The Face of Global Sex 2005
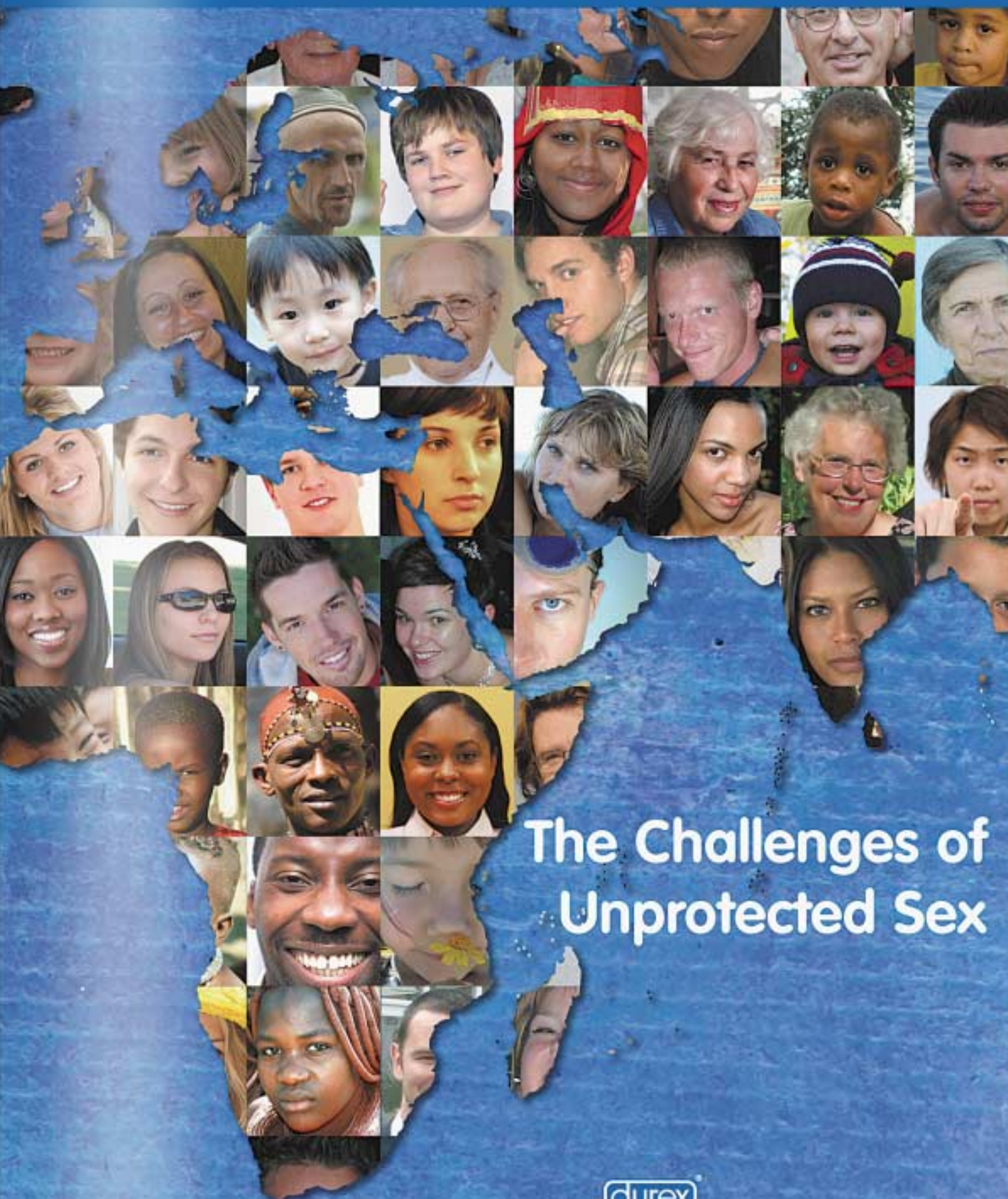
The Challenges of Unprotected Sex

durex

network

contents

foreword

Finding a cure for HIV/AIDS is a top priority for worldwide healthcare organisations. Prevention of transmission of this virus and of other sexually transmitted infections together with reductions in the levels of unplanned pregnancies offer at least as big a benefit to the population's health but receives much less attention.

The Durex Network has produced this report to raise awareness and to stimulate debate around the public health messages and allocation of sexual health improvement resources.

As the world's leading condom manufacturer - and a socially aware company - we at Durex realise we have a duty to promote the safer sex message on a global scale. Last year, for example, we donated nearly four million condoms to good causes, provided many millions more to international organisations and helped to support global initiatives such as Program H and Dance4Life which we review inside.

This year we want to go further - and achieve much more. We have consolidated our social marketing activity under the banner of the Durex Network and this report is the outcome of one of its first initiatives.

Using data collected from the 2005 Durex Global Sex Survey - the world's largest Internet-based survey examining sexual attitudes and behaviour - we have obtained a unique insight into why people take risks with their sexual health and, perhaps more importantly, revealed a statistically sound method to help countries predict rates of unprotected sex and enable more effective targeting of scarce resources toward improving sexual health.

Garry Watts
Chief Executive
SSL International

executive summary

Since the start of the AIDS pandemic in the early 1980s, several studies have questioned whether sex and relationship educational campaigns should target the population as a whole or focus on groups considered to be at greater risk of STIs or unplanned pregnancies.

A question in the Durex Global Sex Survey asked: "Have you ever had unprotected sex with a sexual partner without knowing their sexual history?"

In-depth statistical analysis of this, and other questions asked in the survey presents an opportunity to examine if there are any obvious means of predicting what influences people to have unprotected sex - and what measures can be undertaken to combat this.

age of first sex

Comparison was made between the average age at which someone loses their virginity in a particular country and the levels of unprotected sex reported there.

Results of Unadjusted Multiple Linear Regression (MLR) clearly showed that the average age someone loses their virginity is a predictor of unprotected sex.

gender, sexuality and relationship status

When adjusted to other behavioural variables the effects of gender, sexuality and relationship status do not appear to have a direct influence on whether people have unprotected sex without knowing their partner's sexual history.

number of sexual partners

The Durex Global Sex Survey provides a global perspective on the association between the number of sexual partners and rates of unprotected sex without knowing a partner's sexual history. Unadjusted and adjusted MLR results of 41 countries confirm that the number of sexual partners is a key predictor of the rate of unprotected sex.

In fact, the results suggest that the average number of sexual partners explains 63% of the variance of rates of unprotected sex.

Further regression analysis also indicates that if the number of sexual partners is increased by one - for example the average number of sexual partners of a country becomes nine partners instead of eight - the rate of unprotected sex increases by 3.5%.

Perhaps more usefully, the results can also be used to predict the rate of unprotected sex in countries not included in the survey. Using the graph on page 10 it is possible to predict that in a country in which people average 10 sexual partners, the rate of unprotected sex is expected to range between 48% and 53%.

Population characteristics may also increase the likelihood of people reporting a high number of sexual partners in different parts of the world.

Homosexuals reported having sexual relationships with an average of 21.0 different people. This fell to 14.6 for bisexuals and again to 8.0 for heterosexuals. Gender also has an influence on the number of sexual partners, with males reporting to have had more sexual partners (10.2) than females (6.9), as did the wealth of a country.

what these results indicate

According to the analysis, the number of sexual partners people have, their age, age at first sex and where they live, all appear to have significant impacts on rates of unprotected sex.

how can we interpret these results

While delaying the age of first sex will lead to a reduction in the rate of unprotected sex, evidence suggests that the opposite is happening and people are beginning to have sex at an earlier age. This in turn means that rather than adopting measures to delay people from having sex, more effective measures need to be introduced that will encourage people to take responsibility for their sexual health and use a reliable and safe method of contraception.

Presently, condoms are the only method of contraception available that can protect against HIV/AIDS, other STIs and unplanned pregnancies.

the impact of sex education on encouraging people to use contraception

Whether through sex education lessons with healthcare professionals or among peers, there have been many international studies that have demonstrated that prevention policies work, but when and how to target them is perhaps a more difficult question to answer.

Using analysis of the Durex Global Sex Survey data it is possible to conclude that prevention policies and programmes would perhaps be beneficial if prioritised according to age categories.

Evidence also suggests that intervention programmes may have more chance of success if they take into consideration the factors which influence people in making the decision to have unprotected sex without knowing their partner's sexual history, such as number of sexual partners, where they live and their age.

fast facts

- global rate of condom use as the main method of contraception is 51.6%, ranging from 16.7% in China to 78.2% in Hong Kong

- global rate of self-reported unprotected sex is 47.3%, ranging from 21.1% in India to 73.4% in Norway

- global average age when first received formal sex education is 13.2 years, ranging from 11.3 years in Germany to 16 years in Vietnam. The average age that 75% of all countries surveyed received formal sex education was below 13.8 years

- global average age for losing virginity is 17.4, ranging from 15.6 years in Iceland to 19.8 years in India

- global average annual frequency of sex is 103, ranging from 45.2 in Japan to 138.4 in Greece. Three quarters (75%) of all countries surveyed have an average annual frequency of sex over 97.1 times

- global average number of sexual partners is 9.9, ranging from 3.0 partners in India to 14.5 partners in Turkey. Only 10% of countries surveyed have an average number of sexual partners lower than 5.1

introduction

There are nearly 40 million people[1] infected with HIV across the globe. In 2004, three million died and close to five million became infected.

In addition to this, sexually transmitted infections (STIs) are a major global cause of acute illness, infertility, long-term disability and death, with severe medical and psychological consequences for millions of men, women and infants.

WHO estimates that each year 340 million[2] new cases of syphilis, gonorrhoea, chlamydia and trichomoniasis occur in men and women aged 15-49 years.

And worldwide 137 million women[3] still have an unmet need for family planning - a demand that is expected to increase by 40% over the next 20 years.

Since the start of the AIDS pandemic in the early 1980s, several studies have questioned whether sex and relationship educational campaigns should target the population as a whole or focus on groups considered to be at greater risk of STIs or unplanned pregnancies.

It is common to find epidemiological references to groups considered to be "at risk", such as commercial sex workers, men who have sex with men, intravenous drug users and young people, among many others.

However, even though some studies have examined these population profiles, it remains unclear whether this alone is a predictor of unsafe sex - or if other factors confound this.

