

Psychology 350 Human Sexuality

September 30, 2009
Contraception and Sexuality
Education

- ### Planned Parenthood Federation of Canada
- Public education and awareness
 - Advocacy
 - International projects and liaison with the International Planned Parenthood Federation (IPPF)
 - 23 independent Planned Parenthood [Affiliates](#) in more than 60 communities across Canada
 - is a voluntary, charitable organization
 - provide free services, information and counseling on basic anatomy, sexuality, menstruation, birth control, prevention of STIs, menopause, and counseling for pregnant women

- ### Planned Parenthood Cont.
- Affiliate in BC: Options for Sexual Health www.optionsforsexualhealth.org
 - One site located at BC Women's Hospital and several more in the lower mainland

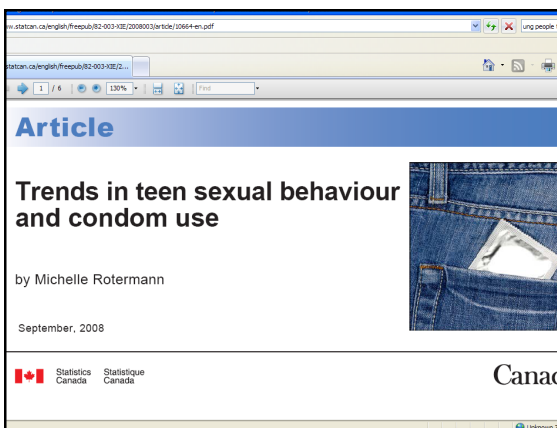



Table 1
Number and percentage of 15- to 19-year-olds who had sexual intercourse at least once, by gender, age group and province, Canada excluding territories, 1996/1997, 2003 and 2005

	1996/1997		2003		2005	
	'000	%	'000	%	'000	%
Total	920	47*	862	45	868	43
Gender						
Males ^a	434	43	437	46	432	43
Females	486	51**	425	45	435	43
Age group						
15 to 17 ^b	380	32	348	30	362	29
18 to 19	540	70*	514	68*	506	65*
Province						
Newfoundland and Labrador	23	46	19	54*	17	49
Prince Edward Island	4 ^c	37*	5	52*	3	35
Nova Scotia	16 ^d	31**	29	49	29	48
New Brunswick	28 ^d	43*	24	52**	19	43
Quebec	297	59*	252	62*	263	58*
Ontario	269	41**	302	49*	302	37*
Manitoba	30	39*	31	43	27	39
Saskatchewan	38 ^d	54	27	39*	28	43
Alberta	82	44	80	36*	77	39
British Columbia	133	47	93	37*	103	40*

^a reference category
^b significantly different from corresponding estimate for 2005 (p < 0.05)
^c significantly different from estimate for reference category or within year rest of Canada (p < 0.05)
^d use with caution (coefficient of variation 16.6 to 33.3%)
 Note: Because of rounding, counts may not add to total.
 Sources: 1996/1997 National Population Health Survey, 2003 Canadian Community Health Survey, cycle 2.1, 2005 Canadian Community Health Survey, cycle 3.1.

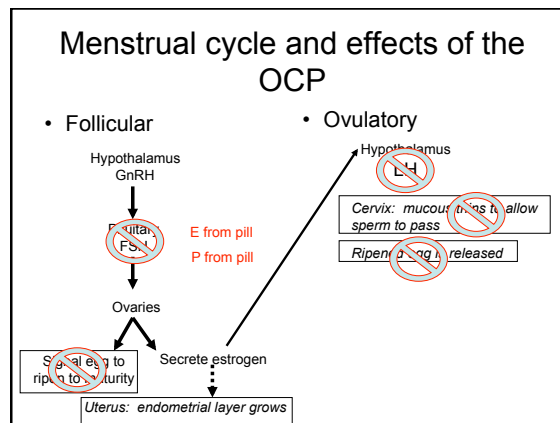
- ### Sex Facts for teens in Canada 2008
- Statistics Canada
- Among 15-19yr old Canadians, pregnancy rate is declining
 - Percentage of 15yr* old girls having intercourse declined (since 1996; 13→8%) whereas rates did not change for boys (since 1996; 11→8%)
 - Multiple partners* is more common for boys
 - 80% of males (15-19) and 70% of females use condoms
 - Condom use declines with age
- *risk factor for STIs

