

ADOLESCENT SEXUAL HEALTH

Adolescent sexual health in Sweden

K Edgardh

Sex Transm Infect 2002;**78**:352–356

In Sweden, society's attitudes towards teenage sexual relationships are liberal, and sexual and reproductive health issues are given high priority. Family and sex education has been taught in schools since the 1950s. The age of sexual consent is 15 years. Since 1975, abortion has been free on demand. Contraceptive counselling is free, easily available at family planning and youth health clinics. Screening for genital chlamydial infection is performed at these clinics, thus providing a "one stop shop" service. Condoms and oral contraception are available at low cost, emergency contraception is sold over the counter. Teenage childbearing is uncommon. However, sexual and reproductive health problems are on the increase among young people. During the 1990s, a period of economic stagnation in Sweden, schools have suffered budget cut backs. Sex education is taught less. Social segregation, school non-attendance, smoking, and drug use have increased. Teenage abortion rates have gone up, from 17/1000 in 1995 to 22.5/1000 in 2001. Genital chlamydial infections have increased from 14 000 cases in 1994 to 22 263 cases in 2001, 60% occurring among young people, and with the steepest increase among teenagers. Thus, a question of major concern is whether and how adolescent sexual behaviour has shifted towards more risky practices during the late 1990s.

and health services on equal conditions for the whole population is given high priority, and health insurance coverage is universal. Schools are principally run by municipalities, and tuition and books are free. More than one fourth of adult Swedes have a higher education—that is, past high school level.

Adolescents comprise approximately one million subjects. Approximately 70% of 13–17 year olds live with both their natural parents, and about 20% of all adolescents have an immigrant background. Social segregation between young people from high income and low income residential areas has unfortunately become a reality during the past 20 years.

Attending school is the main occupation of adolescents. The 9 year compulsory basic school is followed by high school, and all pupils who have finished their 9 years of basic schooling are expected to attend.² The number of teenagers not enrolled in high school standard programmes increased during the 1990s, a period of economic stagnation in Sweden. In certain multicultural parts of the major cities, approximately 25% of all youths finishing compulsory school don't continue on national programmes in high school. School leavers without further education may have difficulty finding a steady job, as unemployment is a problem among the young. National data are collected annually on drug use, and a substantial increase in the use of tobacco, alcohol, and illicit drugs has been noticed during the 1990s.³ Today, 10% of the pupils in the final grade in school have tried one or more illicit drugs.

Relationship and sexual education has been part of the national curriculum in school in Sweden since 1956. Tuition includes information on contraception, STDs, and HIV. Unfortunately, it is taught less these days in many schools, especially in multiethnic school settings.⁴

The annual number of births in the 1990s has varied between 90 000 and 120 000.⁵ The birth rate has declined from 2.1 per woman in 1991 to 1.5 in 1999. This decline is related to the period of economic stagnation: the fertility rate is lowest among women and families with a low income.

Sexual and reproductive health and rights issues (SRHR) were at the top of the agenda at the UN population conferences during the 1990s. These rights are part of the Health for All programmes, with young people as a target group, and they are adopted by Swedish authorities. Reproductive health issues include availability of contraceptives, contraceptive counselling, safe abortion, and STD treatment and prevention. The protection against sexual exploitation and abuse of the young are part of the sexual rights issues, along with defence of the right to develop one's sexuality at an individual pace.

The aim of this paper is to give an overview of adolescent sexual health and rights issues in Sweden, together with an update on Swedish research in the field.

SWEDEN IN BRIEF

Sweden has a population of 8.9 million people, concentrated in the south part of the country and around the major three cities—Stockholm, Göteborg, and Malmö.¹ Public responsibility for social

ADOLESCENT SEXUALITY IN SWEDEN

An impressive number of studies on adolescent sexuality has been conducted in Sweden, and a review that summarised the research up to year 1999 has been published by Forsberg on behalf of the National Institute of Public Health.⁶ An extensive report on teenage sexual and reproductive behaviour in Sweden was published by Danielsson *et al* for the Alan Guttmacher Institute in New York in 2001.⁷ These two reports cover the field of adolescent sexuality, reproductive health

Correspondence to: Department of Venhälsan, Karolinska Institute, Söder Hospital, Stockholm, Sweden, and Center for STD and HIV/Olafskliniken, Ullevål University Hospital, Grensen 5-7, 0159 Oslo, Norway; karin.edgardh@ullevaal.no

Accepted for publication 19 July 2002

issues, and society's interventions and legislation in Sweden. The following highlights some selected issues.