Another issue to consider is whether people who fall outside of these "at risk groups" are also taking precautions when it comes to sex.

The Durex Global Sex Survey was designed by SSL International in 1996 as part of an international corporate social responsibility initiative to better understand the patterns of sexual behaviour. In 2005, it was carried out in 41 countries and received more than 317,000 responses.

The survey included more than 30 questions about sexuality profiles, attitudes and behaviour.

And the results provide an unparalleled opportunity to look at the global picture to consider what factors influence people who gamble with their sexual health.

For the purposes of this report, Miguel Fontes, of the Johns Hopkins Bloomberg School of Public Health, Baltimore, USA and Peter Roach, vice president of the Durex Network, carried out in-depth statistical analysis on the question: "Have you ever had unprotected sex with a sexual partner without knowing their sexual history?"

According to our top line analysis almost half (47%) of all adults globally have had unprotected sex without knowing their partner's sexual history.

The Norwegians (73%), Greeks (70%) and the Swedes (66%) are the least likely to have taken precautions while the lowest risk takers are in India (21%), Hong Kong (24%) and Spain (27%).

The survey data presents an opportunity to examine if there are any obvious means of predicting what influences people to have unprotected sex - and what measures can be undertaken to combat this.

global estimates of HIV/AIDS[4] as of end 2004

North America
1 million

Western Europe
610,000

Eastern Europe & Central Asia
1.4 million

East Asia
1.1 million

Caribbean
440,000

North Africa & Middle East
540,000

South & South-East Asia
7.1 million

Latin America
1.7 million

Sub-Saharan Africa
25.4 million

Oceania
35,000

2

factors influencing rates of unprotected sex

⚪ age of first sex

According to research in the Durex Global Sex Survey the average age for people to lose their virginity is 17.4.

This ranges from 15.6 in Iceland to 19.8 in India.

Analysis of the data revealed that the wealth of the country where people live is a significant predictor of what age people were likely to lose their virginity.

Using World Bank classifications based on income levels it appears that people living in high income countries are, on average, 0.9 years younger when they lose their virginity than people in higher middle income countries. This increases to 1.5 years when compared to low and low middle income countries (Fig. 1).

Hong Kong is an outlier among the high income group - indicating people who live there are much older when they lose their virginity compared to other countries in the high income group.

Reasons for this can only be surmised although cultural and social differences obviously have an impact.

Miller carried out a survey among 1,145 children aged 7-22 over an 11 year period in the United States where people lose their virginity at an average age of 16.9.

According to his findings[5] "age of first date, dating often, number of friends perceived to have had sex at age 16, being Black, having parents undergo marital changes during the child's school years, and fighting at school," were the most significant predictors of age of first sex among males.

All of these variables, except fighting at school and dating frequency, were significant predictors among females.

In addition to this, the age at which menstruation started, parents' education, mother's coercive behaviour and love withdrawal, and attitudes about attending religious services, also had an impact on when girls were likely to lose their virginity.
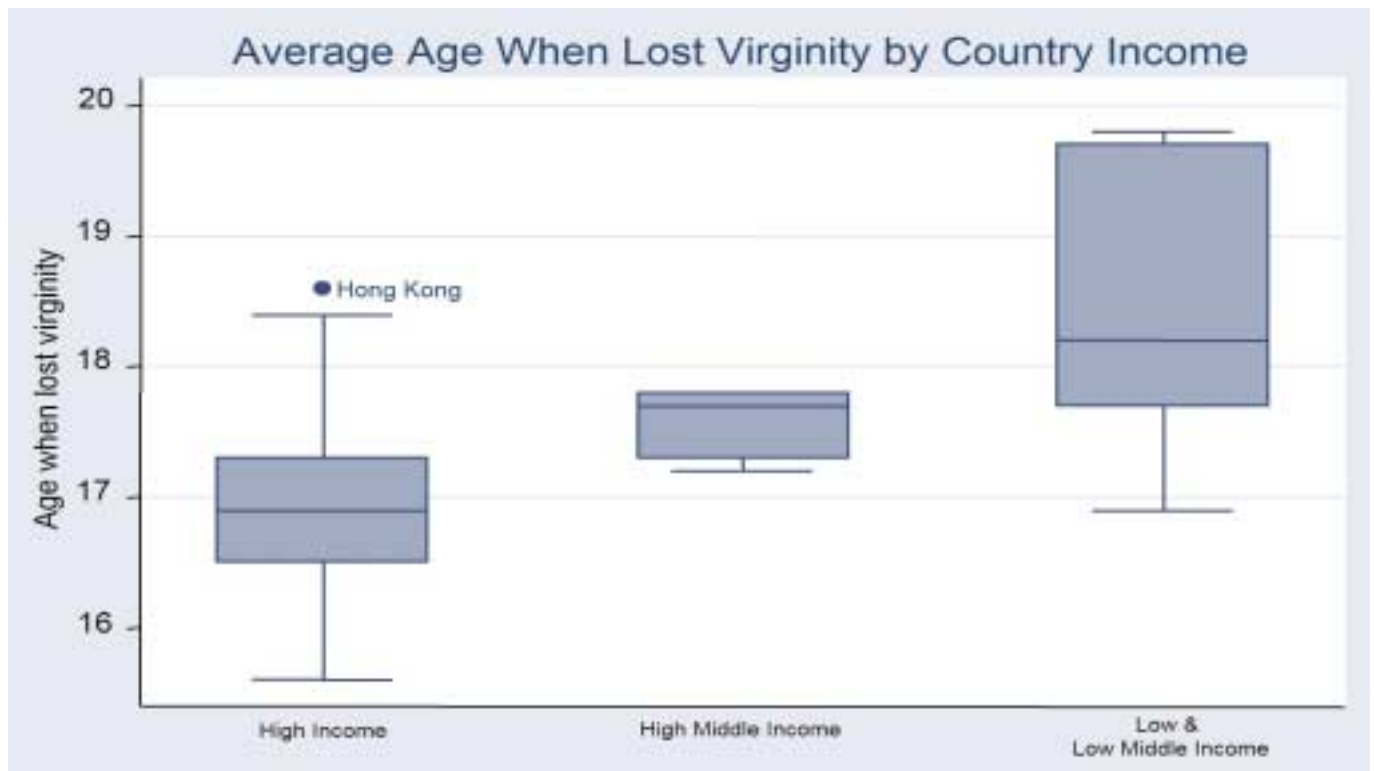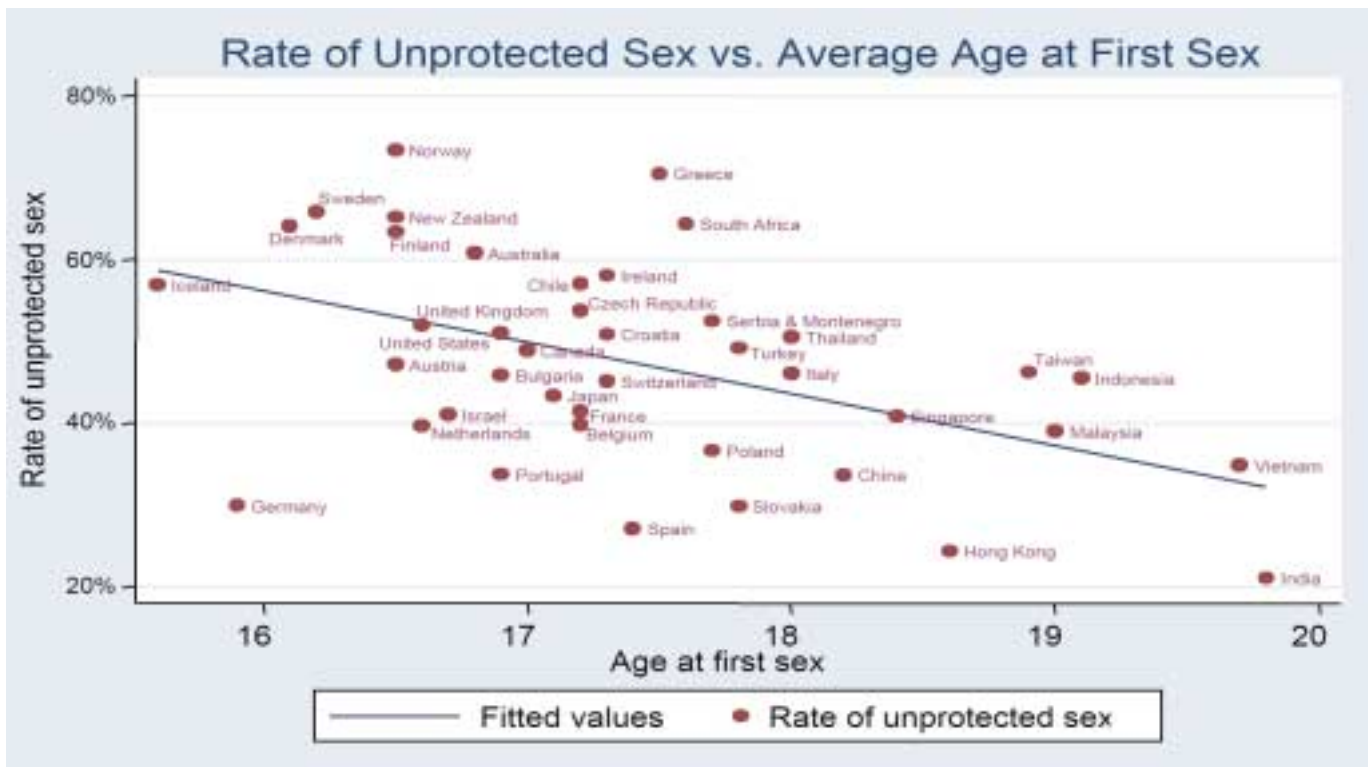
Fig. 1

Average Age When Lost Virginity by Country Income

Fig. 2

Fig. 2 — Rate of Unprotected Sex vs. Average Age at First Sex

But does the age at which someone loses their virginity have an impact on whether or not people are likely to have unprotected sex?

To assess this, comparison was made between the average age at which someone loses their virginity in a particular country and the levels of unprotected sex reported there (Fig. 2).

Results of Unadjusted Multiple Linear Regression clearly show that the average age someone loses their virginity is a predictor of unprotected sex.