Oral contraceptive pill



- recent Canadian survey of girls aged 18-25 indicates the OCP is a popular form of contraception
- 90% of Canadian women are currently on or have been on the OCP at some point
- 23% go off and on
- 56% of these report side effects

- high-normal levels of estrogen and progesterin
- high E → no trigger for FSH → no ovulation
- locks the system into the same late phase of the cycle on a continuous basis



Oral contraceptive pill

<p>Negative effects</p> <ul style="list-style-type: none"> • increased risk of disease of the circulatory system • higher chance of developing blood clots • clotting or hemorrhaging in the brain • protects women from endometrial cancer and ovarian ca, but may aggravate already existing ca • if use OCP for > 5 yrs, increased risk of benign liver tumour • increases the amount of vaginal discharge and susceptibility of vaginitis • may cause nausea, some weight gain by increasing appetite or water retention • 20% of women report irritability and depression • Puts the entire burden on the woman 	<p>Positive effects</p> <ul style="list-style-type: none"> • close to 100% effective • doesn't interfere with intercourse • reduces menstrual flow and cramps • iron-deficiency anemia less likely • can clear acne
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Oral contraceptives and acne

- Approved for the treatment of acne (Canada) are Diane-35 and Ortho Tri-cyclen
- Mechanism?
 - Increased oil production caused by the body's androgen production, which can be highest just before menstruation starts.
 - low-dosage birth-control pills can decrease the presence of excess androgens, thereby decreasing breakouts

Tri-phasic pills

e.g., triphasil, ortho-tricyclen

- Steady level of estrogen but 3 doses of increasing progesterone
- Designed to minimize side effects from progesterone

Low-dose pills


e.g., Tricyclen Lo, Yasmin

- pills today have much less estrogen than at one time.
- Tri-cyclen Lo and Yasmin approved in 2005
- Yasmin contains synthetic P (drospirenone) which reduces water retention, headaches, breast pain, etc.
- Less likely to induce blood clots

Contraceptive patch

e.g., Evra

- 3 weeks on (replace weekly), 1 week off, has 2 day forgiveness period in case of delay
- Same hormones as in combination pill
- 0.60mg ethinyl estradiol
- Actual user failure rate of 1%



**2006 warning from US FDA: The EVRA patch marketed in the USA, which contains 0.75mg ethinyl estradiol, produces elevated risk of blood clots compared to OCPs

Contraceptive ring e.g., Nuvaring

- 3 weeks in, 1 week out, intravaginally
- delivers continuous combined doses of E and P, self-inserted
- same levels of hormones as in combination patch
- even more effective than pill
- Cannot feel during intercourse



Progestin only

- Pills (eg., Micronor) - 35 mcg of norethindrone
 - Prevents ovaries from releasing egg (prevents ovulation)
 - thickens mucus at cervix to prevent sperm from passing
 - in rare cases prevents fertilized egg from implanting into uterus
 - In 40% of all cycles ovulation will still occur
 - Perfect user failure rate of 3%
- Injection (Depo-provera) – Depot medroxyprogesterone acetate
 - 1 injection effective 12-13 weeks
 - Perfect user failure rate of 1% (actual user 3%)
 - There have been numerous cases of osteoporosis and fracture (broken bones) because high P → reduced E (thus, use Vit D supplement)
 - Use only if other treatments are not acceptable

Progestin Only

Implants

- **Norplant**
 - 6 rods inserted under skin of arm and slowly diffuses progestin into bloodstream for up to 7 years
 - Failure rate is only 0.2%
 - Taken off market in 2002



Implanon

- One rod Inserted under skin of arm
- Keep in place 3 yrs
- Approved in USA in 2006 and not yet available in Canada



