—Expressed Opinions about Condoms

<table>
<thead>
<tr>
<th>% of Respondents Who Agree with the Following Statements about Condoms</th>
<th>Condom Users (%)</th>
<th>Condom Non-Users (%)</th>
<th>Difference (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are difficult to use</td>
<td>18.8</td>
<td>21.7</td>
<td>2.9 (−2.1, 7.9)</td>
</tr>
<tr>
<td>Reduce personal interest in sexual intercourse</td>
<td>60.7</td>
<td>64.2</td>
<td>3.5 (−2.5, 9.5)</td>
</tr>
<tr>
<td>Induce sexual impotence</td>
<td>5.5</td>
<td>6.2</td>
<td>0.7 (−2.3, 3.6)</td>
</tr>
<tr>
<td>Limit one’s sexual pleasure of partners</td>
<td>54.8</td>
<td>69.5</td>
<td>14.7 (8.8, 20.6)</td>
</tr>
<tr>
<td>Limit sexual pleasure of partners</td>
<td>59.6</td>
<td>62.4</td>
<td>2.8 (−3.2, 8.8)</td>
</tr>
<tr>
<td>Kill romanticism in relationship</td>
<td>62.6</td>
<td>76.8</td>
<td>14.2 (8.6, 19.8)</td>
</tr>
<tr>
<td>Create doubts about partner</td>
<td>28.1</td>
<td>40.0</td>
<td>11.9 (6.1, 17.7)</td>
</tr>
<tr>
<td>Are shameless to buy</td>
<td>7.2</td>
<td>12.3</td>
<td>5.1 (1.5, 8.7)</td>
</tr>
<tr>
<td>Should be considered like ordinary consumer goods</td>
<td>70.6</td>
<td>55.9</td>
<td>14.7 (8.8, 20.6)</td>
</tr>
<tr>
<td>Are not always effective STD protectors</td>
<td>55.2</td>
<td>66.4</td>
<td>11.2 (5.2, 17.2)</td>
</tr>
</tbody>
</table>

single, level of education, and declaring more than one sexual partner in the past six months were associated with condom use.9,10 Another limitation for our data is that those who report more than one sexual partner in the past six months may exhibit a wide variety of sexual behaviors to the risk of HIV transmission. Moreover, sexual-orientation self-reporting (i.e., heterosexual in our study) does not accurately describe an individual's sexual behavior: "heterosexuals," "bisexuals," and "homosexuals" may sexually interact across the boundaries implied by self-reported sexual-orientation.11,12 Finally, condom use, especially if it is only occasional, is far from being a perfect indicator of protective behavior.

However, the aim of this study was to inform decision-makers in charge of public education campaigns about AIDS rather than to provide in-depth analysis of sexual behaviors. For that purpose, some useful indications and guidelines for general public information about condoms can be derived from our results.

Since 1987, French public health officials have tried to promote condom use through media advertising directed toward the general public (TV ads, newspapers, movies). It is well known that information alone does not cause sufficient change in behaviors, especially those which require significant changes in individuals’ habits and self-representations.13 It has even been argued that public education is particularly ineffective in areas or groups of low HIV prevalence.14 Our study suggests a less pessimistic view: 18.2 percent of our sample being recent condom users of the last 12 months mainly motivated by fear of AIDS. It indicates that condom use has become relatively more acceptable in some segments of sexually active heterosexual population. Similar results have been found in The Netherlands where promotion of condom use in the general public also began in 1987.15

The experience of HIV prevention in the homosexual communities suggests that condom users are less likely than non-users to believe that condoms "spoil sex" and that interventions should focus on helping people develop strategies and techniques that make condom use sexually satisfying.16,17 From our results, it seems that other aspects must also be taken into account:

- The importance of fear of STDs as a predictor for condom use suggests that it may be useful to include information about condoms in the general context of STDs rather than to only associate them with prevention of HIV infection. Evaluation of various types of messages will be necessary to further document this point.
- Although expressed doubts about effectiveness of condoms among non-users may be an posteriori rationalization of behavior rather than a real barrier to use, it seems necessary to point out the effectiveness of condoms as a means of prevention and to popularize technical quality controls of the product.
- The most important aspect of general information about condoms may be to change their social image and to promote them as ordinary consumer goods playing a normal role in sexual and affective relationships. That is what French information campaigns have called a strategy for making condoms "more of a social routine." Some evidence observed among IV drug users seems to reach similar conclusions.18

French campaigns now issue messages about condoms which do not explicitly associate them with AIDS prevention per se and which emphasize their use as non-conflicting with socially and individually valuable relationships.

Acknowledgments

This study was supported by the French Committee for Health Education (CFES) which is a governmental agency in charge of public health education campaigns.

References


Research on the Prevalence and Impact of Drug use in the Workplace:
National Institute on Drug Abuse, Research Grants Program, Program Announcement No. PA-90-10, July 1990

The National Institute on Drug Abuse (NIDA) requests proposals from researchers in fields including but not limited to psychology, epidemiology, sociology, business and labor relations, public health, management, and economics, on the prevalence, etiology, and impact of acute, chronic, and "hangover" effects of drug use by the workforce. Specifically, NIDA requests proposals on:
- pacts of drug use on the workplace including absenteeism, accidents, injuries, job turnover, health care costs, and productivity effects;
- job performance assessment;
- simulation and field studies of workplace environments;
- prevalence and etiology of workplace-related drug use;
- prevalence estimation techniques for work-related populations; and
- studies of relationships among worker, job, and organizational characteristics, and patterns of drug use and consequences.

ADAMHA urges the inclusion of women and minorities in study populations. For further information contact: Workplace Performance and Technical Research Branch, Division of Applied Research, National Institute on Drug Abuse, Parklawn Building, Room 9A-53, 5600 Fishers Lane, Rockville, MD 20857, telephone (301) 443-6014.