Countries like Vietnam and India, for example, where the age for losing virginity is high, report lower levels of unprotected sex, as opposed to the high income countries of Iceland, Sweden, Denmark and Norway where the average age for losing virginity is low, and levels of unprotected sex are high.

Other independent studies have also concluded the younger a person is when losing their virginity the more chance there is of contracting a sexually transmitted infection.

Harrison[6] found in his study of early sexual debut (age 15) among young men in rural South Africa, that "men who initiate sex before the age of 15 form a distinct risk group in this setting."

While Gregson[7] found in a study of women attending an antenatal clinic in sub-Saharan Africa, that HIV prevalence among pregnant women was higher the younger they were.

These results indicate young people, as a whole, are either not aware of contraceptive options available to them, do not have access to contraception, or simply are choosing not to use it.

Fig. 3

Rate of Unprotected Sex by Age Groups
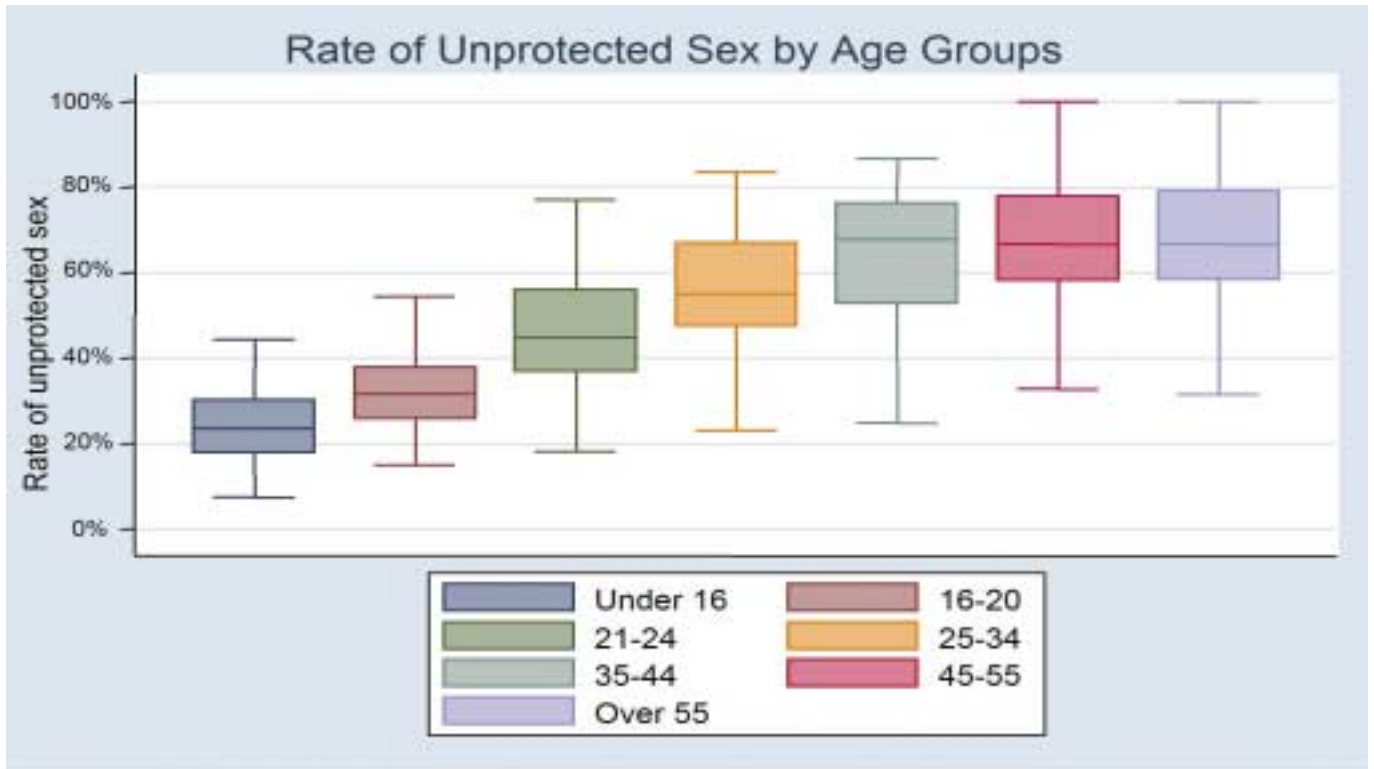
age

Results from the Durex Global Sex Survey have also found that examination of age can be a significant factor in predicting the likelihood of people going on to have unprotected sex.

Fig. 3 clearly indicates that under the age of 35 the number of cases of unprotected sex increases significantly with age.

For example, whereas 26.5% of people aged under 16 report having unprotected sex - this increases to 32.5% for people aged between 16 and 20.

For those people aged 21 to 24 the average rate increases once again to 46.6%, while those in the 25 to 34 year old age band are 57.4% likely to have had unprotected sex.

After the age of 35, however, the rates are only slightly higher. A total of 63.62% of those aged 35 to 44 reported having unprotected sex. This rose marginally to 65.5% for those aged 45 to 55 and to 68.3% for those over 55.

gender

Further analysis was carried out on the data to examine whether gender had an impact on unprotected sex.

The results identified that males are statistically more likely to report having unprotected sex than females - 48.4% compared to 45.3%.

However, these differences are not significant enough to suggest that gender can be used entirely as a predictor of unprotected sex without knowing a partner's sexual history.

It is, however, worth noting that in India, women are much less likely to report having had unprotected sex without knowing a partner's sexual history.
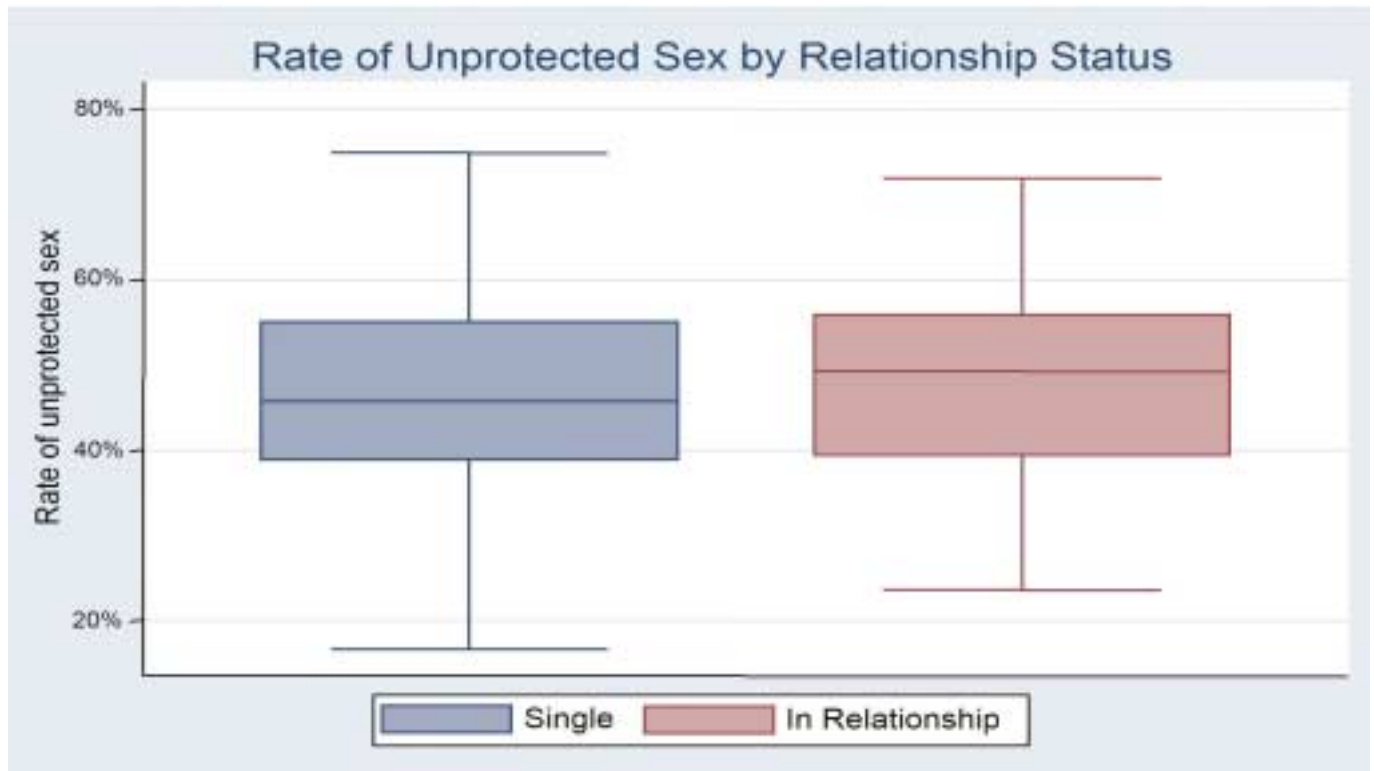
sexuality

When analysing the effects of sexuality it was identified that homosexuals (58.3%) and bisexuals (56.6%) are more likely to report having unprotected sex without knowing a partner's sexual history, when compared to heterosexuals (46.3%).

However, these differences are not significantly different enough to suggest that sex orientation can be used to predict rates of unprotected sex.

Research already conducted in the UK[8] suggests this may be confounded by other variables, such as the number of sexual partners, and more specific analysis is necessary to further explore these links.

relationship status

Being single, as opposed to being in a relationship, also does not appear to have an effect on people reporting unprotected sex without knowing their partner's sexual history.

Virtually the same levels of unprotected sex without knowing a partner's sexual history were reported by people who were in a relationship compared to those who were not, dismissing myths that single people are perhaps more promiscuous and therefore more likely to take risks with their sexual health (Fig. 4).

Fig. 4

Rate of Unprotected Sex by Relationship Status

number of sexual partners

It is not uncommon for behavioural and social research studies to demonstrate a close link between the number of sexual partners somebody has and their tendency to have unprotected sex without knowing their partner's sexual history - and therefore increase their risk of STIs and unplanned pregnancies.

A study conducted in the US[9], for example, among 4,407 sexually active adolescents for the National Longitudinal Study of Adolescent Health, found that "adolescents who engage in sequential or concurrent sexual relationships ... when compared with those who engage in single relationships, have a significantly greater risk for STIs over and above the number of sexual partners."

In the case of older women[10] another study carried out in Germany among drug users attending an inpatients unit, concluded that a "high number of sexual partners was associated with syphilis infection."