Gender issues

Girls are the earlier sexually/coitally experienced sex in Sweden. This was first recognised by Lewin in the early 1980s, when experience of intercourse was reported by 31% of the boys and 47% of the girls among 16 year old high school students in one of the major cities in Sweden.⁸ Traditionally, boys had gained coital experience at an earlier age than girls according to a national sex survey among adults carried out in 1969.⁹ The research team, Helmius and Lewin later described adolescent sex in terms of sexual socialisation, and young people acting out traditional sexual "scripts." According to them, the valid heterosexual script in the Nordic countries includes being in love as a prerequisite for having sex with a partner.^{10,11} When you are in love, sex is permitted—if you feel "mature enough," a concept that has been generally adopted in Sweden.

However, a shift may have occurred or be on its way. In 1999, a questionnaire study was performed among 272 17 year olds in a low income multicultural high school setting in suburban Stockholm.¹² The response rate for students was 76%. With no gender difference, 55% had experienced vaginal intercourse. Neither being in love, nor having a steady partner, was a prerequisite for having sex. No differences were found with regard to immigrant background. Drug use, multiple partners, and casual sex were reported with no gender difference. Whether or not the results are representative for other parts of the major cities, and for less multiculturally mixed settings, is an issue for further investigation. However, a trend of sex convergence and "sex for the fun of it" may exist. The scripts may have changed, as has society.

The KAB gap

In the early 1980s, genital chlamydial infection was recognised as a major adolescent health problem, and screening programmes were launched at the youth health clinics. In the late 1980s—that is, in the early era of HIV, the concept of "safer sex" was introduced. Condom use was advocated, HIV testing facilities provided also for the very young. Thus, adolescent "sexual beginners" were supposed not only to use contraceptives, but to minimise their risks for sexually transmitted infections. How did they cope?

A survey published in 1992 by Jarlbro and Persson illustrated the KAB gap—the difference between the good Knowledge and Attitudes among the respondents, and their sometimes risky Behaviour.¹³ The questionnaire based survey was performed at 74 of the 99 youth health clinics available in Sweden at that time. Knowledge and experience of STDs were specifically investigated. The response rate was 90%, 9277 youth clinic visitors participated, with a mean age of 17.5 years, and 93% of the respondents were sexually active girls. Pregnancy was reported by 9%, and STDs (mostly chlamydia) by 17% of the participants. The respondents' knowledge of contraception and STDs was satisfactory, and the girls could often manage contraception by use of the pill. However, consistent condom use for the protection of STD was more complicated, and seldom put into practice—"it cannot happen to me." This KAB gap has later been addressed by several researchers—for example, Andersson-Ellström and Tydén.^{14,15} Along with the knowledge that early smoking and use of alcohol coincide with early age at first intercourse, it is acknowledged among professionals working with adolescents in Sweden.

Contraceptive use at first and at most recent intercourse was also investigated by Jarlbro and Persson. The "mean" reported percentage was approximately a 60% use at first and 70% at most recent intercourse. This is in accordance with other and later studies on contraceptive practice in Sweden,

where contraceptive pills are widely used.¹⁶ A condom was most commonly used at the coital debut, and oral contraceptives at the most recent intercourse. The methods were seldom combined. Age at coitarche was lower among respondents with a shorter education, and school non-attenders were identified as a group at risk for pregnancy and STDs.