Progestin only

- **Advantages**
 - Reduces risk of inflammation in the fallopian tubes and prevents infertility.
 - Reduces menstrual pain, pre-menstrual pain, pain associated with endometriosis and chronic pain.
 - Possibly reduces frequency of seizures.
- **Disadvantage**
 - Much less research compared to combination pills

Shorter hormone withdrawal OCPs

- Yaz
 - 24/4
 - Reduced headaches cramping, breast tenderness associated with hormone withdrawal

Oral Contraceptives and Cancer

- **MYTH:** Taking the Pill can lead to many types of cancer, including ovarian and endometrial cancer
- n = 150,000+ women studied
- > 6 mos use associated with increased rates of breast ca
 - Risk strongest for women using OCP within 5 yrs of breast ca
- > 10 years use associated with increased rates of cervical ca
- lower levels of ovarian and endometrial ca (both combination and progestin-only pills)
 - Longer the use, more the reduced risk of these cancers

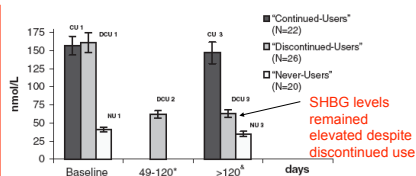
Oral contraceptives and sexuality

Changes in SHBG Over Time In "Continued-Users", "Discontinued-Users" vs. "Never-Users" of OCP

2 possible

mechanisms:

1. The mid-cycle rise in T is blocked
2. OCP increases SHBG, which binds T, and reduces free T



SHBG = sex hormone binding globulin

Figure 1 Changes in SHBG in "Continued-Users" (CU), "Discontinued-Users" (DCU), and "Never-Users" (NU) at different time intervals: at baseline (1), 49-120 days (*mean 80 days for "Discontinued-Users") (2), and >120 days (3) (*mean 203 days for "Continued-Users"; 196 days for "Discontinued-Users"; 234 days for "Never-Users"). Panzer, 2006

Oral contraceptives, mood, and sexuality

- Ott et al., 2007
- N = 328 girls aged 14-17 and followed for 41 months
- F2f interviews and daily diaries
- Do mood and sexual interest differ by contraceptive method?
 - Mood more positive during stable OCP use > non-OCP use, initiating OCP, and depot provera use
 - No significant effect on sexual interest in any grp

Ott et al. 2007 cont.

- Do day to day variations in mood differ by contraceptive method?
 - Less variation in neg mood among stable OCP users
 - No association of day to day variation in positive mood and OCP group

Ott et al., 2007 cont.

- Are mood changes related to stopping or initiating OCP?
 - Positive mood higher and negative mood lower during weeks ON the OPC compared to off
 - No relationship to sexual interest

Emergency contraception

- Use 12-24 hours after unprotected intercourse; not effective if used 72 hours later
- Plan B – no prescription needed
- Is not an abortion pill
- 2 doses of high-progesterone
- How it works:
 - can inhibit or delay ovulation
 - may also prevent movement of the egg or sperm in the fallopian tubes
 - interfere with fertilization
 - alter the lining of the uterus
- Effectiveness: no contraception: 30% chance; with Plan B: 2% chance

Emergency Contraception (cont.)

- Preven
 - Kit
 - combination pills taken at higher doses
 - Available from pharmacist over the counter
 - Pregnancy rate: 7.5%

See <http://www.advocatesforyouth.org/youth/health/ec/mythsfacts.htm> for a list of common myths around EC use

Intrauterine device



- Prevents sperm from fertilizing egg or from implantation into uterus
- Can release progesterone into uterus to reduce endometrium
- Failure rate 0.7%

Martin-Loeches, 2003: Do the IUD and OCPs differ in effects on sexual desire?
 -Compared 1073 women in a prospective observational study
 -All women had a similar decrease in sexual desire in both groups

Cervical diaphragm

- diaphragm is a circular, dome-shaped piece of rubber inserted into the vagina that fits snugly over the cervix by a physician
- must apply contraceptive cream to it
- insert up to 6 hours before sex and leave in place between 6-24 hours after sex
- it blocks the entrance of the uterus so sperm cant swim up and cream kills any sperm that do get through