While a study in South Beach USA,[11] among men who have sex with men, found those who had four or more anal sex partners in the last 12 months were significantly more likely to produce a positive result when testing for an STI.

The Durex Global Sex Survey provides a global perspective on the association between the number of sexual partners and rates of unprotected sex without knowing a partner's sexual history.

Fig 5 (page 10) shows the results of a regression analysis of all 41 countries that participated in the Durex Global Sex Survey.

Unadjusted and adjusted Multiple Linear Regression results confirm that the number of sexual partners is a key predictor of the rate of unprotected sex.

In fact, the results suggest that the average number of sexual partners explains 63% of the variance of rates of unprotected sex.

Further regression analysis also indicates that if the number of sexual partners is increased by one - for example the average number of sexual partners of a country becomes nine partners instead of eight - the rate of unprotected sex increases by 3.5%.

Perhaps more usefully, these results can also be used to predict the rate of unprotected sex in countries not included in the survey.

Program H

Program H was launched in Brazil in 2002 to challenge existing attitudes to gender and equity and raise awareness of condoms.

An estimated 660,000 people currently live with HIV/AIDS in Brazil - largely because of the attitudes that exist among young men living in the favelas.

Many were prone to promiscuous behaviour and violence towards women and were having sex at an early age with multiple partners - seeing it as an opportunity to gain status rather than an opportunity for intimacy.

Durex has been working with the Brazilian government for many years to raise the profile of condom quality.

In 2001 it began looking beyond the provision of public health contracts and started working with non-government organisation, Instituto Promundo, and John Snow Brasil to raise awareness of HIV/AIDS to young men living in the suburbs of Rio de Janeiro.

Program H was initially started to encourage changes in outlook, including approaches to violence, fatherhood and condom use.

It provided materials to allow community and youth groups to run workshops designed to promote attitude change, and encouraged young men to attend informal gatherings to discuss how to take control of their lives.

Recurring themes included how to handle the situation if your girlfriend or sexual partner becomes pregnant, how to solve a conflict with a girl without violence; and how to remember to use a condom, even when it was the last thing on your mind.

The workshops also led to the development of Hora H condoms - see separate case study on page 11.

In depth research of Program H has shown that regular condom use with a long term partner increased 25 percentage points in Bangu and there was a significant reduction of more than 20 percentage points of sexually transmitted infections.

Fig. 5
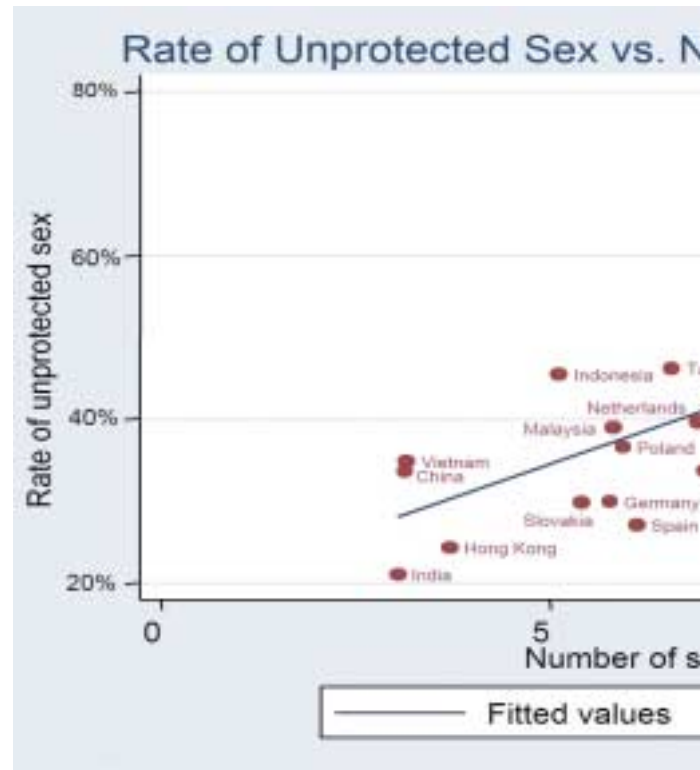
For example, Fig. 6 demonstrates the prediction and confidence intervals of rates of unprotected sex for different averages of numbers of sexual partners.

Fig. 6
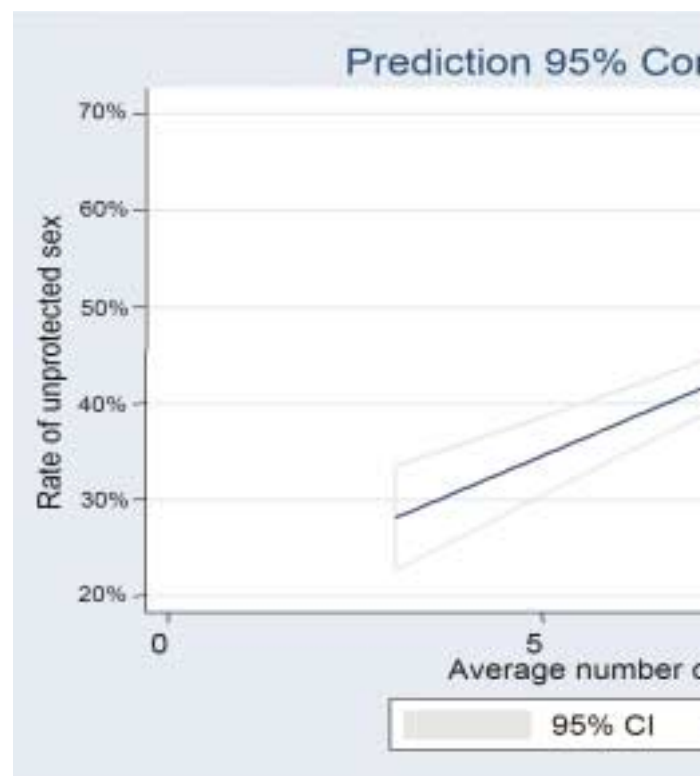
what population characteristics influence

Population characteristics may also increase the likelihood of people reporting a high number of sexual partners in different parts of the world.

For example, in all countries analysed in the Durex Global Sex Survey, sexual orientation had a significant effect on the number of sexual partners people were likely to report.

umber of Sexual Partners

● Rate of unprotected sex

Using this graph it is possible to predict that in a country in which people average 10 sexual partners, the rate of unprotected sex is expected to range between 48% and 53%.

nfidence Interval

— Fitted values

higher numbers of sexual partners

Homosexuals reported having sexual relationships with an average of 21.0 different people. This fell to 14.6 for bisexuals and again to 8.0 for heterosexuals, as illustrated in Fig. 7 (page 12).

These results are confirmed by many other studies carried out among different population groups.

Hora H

As part of Program H, emphasis was placed on seeking to increase the number of young men that use condoms regularly in the low income areas of Brazil, and improve their access to condoms in general.

It was recognised that existing condoms available in Brazil tended to be difficult to get hold of and were not marketed in a way that appealed to young men.

Group discussions led to the creation of a new condom being sold at low cost under the brand name Hora H, which translates into 'in the heat of the moment'.

The name represents the fact everyone knows you should use a condom, but in the heat of the moment you may forget or not have access to one.

With the support of Durex, members of the Program H discussion group worked with a design company to produce a logo, packaging and instructions for use to better suit the street language of the 15-24 target age group.

With the help of young promoters, point of sale and advertising materials were also created.

Its communication strategy engages the interest of young people with its "cool" image and stress free way of promoting condom use.

The Hora H condoms are now challenging perceptions of traditional condom availability and can be purchased at street markets, music stores and bars during the times when casual encounters are most likely to occur.

In 2004 an interactive website was also launched to provide young people with a venue to discuss issues that matter to them and to facilitate their ongoing participation in the development of the condoms and their image.

Fig. 7

Average Number of Sexual Partners by Sex Orientation

Legend: Heterosexual, Bisexual, Homosexual
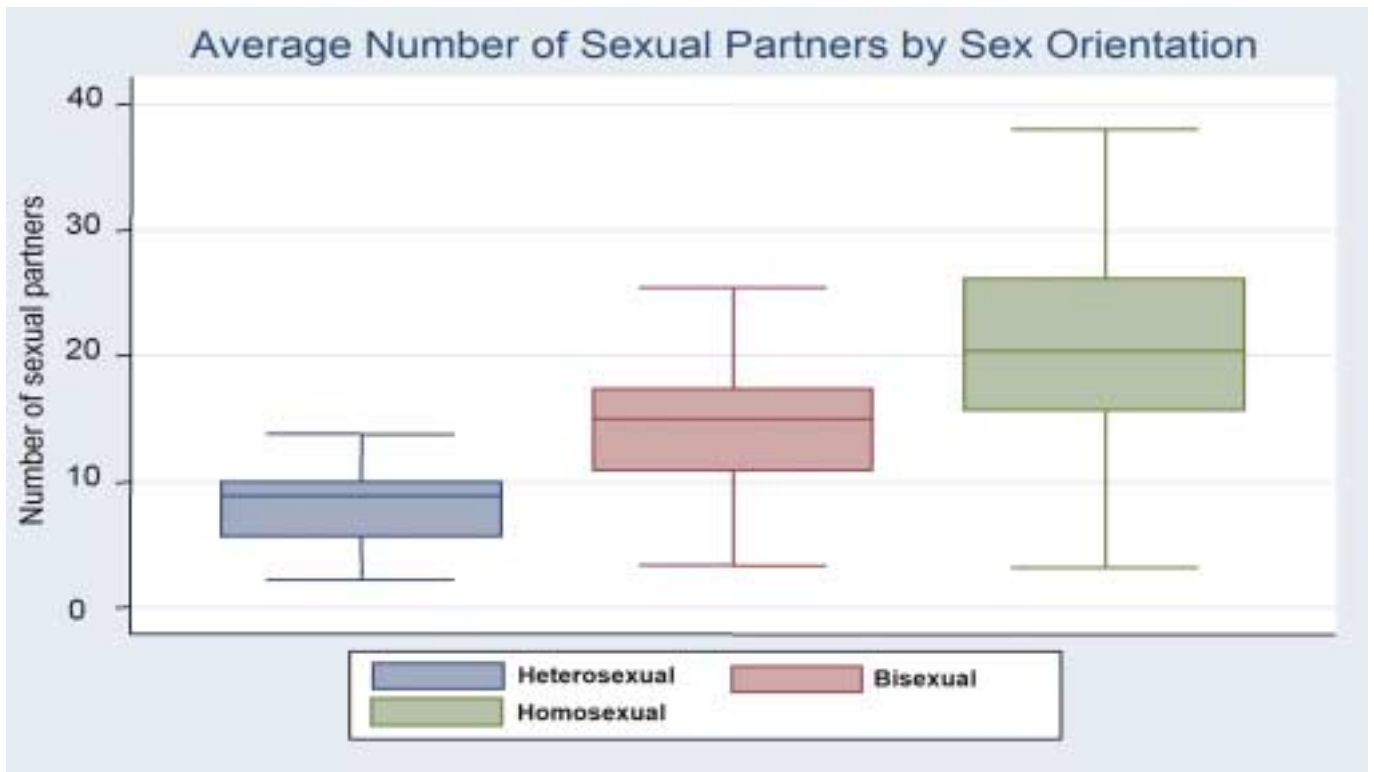
For example, a study among young women in the United States,[12] which showed that the "number of sexual partners (among young women) was low compared to homosexual men."