ADOLESCENT MEDICINE, RISK TAKING BEHAVIOUR, AND THE SAM 73–90 SURVEY

An important approach to the research on adolescent sexuality was initiated by experts in adolescent medicine in the 1980s, a field promoted by Berg-Kelly and colleagues.^{17,18} Berg-Kelly introduced concepts from adolescent psychology such as "risk taking" and "social age," and familiarised Swedish investigators with research from the United States. Sexual risk taking was addressed in a general adolescent health perspective, without a moral stigmatisation of young sexuality, and risk factors as well as protective factors for adolescent health were identified. The impact of community intervention on adolescent health behaviour was described.¹⁹

The adolescent medical approach was used in the only national survey on adolescent sexuality performed in Sweden, the SAM 73–90 survey.^{20,21} The questionnaire study was conducted in 1990 among 1943 high school students and 210 school dropouts born in 1973. Response rate was 92% for the students and 44% for the school non-attenders. A heterosexual orientation was reported by more than 95%, and heterosexual coital experience was reported by 54% of the student boys and 64% of the student girls. Early starters, with their first intercourse before age 15, comprised 16% of both sexes. Factors associated with coital experience were early puberty, high perceived social age, not living with both parents, vocational study programme or school non-attendance, and risk taking behaviour with regard to smoking, alcohol, and use of illicit drugs. Non-coital sexual experience included cunnilingus and fellatio, experienced also as practices preceding coitarche. Both sexes picked positive alternatives, expressing both intimacy and excitement, to describe the emotional qualities of their sexual experience. No differences were found with regard to ethnic background.

STD was reported by 5% of the coitally experienced boys and 9% of the girls. Induced abortion was reported by 7% of the girls. Boys with an early start reported a high number of partners, and were thus at risk for STD.²² Early starting girls were, compared to later starters, at increased risk for unwanted pregnancy and sexually transmitted infections. Among them, STD and pregnancy was reported by 15% and 14%, respectively.²³ Sexual abuse was alleged more often by early starting girls, but not boys.

Connections with family and school are recognised as protective factors for adolescent health and wellbeing. As could be expected, school dropouts reported lower family stability than the students, together with a higher incidence of health hazardous risk taking and suicidal ideation. Early sexual experience and unwanted consequences of sex were reported more frequently than by students: among female school dropouts, STD was reported by 19% and induced abortion by 14%.²³ Five girls were mothers.

No follow up survey has been performed in Sweden, in spite of increasing rates of school non-attendance, drug use, abortions, and chlamydial infections during the late 1990s. However, the national programme for the prevention of STD and HIV for the years 2000–2005 focus on young people, and explicitly so on youngsters not enrolled on the national schooling programmes.²⁴ Hopefully, an initiative to start longitudinal surveys among teenagers will be taken by the national institute of public health.

Homosexuality

During the late 1980s, the main sexual health concern was fear of HIV becoming epidemic among young people in Sweden. Generous resources were allocated to information targeting the young, and information on sexual orientation and homosexuality was part of the campaigns. The media responded with an increasing interest in depicting these issues in TV shows and films, and today, gay pride parades colour the city life in Stockholm. In 1994 the parliament passed the law on registered partnership. According to a national survey on HIV related issues, repeatedly performed during the period 1987–97, the acceptance of homosexual relationships has increased steeply during this period of time.²⁵ More young people admit to a same sex sexual attraction today than 15 years ago, experiment with same sex relationships, and “come out” as homosexuals or bisexuals.⁶ Fortunately, no outbreaks of HIV or syphilis have occurred among very young homosexual men.²⁶ In Norway, a coming out process in adolescence is related to an increased risk for suicidal attempts, but this has not been investigated in Sweden.²⁷

TEENAGE PREGNANCY, ABORTION, AND CONTRACEPTION

Abortion became free on request in Sweden in 1975, and induced abortion is statutorily notifiable to the Swedish board of health. Parental consent is not mandatory for a teenage girl requesting an abortion. The liberation was combined with an expansion of the family planning programme with teenage girls as a target group, and easy access to cheap oral contraception. Today, a network of youth health clinics and family planning centres, run by midwives, gynaecologists and social health workers, provide contraceptive counselling and chlamydia screening.

From 1975 until 1985, the teenage abortion rate decreased from 30/1000 to 18/1000.^{5,7} The decrease was accompanied by a decrease in teenage childbearing, thus indicating an overall decline in teenage pregnancies. Since 1975, most induced abortions are performed early in pregnancy, with few exceptions before the 12th week of gestation. During the past 20 years, approximately 70% of all teenage pregnancies have been terminated by an abortion; and approximately 90% among 15–16 year old girls.