While in Northern Thailand,[13] a study among teenagers concluded that homosexual and bisexual "males had a significantly higher number of sexual partners than did heterosexual males."

In the case of gender, analysis of the Durex Global Sex Survey data also found that gender has an influence on the number of sexual partners, with males reporting to have had more sexual partners (10.2) than females (6.9) (Fig. 8).

Many other population characteristics, such as a history of sexual abuse, participating in particular sporting activities or smoking, are also likely to result in an increase in the number of sexual partners.

For example, a study conducted in Estonia[14] with 977 school children found that daily smokers are 140% more likely to have multiple sexual partners.

Differences were also found in a study among youth in the large cities of the South-western United States[15] with "adolescents reporting a history of sexual abuse being more likely to have had three or more sexual partners in the last three months."

Fig. 8

Average Number of Sexual Partners by Gender

Legend: Female, Male

Fig. 9

Average Number of Sexual Partners by Country Income
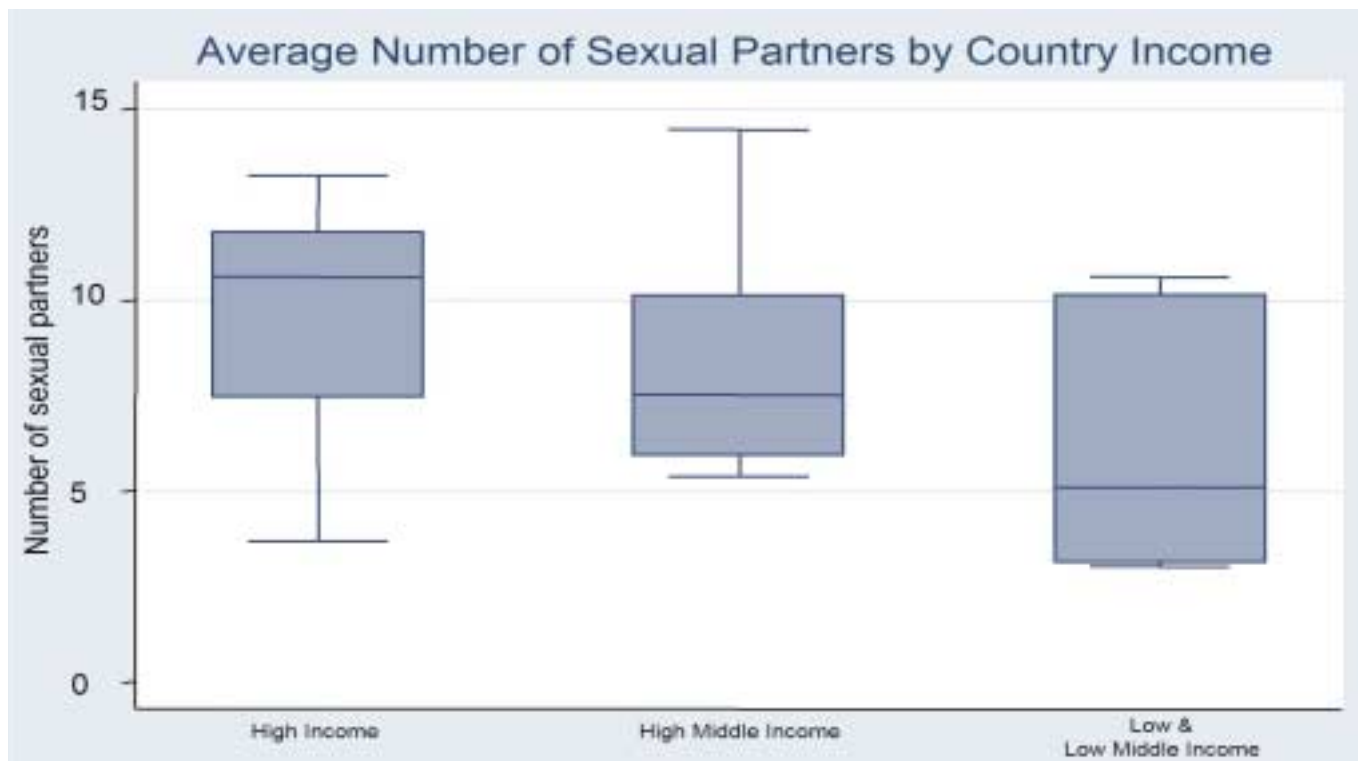
In the case of sporting activity, a study of student athletes[16] concluded that "both male and female students who compete in sports reported significantly higher numbers of sexual partners than other students."

Results of the Durex Global Sex Survey also found that the wealth of the country people lived in also appeared to have an impact on the number of sexual partners people were likely to report. As a rule, those living in high income countries have, on average, 3.4 more sexual partners than those living in low or low middle income countries.

However, as is demonstrated in Fig. 9, there are several exceptions to this rule where low and low middle income countries have similar or even higher averages of sexual partners when compared to countries in the other two income groups.

3

what these results indicate

The Durex Global Sex Survey provides a unique opportunity to analyse factors which influence people in making decisions about their sexual health.

To the best of our knowledge no survey into sexual health and well being has ever been carried out on such a scale before - presenting a fascinating global picture of the world we live in today.

From this analysis it is possible to draw several conclusions which could be used to influence how best to raise awareness of sexual health and promote the means to protect populations against the dangers of unprotected sex.

For example, when analysed independently, gender, sexuality and relationship status do not appear to have a direct influence on whether people have unprotected sex without knowing their partner's sexual history.

However, according to the analysis, the number of sexual partners people chose to have, where they live, their age, and age at first sex, all appear to have significant impacts on rates of unprotected sex.

4

how we can interpret these results

Common sense dictates that the ability to delay having sex will result in fewer sexually transmitted infections, including HIV/AIDS and unplanned pregnancies.

According to this research, for every year it is possible to delay the age of first sex, rates of unprotected sex reduce by 6.3%.

While delaying the age of sex will lead to a reduction in the rate of unprotected sex, evidence suggests that in reality the opposite is happening and people are beginning to have sex at an earlier age.

This in turn means that rather than adopting measures to delay people from having sex, more effective measures need to be introduced that will encourage people to take responsibility for their sexual health and use a reliable and safe method of contraception.

case study

Dance4Life

Dance4Life is an initiative embracing movement and dance to raise awareness of HIV/AIDS among young people.

As the youth brand of the World AIDS Campaign, its key aim is to involve young people all over the world in a broad range of initiatives such as dance events, talks and educational projects.

Every two years, on the Saturday before World AIDS Day (1 December) this activity culminates in a global event at which thousands of people dance non-stop for five hours completely dressed in white.

The Durex Network has been working with Dance4Life since 2004 when it donated 250,000 condoms as a global "thank you" to people who completed its Global Sex Survey. In 2005 this was increased to one million condoms and a formal commitment to actively support Dance4Life in its awareness raising activities.

Peter Roach, vice president of the Durex Network, said: "A key part of the Durex Network is working with like-minded organisations to raise awareness of the safer sex message.

"We are delighted one of our first partnerships has been established with Dance4Life."

Over the next few years, the Durex Network will focus on communicating the fact that condoms are the only effective means to protect against unplanned pregnancies and STIs, including HIV/AIDS, at Dance4Life events.

As well as supplying condoms it will also be providing access to sex education resources to educators, healthcare professionals and young people associated with Dance4Life.

The profile of Dance4Life activities will also be raised through media campaigns, awareness raising events, political lobbying and liaising with healthcare professionals, educators and opinion formers.

Wessel van Eeden, who manages communication and funding at Dance4Life, said: "We are delighted to be working in partnership with Durex.

"If we are ever going to make an impact in the fight against HIV/AIDS then it is vital we communicate the risks associated with unprotected sex and the need to protect yourself with a condom to as many young people as we can."

5

condom use: the most effective form of protective sex

Presently, condoms are the only method of contraception available that can protect against HIV/AIDS, other STIs and unplanned pregnancies.

Results of Adjusted Multiple Linear Regression suggest that once people become sexually active, encouraging condom use will have a positive impact on reducing levels of unprotected sex.

As indicated in Fig. 10, a 1% increase in the rate of condom use as the main method of contraception results in 0.21% decrease in the rate of unprotected sex.

6

the impact of sex education on encouraging people to use contraception

According to Stone[17] there are three factors associated with contraceptive use at the time of first sex for young men.

As well as having an intimate reason for having sex for the first time and having parents who portrayed sexuality positively during childhood and early teenage years, perhaps the most important was "discussing contraception beforehand."

Whether through sex education lessons with healthcare professionals or among peers, there have been many international studies that have demonstrated that prevention policies work, but when and how to target them is perhaps a more difficult question to answer.

Analysis of the Durex Global Sex Survey results reveal there are wide differences in the average age which people are receiving sex education throughout the world (Fig. 11).

On average, people living in low or low middle income countries, are a year older (14) than people living in upper middle income countries (13) and two years older than people living in high income countries (12) when they first receive sex education.

Notable differences to this rule are Singapore and Portugal - which both enjoy high-income status - but do not teach sex education until 14 years of age.

However, as already indicated, it is the higher income countries which - despite teaching sex education at an earlier age - are going on to report high levels of unprotected sex.