Over the years, the teenage abortion rate has fluctuated. An increase occurred in the late 1980s. A changing pattern of contraceptive use was discussed as a contributing factor,—for example, less use of oral contraceptives due to fear of adverse effects. Since then, subsidies for oral contraceptives have emerged, and emergency hormonal contraception has become easily available.²⁸ In spite of this, teenage abortion rates are increasing, from 17/1000 in 1995 to 22.5/1000 in 2001. A total of 5665 abortions were performed among teenage girls in 2001.

Teenage childbearing is uncommon in Sweden, and despite a safe medical and social security system, teenage mothers face an increased risk of a less favourable social situation and also premature mortality.²⁹ They have been shown to be exposed to a more violent environment—violent men—than older childbearers. A large proportion of fathers to children born to teenage mothers are involved in serious crime.

SEXUALLY TRANSMITTED INFECTIONS

HIV, chlamydia, and gonorrhoea belong to the notifiable STDs in Sweden, and are registered by the Swedish institute for infectious diseases.

Genital chlamydial infection is the most prevalent bacterial STD in Sweden, and young age is the major identifiable risk factor.³⁰ Chlamydia became notifiable in 1988, when 38 000 cases were reported. Screening programmes targeting the young were introduced early, and treatment and partner notification have contributed to a reduction of the incidence of

infection. In 1994, 14 000 cases were reported. Consequently, the serious sequelae of chlamydia have decreased: salpingitis first, ectopic pregnancy later, as reported by Kamwendo.³¹

Unfortunately, the positive trend no longer prevails. In 1998, 15 198 cases of genital chlamydial infections were reported, among a total of approximately 320 000 samples taken. The increase continues, and 16 711 cases were reported in 1999, 19 284 in 2000, and 22 263 in 2001²⁶; 40% of the cases occur among 20–25 years old, and 20% among teenagers. The steepest increase occurs among teenagers, with an increase of 20–28% during the past 3 years, to compare with an increase of 14–20% among 20–25 years old. The number of samples taken is stable, and the increase is not related to new diagnostic methods, as the highly sensitive nucleic acid amplification techniques have been in use for many years. Thus, it is real.

While HIV is rarely reported among adolescents in Sweden, other viral STDs are frequently seen. There is no national reporting system for clinical infections with human papillomavirus (HPV) and herpes simplex virus (HSV). However, among pregnant women in a long term survey of the seroprevalence of HPV16 and HSV-2 in Stockholm, 21% were seropositive to HPV16 and 33% to HSV-2.³² There are increasing numbers of genital infections caused by HSV-1 being reported, possibly transmitted through oral sex. HSV-1 was more frequent than HSV-2 in young women with a primary genital infection, according to Löwhagen and co-workers in a recent study from Göteborg.³³

Gonorrhoea is a rare infection in Sweden.²⁶ A mere 211 cases were reported in 1996, but the incidence has risen from 348 cases in 1998 to 588 in 2000. This recent increase was unexpected, and partly due to a spread among teenagers in Stockholm—that is, in a much younger age group than usually affected with gonorrhoea.

According to the major sales organisation, 25 million condoms were sold in 1987, and 17 millions in 1998.³⁴ This includes condoms distributed to youth health clinics. In view of the changing epidemiological situation, with chlamydia and gonorrhoea increasing, and HPV and HSV infections spreading, the decrease in sales of condoms is worrying, and may be an indication of less safe sexual behaviour. However, a slight increase has later been reported.

With this background of increasing abortions and STIs, a question of major concern is whether and how adolescent sexual behaviour has shifted towards more risky practices during the last decade. A generalised increased risk taking is possible, in accordance with the reported increased smoking, and use of alcohol and other drugs.

CHILD AND ADOLESCENT SEXUAL RIGHTS ISSUES

Child sexual abuse has long been an issue of major concern in Sweden, and an extensive overview of the field is available in English over the internet, provided by the Swedish board of health and welfare.³⁵ Telephone help lines in Sweden receive an increasing number of calls from children and teenagers concerning sexual abuse. In the SAM 73–90 survey, child sexual abuse was reported by 11% of female and 3% of male students, and by 28% of female and 4% of male school non-attenders.³⁶ Alcohol and drug abuse, and suicidal ideation and attempts, were reported significantly more often by abused youths of both sexes. Girls reporting abuse were over-represented among the early starters of coital activity. Few adolescents had told anybody “professional” about the abuse. Revictimisation during adolescence is a recognised phenomenon.