Using analysis of the Durex Global Sex Survey data it is therefore possible to conclude that prevention policies and programmes would perhaps be beneficial if prioritised according to age categories.

Fig. 10

Rate of Unprotected Sex vs. Rate of Condom Use
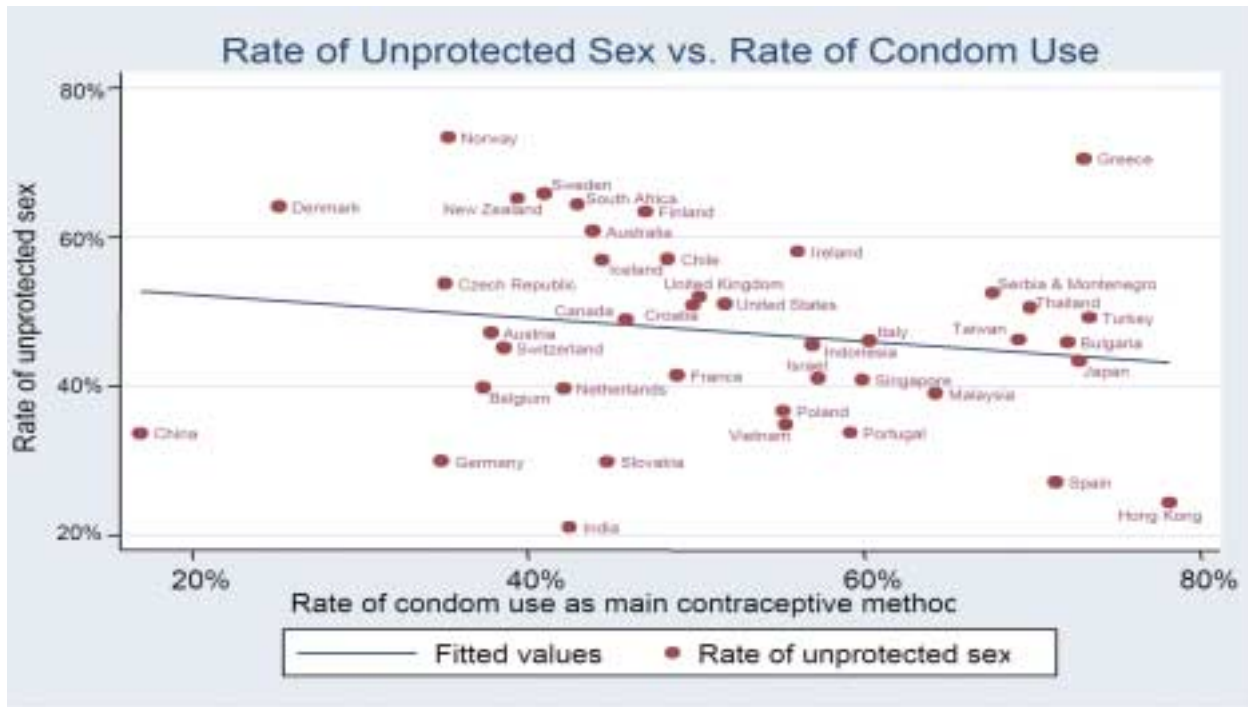
In addition to teaching sex and relationship education in the classroom this report provides evidence that safer sex messages may have more impact if they were repeated and re-emphasised to people once they have left the school environment. For example, in further education establishments, social clubs and the work place.

Evidence in this report also suggests that intervention programmes may have more chance of success if they take into consideration the factors which influence people in making the decision to have unprotected sex without knowing their partner's sexual history, such as number of sexual partners, where they live, their age, and age at first sex.

Examples of successful intervention programmes which take into consideration young people's attitudes, and social and cultural expectations, to see how they influence sexual behaviour, include Program H in Brazil and Yaari Dosti in India.

Evaluation of this style of preventative programme has revealed that questioning these norms can result in young people challenging their own unprotected sexual behaviour. (See case studies on Program H and Hora H).

Fig. 11
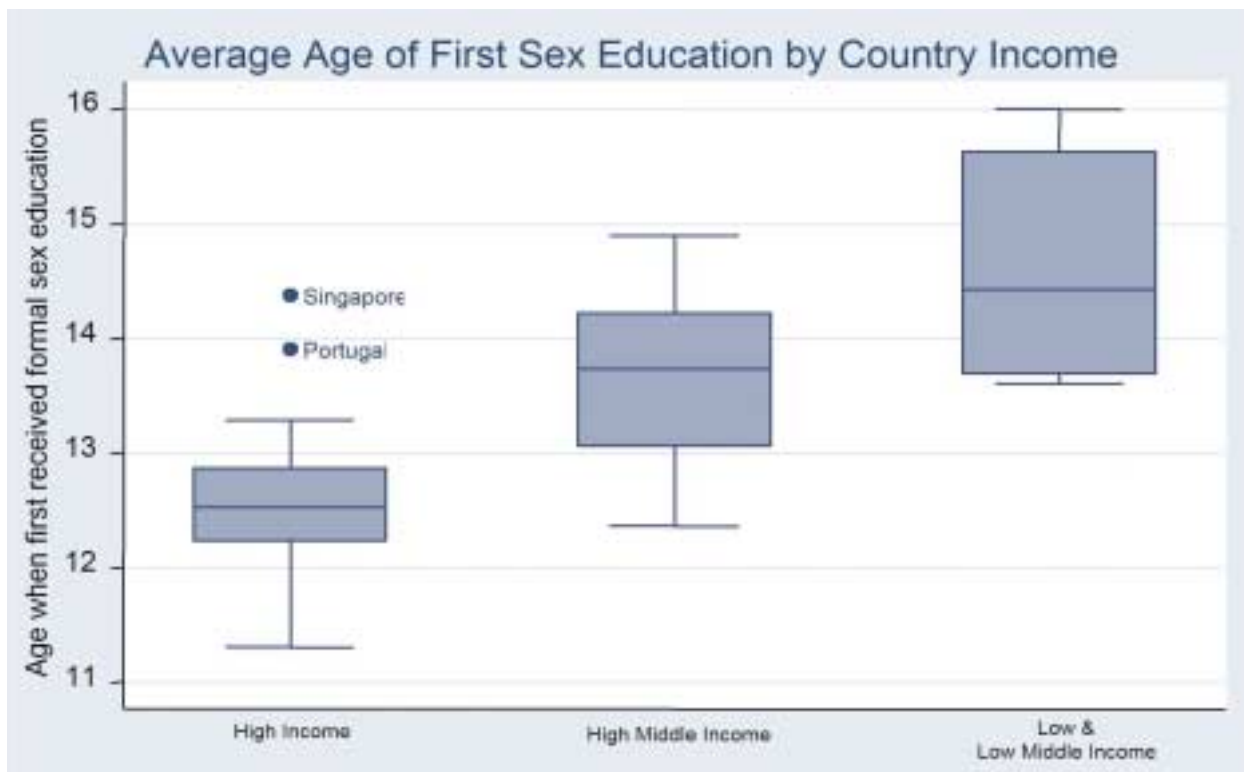
Average Age of First Sex Education by Country Income

15

❝ People who have a large number of sexual partners are not necessarily more likely to have unprotected sex.

Many factors play a role in whether an individual has safer sex or not. These complex social factors include access to information, knowledge of safer sex practices, health status, the nature of their sexual relationships, their ability to negotiate safer sex, particular attitudes, issues of self-esteem, and so on.

A large number of sexual partners may increase a person's risk of becoming infected with STIs, but this person might still engage in safer sex each and every time. ❞

Michael Mancelli & Olivier Ferlatte
HIV Prevention & Awareness Educators
AIDS Vancouver
Canada

❝ My personal opinion is that it is probably more likely - people who choose to have more sexual partners may be more likely to be risk takers and this could extend to taking a chance by having unsafe sex. There will be some who are ultra careful but we need to make sure that people are aware of the risks so that they can protect themselves and their partners. ❞

Sandra Gidley
Liberal Democrat Spokeswoman
UK

❝ I do believe that an increased number of partners could lead to a more lax personal policy about condom use. I feel it is natural for someone to be very worried about potential risks when they first begin engaging in sexual behaviour and be very careful about protecting themselves. However, as time goes on and they have escaped infection or other potential consequences, they may begin to feel a false sense of safety and be less stringent about using condoms. ❞

Anni Baker, Program Manager
Project Hope
Boston University Community Service Center
USA

❝ Experience in Germany has shown that people who have a large number of partners deal with the risks of STIs and HIV rather rationally. When having sex with an unknown partner, they use condoms more frequently than people who fall in love spontaneously.

Every single person is responsible for safer sex. Especially in sexual relationships it often needs strength to voice one's own needs and to abjure sex without a condom. ❞

Dr. Volker Mertens
Head of Public Relations
German AIDS Foundation

❝ This is one of the most difficult questions to answer. I believe that several factors influence the decision to use or not use condoms. I believe that persons with multiple partners do not always use condoms. We (humans) tend to measure risk and make decisions based on our knowledge of HIV/STIs, our self esteem and if the individual uses alcohol or drugs to engage in sexual encounters. These are the major factors to keep in consideration. Self esteem, knowledge of HIV/STIs and substance use. ❞

Carlos Chavez
Renz Addiction Center
Elgin, Illinois, USA

❝ Sexual practices we adopt and values which we associate with such behaviours are a result of a long-term process. I therefore believe that the answer here is relative, as someone who may have a high number of sexual partners, and therefore considered to be of a somewhat "liberal" attitude, may still very well feel impelled to protect him/herself each and every time. At the same time, a person who searches for a stable and exclusive relationship may find him/herself fall for another, to the extent that as a "proof" of this complete dedication, s/he will disregard the issue of protection. ❞

Lula Ramirez
Education Strategy Coordinator
Grupo CORSA - Advocacy for Homosexual Rights
Brazil

❝ My answer would have to be, yes. As a matter of fact, if the above was not the case, statistics relating numbers of sexual encounters and different pathologies (Papilloma, Chlamydia and other microorganisms, leukorrhea, uterus cancer, etc.) would not be prevalent. ❞

Enrique Oyarzun Ebensperger.
President of the Chilean Society of Gynaecology and Obstetrics
Chile

partners are more likely to have unprotected sex?

" I wouldn't agree with the statement that people who have multiple sexual partners are necessarily more likely to have unprotected sex. It is possible that somebody who is very sexually active uses protection every time, while another person who has few (or one) partners neglects it altogether. "

Alec Khachatrian
Director of Programs
Russian Federation
Transatlantic Partners Against AIDS

" Tendency to risk sexual behaviour increases with having a higher number of partners and getting older. The reason for that is: as often as we do some activity it seems to us more simple and safe. Numerous and unstabilised sexual contact reduces the sense of responsibility. "

GSS expert Science Medical Doctor Grzegorz Poludniewski
Poland

" In India, most people with multiple sexual partners have unprotected sex simply because they think they know their partners well. This is worrying and needs to be addressed. "

Mr Ashok Babu
Program Manager
AIDS Prevention and Control Project (APAC)
Tamil Nadu
India

" With all things it is impossible to generalise, everyone makes their own choices. Everything from religion to alcohol plays a part as does self esteem.

A person lacking in self esteem is more likely to go along with what someone else wants - they may wish to take precautions yet their partner prefers not to so they go along with the stronger partner's wishes. "

Sara Jones
Primary School Teacher
Dubai

" We need to consider where the sex takes place, for example, if it's in a person's home, back room, or with a prostitute. These factors are integral in deciding whether people are likely to have protected or unprotected sex. "

Roy Starkey
Client Service Worker
Positive Directions (St Luke's Nursing Service)
Australia

" Due to the HIV/AIDS pandemic there is a greater awareness and tendency to use condoms in South Africa, therefore, I would suggest that people who have many partners would use condoms. However, there is still a tendency to not use condoms due to cultural and sexual difficulties. "

Myrna Lewis
Director of Dharma Partners Consulting
(MA Clinical Psychology)
South Africa

" It's hard to generalise. Some will recognise that casual sex has an inherent risk and insist on condom use. Others - as some research indicates - including very sexually active young women from lower socio economic levels, will not consider themselves at risk, or are not in a position, because of coercion, alcohol or substance abuse to make an informed decision and insist on condom use. "

Gill Greer
Executive Director
Family Planning Association
New Zealand

8

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	Age when first received sex education	Age of first sex	Age formal sex education should start	% people having unprotected sex	Number of sexual partners	Frequency of sex
Global	13.2	17.4	11.7	47.4	9.0	103
Australia	12.5	16.8	11.5	61.8	13.3	108
Austria	11.9	16.5	11.4	47.2	9.7	105
Belgium	12.2	17.2	11.3	39.8	7.5	106
Bulgaria	13.7	16.9	11.9	46.0	9.1	127
Canada	12.4	17.0	11.1	48.9	10.7	108
Chile	12.9	17.2	10.7	57.0	10.1	112
China	15.1	18.2	11.8	33.6	3.1	96
Croatia	13.8	17.3	12.0	51.0	7.5	134
Czech Republic	13.7	17.2	11.4	53.7	9.0	120
Denmark	12.7	16.1	12.0	64.1	9.3	98
Finland	12.0	16.5	11.3	63.4	12.4	102
France	13.3	17.2	12.4	41.4	8.1	120
Germany	11.3	15.9	11.2	29.9	5.8	104
Greece	13.2	17.5	12.0	70.5	10.6	138
Hong Kong	13.3	18.6	11.0	24.4	3.7	78
Iceland	12.0	15.6	11.4	57.0	13.0	109
India	15.6	19.8	13.9	21.1	3.0	75
Indonesia	14.4	19.1	12.4	45.5	5.1	77
Ireland	13.1	17.3	11.3	58.0	11.1	97
Israel	12.4	16.7	11.8	41.1	10.6	100
Italy	12.8	18.0	11.6	46.1	11.8	106
Japan	12.5	17.1	11.5	43.1	10.2	45
Malaysia	14.9	19.0	12.4	39.0	5.8	83
Netherlands	11.9	16.6	11.2	39.7	7.0	115
New Zealand	12.6	16.5	11.6	65.2	13.2	114
Norway	12.4	16.5	11.6	73.4	12.1	98
Poland	13.1	17.7	12.2	36.6	6.0	115
Portugal	13.9	16.9	12.0	33.8	7.0	108
Serbia & Montenegro	13.6	17.7	11.8	53.0	10.1	128
Singapore	14.4	18.4	12.3	41.0	7.2	73
Slovakia	12.4	17.8	11.7	30.0	5.4	106
South Africa	13.3	17.6	11.0	64.5	12.5	109
Spain	12.9	17.4	11.4	27.1	6.1	105
Sweden	12.2	16.2	11.7	65.8	11.8	92
Switzerland	12.6	17.3	11.6	45.1	11.1	104
Taiwan	14.2	18.9	11.9	46.3	6.6	88
Thailand	14.4	18.0	12.1	51.0	10.6	97
Turkey	14.6	17.8	12.1	49.2	14.5	111
UK	12.5	16.6	11.1	52.0	9.8	118
United States	12.5	16.9	11.3	51.1	10.7	113
Vietnam	16.0	19.7	13.1	35.0	3.2	87

What is your main method of contraception?

	%	Australia	Austria	Belgium	Bulgaria	Canada	Chile	China	Croatia	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Iceland	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Netherlands	New Zealand	Norway	Poland	Portugal	Serbia & Montenegro	Singapore	Slovakia	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	UK	United States	Vietnam	Global
Condom	%	44	38	37	72	46	48	17	50	35	25	47	49	35	73	78	44	42	57	56	57	80	73	64	42	39	35	55	59	68	60	45	43	71	41	39	69	70	73	50	52	55	52
Contraceptive pill	%	31	39	43	8	27	31	7	21	44	61	32	35	44	6	5	27	2	2	27	24	17	2	4	40	35	36	22	26	4	4	32	27	17	28	37	2	8	6	29	22	6	22
Emergency hormonal contraception	%	0	0	0	1	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0	1	2	1	0	0	2	0
Natural method	%	3	1	0	13	2	3	7	9	5	0	1	1	1	9	3	3	4	6	1	1	9	1	8	0	2	1	2	2	8	7	5	2	1	2	1	9	5	5	1	3	7	4
Coil/IUD	%	1	3	3	0	2	4	7	1	2	1	4	2	1	0	1	3	1	4	1	0	1	0	1	2	2	2	1	1	1	1	0	3	1	4	4	2	0	2	2	1	3	2
Diaphragm	%	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
No method used	%	6	3	6	1	6	5	7	9	4	3	6	3	2	6	4	7	8	7	3	6	5	6	5	6	6	9	6	4	10	7	5	7	2	8	5	3	3	3	6	8	4	5
Trying to have a baby	%	1	1	2	1	1	1	7	2	2	1	2	2	1	1	0	2	8	2	1	0	1	1	1	1	1	2	1	1	3	2	1	1	1	1	1	1	1	1	1	1	2	2
Sterilisation	%	3	2	1	0	4	1	6	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	1	2	5	1	0	0	0	0	1	6	0	1	3	2	1	0	3	4	1
Contraceptive injection	%	2	2	0	0	2	1	7	0	1	0	0	0	0	0	1	2	0	2	2	0	0	0	0	0	3	2	0	0	0	0	0	3	0	1	0	0	0	1	2	1	0	1
Abstinence	%	1	0	1	1	2	1	7	0	0	1	1	1	0	1	1	0	1	1	1	1	0	1	1	1	1	0	1	1	1	1	0	2	1	2	0	1	1	0	2	1	1	1
Other	%	2	5	2	0	1	1	7	1	1	1	3	1	2	1	1	1	5	1	1	1	1	1	2	1	3	1	0	0	1	2	2	2	4	4	0	1	1	1	2	2	2	2
Not currently having sex	%	6	6	6	3	7	4	7	7	6	7	4	6	13	4	6	10	28	17	7	10	5	15	13	5	5	8	9	6	6	16	8	4	5	8	5	11	7	6	5	6	17	8

Which of the following should your Government be investing in?

	%	Australia	Austria	Belgium	Bulgaria	Canada	Chile	China	Croatia	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Iceland	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Netherlands	New Zealand	Norway	Poland	Portugal	Serbia & Montenegro	Singapore	Slovakia	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	UK	United States	Vietnam	Global
Sex education in schools	%	30	24	15	49	29	48	16	46	33	17	32	15	22	56	50	23	47	38	29	23	32	27	52	21	29	16	34	47	53	36	41	35	26	18	23	42	53	57	32	27	69	34
Educational initiatives	%	8	8	7	6	5	9	10	10	6	4	5	5	6	3	15	4	9	8	6	6	6	7	7	8	8	5	6	8	7	8	8	5	5	9	6	21	7	7	6	6	6	7
Free contraception	%	24	22	39	7	23	11	10	21	16	25	30	38	17	8	12	48	4	9	33	21	22	14	7	39	40	34	31	15	14	12	16	9	26	29	18	11	7	12	24	23	2	20
Advertising campaigns	%	2	5	6	5	3	5	10	11	2	4	3	1	1	4	5	3	6	4	3	4	5	4	4	8	2	2	5	3	8	3	3	2	1	3	2	1	4	4	3	1	2	4
STI/HIV prevention programmes in developing countries	%	9	11	7	7	11	17	9	2	5	11	11	11	13	4	2	5	11	9	9	11	8	9	8	7	4	11	2	5	3	5	6	14	10	18	19	5	6	4	9	6	9	8
Researching into a vaccine for HIV/AIDS	%	8	13	13	11	9	3	10	3	18	14	7	21	16	9	7	4	6	3	6	12	14	13	4	9	4	14	11	5	6	8	10	9	15	8	12	7	7	4	7	10	3	9
Researching into a cure for HIV/AIDS	%	15	14	10	12	15	5	9	4	14	20	5	6	21	14	6	9	11	4	10	18	10	17	7	8	8	14	7	15	6	15	11	16	14	12	15	7	8	5	15	19	2	11
Awareness of abstinence before marriage programmes	%	1	1	0	1	3	1	9	1	1	1	2	1	1	1	1	2	22	2	1	1	1	7	1	3	1	1	1	0	7	2	8	0	1	2	1	6	4	2	5	5		3
None of the above	%	2	1	2	1	2	0	9	1	2	3	4	1	1	0	1	2	1	1	2	1	2	2	1	2	2	2	0	0	5	1	0	1	1	1	1	2	2	1	1	2		2
I'm not concerned about these issues	%	1	1	1	1	1	1	9	1	1	1	1	1	1	2	1	1	1	2	3	1	2	1	6	2	1	0	1	1	1	1	1	2	2	0	1	2	4	2	1	1	2	2

Thinking in terms of sexual health, what do you think developing countries need the most?