Sexual coercion, peer abuse, and rape have recently been given extensive coverage in the Swedish mass media, as has the potential negative impact of easily available pornography. Little research has been published on these issues in Sweden, but the field is well covered by Forsberg.⁶ A national sex survey from 1996 reported that 12% of adult Swedish women had

Key messages

- (1) Despite the Swedish tradition of a liberal and supportive approach towards adolescent sexual relations, and a network of youth health clinics, teenage abortion rates, and chlamydial infections are rising steeply in Sweden.
- (2) During a period of economic stagnation in the 1990s, schools suffered budget cut backs, sex education has been taught less, and the group of school non-attenders has increased. Health hazardous risk taking has become more common, with increased smoking and use of alcohol and illicit drugs, indicating a shift towards more risky sexual behaviour as well.
- (3) Young attitudes towards sex may be changing, from the "love script" into a "sex for fun" script.
- (4) National longitudinal surveys are required to follow the shifts in sexual knowledge, attitudes, and behaviour among teenagers, with special focus on school dropouts.

been forced into sex, most of them when in their upper teens.³⁷ However, no official age specific statistics are available on the number of rape cases after age 15, the age of legal consent. In the study performed in 1999 in a low income suburb to Stockholm, 2.2% of the boys and 13.0% of the girls reported sexual abuse, and peer sexual abuse was reported by a total of 3.1% of the respondents.¹² Verbal sexual harassment in school was reported by 14.0% of the boys and 10.3% of the girls, mostly in terms of being called "fag" or "slut/whore."

Young male sexual offenders are a focus of interest for research and intervention in Sweden today. Young male rapists as a rule have a criminal record including other aggressive crimes. Långström has published a review of the research on behalf of the Swedish national board for health and welfare,³⁸ and intervention programmes are developed by experts at the Swedish Save the Children Fund.³⁹

Child pornography is prohibited in Sweden, and purchasing "sexual services" is a criminal offence since 1999, but prostitution is not. The issues of child sexual abuse, peer abuse and rape, pornography, and prostitution, are all covered in depth in the background material for the recommendations of a new legislation on sexual crime in Sweden.⁴⁰ The recommendations provide children and teenagers with an improved protection of sexual integrity and rights.

CONCLUSION

In Sweden, society's acceptance of sexual activity among young people is high, and responsible sexual relationships recognised to add quality to adolescent life. These attitudes have long since been combined with sexual education in school, with contraceptive services targeting the young, and with programmes for chlamydia screening. Until recently, a positive trend with decreasing teenage abortions and genital chlamydial infections has prevailed. However, during a recent period of economic stagnation in Sweden, the situation has changed. Since the late 1990s, teenage abortions and chlamydial infections are rising steeply. Schools have suffered cut backs, and sex education is taught less today than 15 years ago. Social and ethnic segregation, school non-attendance, and drug use have increased and sexual harassment and peer sexual abuse have become issues of major concern. The traditional "love script" for young sexual relationships may have changed towards more openly experimental attitudes and behaviour. This is an area for further investigation.

Thus, even in Sweden, with its tradition of openness and non-judgmental attitudes towards adolescent sexuality, and ample resources with regard to sexual and reproductive health services for the young, challenges remain to be met in order to prevent STDs and unwanted teenage pregnancies, as well as sexual exploitation and abuse.

ACKNOWLEDGMENTS

I thank Professor Kari Ormstad, Institute of Forensic Medicine, University of Oslo, and Professor Eric Sandström, Department of Venhälsan, Karolinska Institute, Söder Hospital, Stockholm, who critically reviewed the manuscript.