	%	Australia	Austria	Belgium	Bulgaria	Canada	Chile	China	Croatia	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Iceland	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Netherlands	New Zealand	Norway	Poland	Portugal	Serbia & Montenegro	Singapore	Slovakia	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	UK	United States	Vietnam	Global
Money to support sex education	%	32	33	23	44	29	62	16	55	39	31	31	18	32	48	36	34	25	4	30	30	31	26	31	25	31	44	29	27	54	27	34	25	24	39	41	36	45	52	26	28	59	34
Greater access to condoms	%	21	35	32	11	20	12	17	9	26	32	24	32	35	9	22	38	9	8	25	25	24	30	11	39	25	25	37	24	17	15	17	7	31	23	30	33	19	14	25	23	13	23
Greater access to drugs/vaccines for people with HIV/AIDS	%	16	9	17	11	16	12	14	8	17	14	7	25	12	20	12	11	12	34	19	14	21	16	11	16	13	12	17	11	10	12	11	20	20	14	9	10	6	5	19	15	6	14
Money towards the care of people with HIV/AIDS	%	6	3	6	14	6	4	13	9	7	12	8	5	8	12	4	4	7	2	4	19	7	11	7	3	4	5	6	6	6	7	8	7	4	5	3	1	3	4	6	6	2	6
Help to encourage women to stand up for their rights	%	12	14	15	5	14	2	13	5	5	8	19	8	8	3	6	10	13	5	8	5	10	9	10	13	9	8	4	3	6	11	7	14	6	14	10	3	2	3	7	9	4	8
Family planning	%	11	5	6	14	11	7	14	12	4	2	9	11	4	6	18	1	23	9	12	6	6	6	20	3	16	4	5	28	6	17	19	18	15	3	5	14	18	19	15	13	8	11
Help to encourage people to abstain from sex until they are married	%	2	1	1	1	4	1	13	2	2	1	2	1	1	1	2	2	11	39	2	1	2	2	1	1	1	1	2	2	1	1	4	9	0	2	2	3	7	3	2	6	9	4

Which of the following do you think will best help raise awareness of safer sex?

	%	Australia	Austria	Belgium	Bulgaria	Canada	Chile	China	Croatia	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Iceland	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Netherlands	New Zealand	Norway	Poland	Portugal	Serbia & Montenegro	Singapore	Slovakia	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	UK	United States	Vietnam	Global
A sexual health awareness day	%	13	6	7	6	11	7	19	5	7	11	9	8	8	5	20	7	13	6	10	15	7	20	13	9	12	15	12	11	5	11	3	8	5	12	4	6	4	11	12	9	11	9
Posters highlighting the importance of safer sex	%	5	12	13	13	5	26	19	14	16	10	8	10	9	8	10	6	18	15	7	13	4	13	6	9	4	7	11	7	9	9	12	4	2	7	11	11	4	11	8	3	9	10
Free condoms in areas with a high rate of STIs and/or unplanned pregnancies	%	31	41	31	24	31	23	21	33	37	33	31	58	47	21	15	51	15	25	35	31	44	30	18	37	36	32	36	34	30	25	33	15	48	37	43	30	21	19	32	34	29	32
Encourage governments to discuss safer sex issues	%	17	14	20	17	17	9	20	13	12	14	11	9	11	12	27	15	16	12	16	12	17	12	22	15	12	16	22	35	23	13	19	20	14	17	25	19	28	16	19	16		17
Teaching materials for schools and healthcare professionals	%	31	22	26	35	32	34	20	32	27	37	12	18	52	24	18	36	34	39	23	25	13	36	22	29	31	21	23	18	28	35	49	23	27	20	21	48	26	30	29	31		28
None of the above	%	3	5	3	5	4	1	1	3	7	5	4	3	7	2	4	3	2	8	2	6	3	12	3	3	4	3	4	3	4	4	5	2	3	5	7	4	5	2	6	4		4

Please indicate whether you think young people should be encouraged:

	%	Australia	Austria	Belgium	Bulgaria	Canada	Chile	China	Croatia	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Iceland	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Netherlands	New Zealand	Norway	Poland	Portugal	Serbia & Montenegro	Singapore	Slovakia	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	UK	United States	Vietnam	Global
To abstain from sex until they are married	%	5	1	1	1	9	3	23	1	1	1	4	2	2	1	10	2	49	54	4	2	2	7	20	2	5	3	6	2	1	24	3	21	1	2	3	4	20	9	6	14	15	8
To practise safer sex	%	71	77	79	80	71	87	32	74	83	73	76	91	69	78	56	79	41	38	71	88	82	60	65	92	70	80	79	86	80	61	85	66	83	74	82	80	69	79	92	71	68	74
To have regular health check-ups	%	23	20	19	19	18	9	23	24	14	25	18	6	26	20	24	17	8	6	24	8	14	24	14	4	24	16	13	11	18	14	11	12	15	22	13	15	8	10	1	14	16	16
None of the above	%	1	2	1	0	2	1	22	1	2	1	2	1	3	1	10	2	2	2	1	2	2	9	1	2	1	1	2	1	1	1	1	2	2	2	3	2	1	1	1	2		

9

research and statistical methods

brief history

The Durex Global Sex Survey (DGSS) was created by SSL International in 1996 as part of an international corporate responsibility effort to better understand the various patterns of sexual behaviour in 15 countries. In 2005, the survey was carried out in 41 countries. The DGSS includes more than 30 questions about sexuality profiles, interests, beliefs, and behaviours. In addition, in each individual country, a minimum of 1,000 respondents is required to ensure a proper sample size of responses. Consequently, the minimum accepted deviance from the true proportion/mean in each country is established at 3.4%.

overview of statistical methods

Based on the results of the survey, DGSS reports introduce two different types of statistical information. First, they offer ranking tables of responses for key sexuality indicators from all countries included in the study - from highest to lowest. Furthermore, in-depth statistical analyses, such as unadjusted and adjusted Multiple Linear Regression (MLR), check-of-fit, t-test of differences of means and proportions, variance analyses, test for normality of studentised residuals, prediction of 95% Confidence Intervals, among others, provide statistical evidence on the main issue discussed in this report.

For the purposes of this report, DGSS statistical experts used two types of analytical parameters for its subsequent in-depth statistical analyses of aggregate primary data: population segmentation and country groups. Population segmentation was based on four key variables: 1) gender; 2) relationship status (2 categories); 3) sexual orientation (3 categories), and 4) age groups (6 categories). In the case of country groups, the DGSS uses the World Bank[1] classification of country groups based on three income levels: a) High Income (25 countries), b) Upper Middle Income (9 countries), and c) Low and Low Middle Income (7 countries).

thematic analysis (the challenges of unprotected sex)

For the DGSS 2005, the main dependent variable used for regression and other statistical analyses was unprotected sex. The survey questionnaire included the following question "Have you ever had unprotected sex with a sexual partner without knowing his/her sexual history?" Response categories were yes, no, and I'm a virgin. All "yes" responses were added to identify the proportion of individuals with a history of unprotected sex for each country.

Based on different aggregate rates of unprotected sex for all countries, DGSS experts performed statistical t-tests of differences in rates based on the various population segmentation profiles indicated above. Some of these differences are presented in the main body of the report, including the data displayed in box plot graphic format.

Moreover, a DGSS 2005 MLR model shows the results of the different unadjusted and adjusted associations between the main variable of this report "unprotected sex" and five independent variables: a) rate of condom use as the main contraception method; b) average number of sexual partners;

c) average frequency of sex per year; d) average age when received first sexual education; and e) average age when lost virginity. Based on this model, DGSS experts performed different checks of fit and analyses of residuals of the dataset, which are discussed in the next section.

Finally, DGSS experts performed final regression of differences for each individual dependent and independent variable included in the MLR model and three country groups. The main goal of these regressions was to identify any statistical differences between rates and averages among the three country groups and define the specific values of these differences and their respective 95% Confidence Intervals.

overall quality of information collected

As indicated above, different checks of fit and analyses of residuals for the final regression model of the DGSS 2005 also provided the opportunity to verify the robustness of the data. One important analysis was the Kernel Density Estimate compared with normal density. The main purpose of this analysis is to demonstrate whether the dataset used for the final regression model is parametric. The final estimate resulted in a p-value of 0.45824. This confirmed that the overall dataset of aggregate results included in the final regression model of the DGSS 2005 is parametric (fit normal curve). To better illustrate this positive association, Fig. 12 compares the Kernel density estimate curve for the final regression model and a normal density curve.

Furthermore, DGSS experts calculated the specific margin of error from the true proportion of unprotected sex based on the 41 countries included in the final statistical analysis. Therefore, based on the number of countries included in the final reporting of results (41) and a Confidence Interval of 95%, a one population/proportion formula was used to identify the margin of error of the survey at the global level. The results of these calculations show that the DGSS proportion results have a 15% margin of error (higher or lower) from the true proportion.

(1) Retrieved from http://www.worldbank.org/data/countryclass/classgroups.htm on September 12, 2005. For the purpose of this report, DGSS experts combined low income and low middle income country groups.

Fig. 12

KERNEL DENSITY ESTIMATE

Kernel density estimate
Normal density
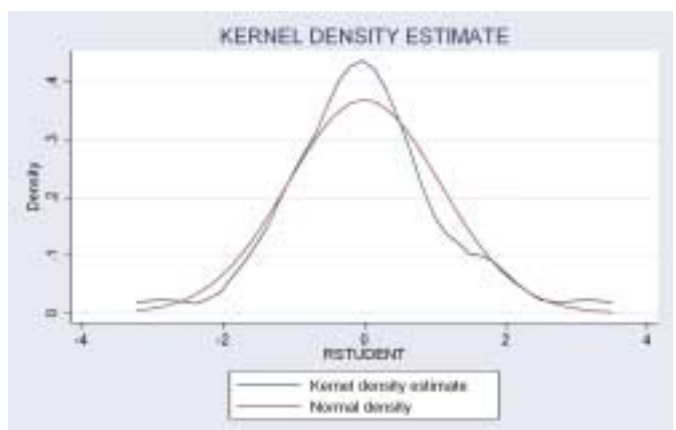
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