REFERENCES

- 1 **Statistics Sweden.** Population and welfare statistics. Available at SCB, Statistics Sweden www.scb.se
- 2 **The Swedish School System.** Available at The National Agency for Education www.skolverket.se, March 2002.
- 3 **CAN.** Drug trends in Sweden. Available at CAN, The Swedish Council for Information on Alcohol and Other Drugs www.can.se, March 2002.
- 4 **Jarlbrog G.** Sex- och samlevnadsundervisning i grundskolan. [Education on sexuality and interpersonal relations in compulsory school.] The National Institute of Public Health 1997;18. (Swedish)
- 5 **Swedish Board of Health and Welfare.** Statistics on pregnancy and abortion available at the Swedish Board of Health and Welfare at www.sos.se (Swedish. English summaries).
- 6 **Forsberg M.** *Adolescent sexuality in Sweden. A research review 2000.* Stockholm: The National Institute of Public Health Report, 2000:18.
- 7 **Danielsson M, Rogala C, Sundström K.** *Teenage sexual and reproductive behavior in developed countries, can more progress be made?* Country Report for Sweden. Occasional Report No 7. New York and Washington: The Alan Guttmacher Institute, 2001.
- 8 **Lewin B.** The adolescent boy and girl: first and other early sexual experience with intercourse from a representative sample of Swedish school adolescents. *Arch Sex Behav* 1982;**11**:417–28.
- 9 **Zetterberg H.** Om sexuallivet i Sverige. Värderingar, normer, beteenden i sociologisk tolkning. [On sexuality in Sweden, values and behavior in a sociologic perspective.] SOU, Swedish Governmental Official Reports, 1969:2. (Swedish.)
- 10 **Lewin B, Helmius G.** Ungdom och sexualitet, en sociologisk studie av ungdomars sexuella föreställningar och erfarenheter. [Youth and sexuality, a sociologic study.] Uppsala: Dept of Sociology, Uppsala University, 1983. (Swedish.)
- 11 **Helmius G.** Mogen för sex?! Det restriktiverande samhället och ungdomars sexuella glädje. [Mature enough for sex?! The Restrictive Societal Norms and Youngs People's Sexual Joy.] Doctorial thesis. Uppsala: Dept of Sociology, Uppsala University, 1990. (Swedish. English summary.)
- 12 **Edgardh K.** Sexual behavior in a low-income high school setting in Stockholm. *Int J STD AIDS* 2002;**13**:160–7.
- 13 **Persson E, Jarlbrog G.** Sexual behaviour among youth clinic visitors in Sweden: knowledge and experiences in an HIV perspective. *Genitourin Med* 1992;**68**:26–31.
- 14 **Tydén T.** It will not happen to me: sexual behavior among high school and university students and evaluation of STD-prevention programmes. Doctorial thesis. Uppsala: Dept of Obstetrics and Gynecology, Uppsala University, 1996.
- 15 **Andersson-Elström A, Forssman L, Milsom I.** The relationship between knowledge about sexually transmitted diseases and actual sexual behavior in a group of teenage girls. *Genitourin Med* 1996;**72**:32–6.
- 16 **Larsson G, Blohm F, Sundell G, et al.** A longitudinal study of birth control and pregnancy outcome among women in a Swedish population. *Contraception* 1997;**56**:9–16.
- 17 **Berg-Kelly K.** Normative developmental behavior with implications for health and health promotion among adolescents: a Swedish cross-sectional survey. *Acta Paediatr* 1995;**84**:278–88.
- 18 **Berg-Kelly K, Ehrver M, Erneholm T, et al.** Self-reported health status and use of medical care by 3,500 adolescents in western Sweden. I. *Acta Paediatr Scand* 1991;**80**:837–43.
- 19 **Berg-Kelly K, Alven B, Erdes L, et al.** Health habits and risk behavior among youth in three communities with different public health approach. *Scand J Soc Med* 1997;**25**:149–55.
- 20 **Edgardh K.** Adolescent sexuality and sexual abuse—a Swedish perspective. Doctorial thesis. Stockholm: Dept of Venhälsan, Karolinska Institute, 2001.
- 21 **Edgardh K, Lewin B, Nilsson BR.** Sexual experience and behaviour as reported by 17-year-old girls and boys in Sweden. *Scand J Sexology* 1999;**2**:41–60.
- 22 **Edgardh K.** Sexual behaviour and early coitarche in a national sample of 17-year old Swedish boys. *Acta Paediatr Scand* (accepted).
- 23 **Edgardh K.** Sexual behaviour and early coitarche in a national sample of 17 year old Swedish girls. *Sex Transm Infect* 2000;**76**:98–102.
- 24 **The National Institute of Public Health.** Nationell handlingsplan för HIV och STD för 2000–2005. [National program for the prevention of STD and HIV in Sweden for the period 2000–2005.] Stockholm: The National Institute of Public Health, 2000. (Swedish.)
- 25 **Herlitz CA, Steel JL.** A decade of HIV/AIDS prevention in Sweden: changes in attitudes associated with HIV and sexual risk behaviour from 1987 to 1997. *AIDS* 2000;**14**:881–90.
- 26 **Swedish Institute for Infectious Disease Control.** Statistics on sexually transmitted infections in Sweden. Available at www.smittskyddsinstitutet.se. (Swedish. English summaries.)
- 27 **Hegna K.** [Is there an elevated risk of attempted suicide among homosexual adolescents?] *Tidsskr Nor Laegeforen* 2001;**121**:1100–2. (Norwegian. English summary.)
- 28 **Tydén T, Wetterholm M, Odland V.** Emergency contraception: the user profile. *Adv Contracept* 1998;**14**:171–8.

- 29 **Otterblad Olausson P.** Teenage childbearing, pregnancy outcomes and long-term consequences for the mothers. Doctorial thesis. Stockholm: Dept of Medical Epidemiology, Karolinska Institute, Stockholm, 2000.
- 30 **Ramstedt K,** Forsman L, Giesecke J, *et al.* Risk factors for Chlamydia trachomatis infection in 6810 young women attending family planning clinics. *Int J STD AIDS* 1992;**3**:117–22.
- 31 **Kamwendo F,** Forslin L, Bodin L, *et al.* Decreasing incidences of gonorrhoea- and chlamydia-related acute pelvic inflammatory disease. A 25-year study from an urban area of central Sweden. *Sex Transm Dis* 1996;**23**:384–91.
- 32 **af Geijerstam V,** Wang Z, Lewensohn-Fuchs I, *et al.* Trends in seroprevalence of human papillomavirus type 16 among pregnant women in Stockholm, Sweden, during 1969–89. *Int J Cancer* 1998;**76**:341–4.
- 33 **Löwhagen GB,** Tunback P, Andersson K, *et al.* First episodes of genital herpes in a Swedish STD population: a study of epidemiology and transmission by the use of herpes simplex virus (HSV) typing and specific serology. *Sex Transm Infect* 2000;**76**:179–82.
- 34 **Andersson B.** Personal communication, Swedish Association for Sexual Education, May 2001.
- 35 **Svedin C-G.** Sexual abuse of children. Definitions and incidence. Expert Report for the National Board of Health and Welfare 1999, available at www.sos.se March 2002.
- 36 **Edgardh K,** Ormstad K. Prevalence and characteristics of sexual abuse in a national sample of Swedish seventeen-year-old boys and girls. *Acta Paediatr* 1999;**88**:310–19.
- 37 **Lewin B,** Fugl-Meyer K, Helmius G, *et al.* Sex I Sverige. Om sexuallivet i Sverige 1996. [Sex in Sweden. A national survey on adult sexual behavior 1996.] The National Institute of Public Health, Stockholm 1998:11. (Swedish.)
- 38 **Långström N.** Young sex offenders: a research overview. Expert Report for the National Board of Health and Welfare 1999, available at www.sos.se March 2002.
- 39 **Nyman A,** Svensson B. *Boys, sexual abuse and treatment.* Stockholm: Save the Children Sweden, 2002.
- 40 **Sexualbrotten.** Ett ökat skydd för den sexuella integriteten och angränsande frågor. Betänkande av 1998 års sexualbrottskommitte. [Sexual crimes. Improved protection of the sexual integrity and related issues.] SOU Swedish Governmental Official Reports 2001:14. (Swedish. English summary.)



Have your say

eLetters

If you wish to comment on any article published in *Sexually Transmitted Infections* you can send an eLetter using the eLetters link at the beginning of each article. Your response will be posted on *Sexually Transmitted Infections* online within a few days of receipt (subject to editorial screening).

www.sextransinf.com