Cervical cap

- Fits more snug over the cervix than the diaphragm
- should be used with spermicidal cream
- can remain in place up to 24 hours

Cervical Cap



Lea contraceptive

- has a slit where air can escape as well as cervical secretions
- with spermicide has failure rate of about 9%
- provides protection for up to 8 hours
- should be left in place for up to 24hours after intercourse
- Reusable
- Purchase from drug-store for \$50



Contraceptive sponge

- contraceptive sponge is a round, polyurethane foam device that fits over the cervix and contains spermicides
- should be inserted 15 min before intercourse
- high failure rate: 21-26%
- Cost is ~ \$2.00



Male condoms

- rubber/latex
- Polyurethane (for those with latex allergies)
- intestinal tissue of lambs (natural membrane) increase sensation but degrade with oil-based lubricants
- spermicidally lubricated condoms



Condom use errors

- Crosby et al., 2003
 - 260 male and female university students
 - 11% used sharp instruments to open packages
 - 19% stored condoms in wallet
 - 83% used same condom when switching sexual activities
 - 14% removed condoms before sex was over
 - 28% reported condom slipped or broken off
- Sanders, 2003
 - 102 women who applied condoms to their partners:
 - 46% did not leave space at the tip
 - 30% put condom on wrong side up and had to take it off
 - 28% reported breakage, slippage, or both

Female condoms

- polyurethane
- one ring is inserted into vagina the other remains outside the introitus
- blocks entrance of uterus and outer ring protects lips from STIs



Negative:
 -rustling noise
 -Can be irritating to penis

Douching

- One of the oldest forms of “birth control”
- Not effective
- Can even propel sperm *into* the vagina



Withdrawal

- ejaculation must take place completely away from vagina
- failure rate around 19%
- pre-ejaculate may contain a few drops of sperm
- is linked to premature ejaculation in the male because it is stressful
- 100% of control is up to male; stressful for woman

Fertility awareness

- talked about these as methods of conception
- abstain from sex during fertile period (ovulation)
- require a long period of abstinence (15 days for irregular women!)
- calendar method, basal body temperature method, cervical mucus method: safe period a few days after menstruation when no mucus is produced and there is vaginal dryness

Methods for the future

- **Essure:** permanent sterilization for women
 - Small metal coil into the fallopian tubes (through vagina); now available in Canada
 - Tissue grows around it thus blocking the tubes
 - no need for surgery



Methods for the future

- **Hormonal contraceptives for men**

- Prevent sperm production by raising T
- Expect on market in 5-10 yrs



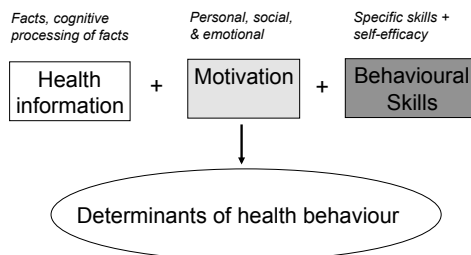
If we have so many methods of contraception available, why are unwanted pregnancy rates so high?

Does “romantic love” increase pregnancy rates?

- Goldmeier, 2005
- There is a discrepancy between knowledge of STIs, pregnancy, and behaviour
- Hypothesis: romantic love might overwhelm logical thought processes to cause a deterministic and non-logical response to sex
- Evidence:
 - Serotonin levels similar in those with OCD and those in love
 - Elevated cortisol early in relationship
 - fMRI activation in limbic and cortical areas → sites of dopamine action

Multifactorial models affecting contraceptive use

Information-Motivation-Behavioral Skills Model (Fisher & Fisher)



Pleasure, power, and inequality

- Themes emerging from qualitative interviews with young adolescents about contraception and sexual pleasure:
 - Physical pleasure and lack of discomfort
 - Spontaneity and sexual flow
 - closeness

Sexuality Education

Definition of Sexuality Education

- The lifelong process of acquiring information about sexual behaviour and forming attitudes, beliefs, and values about identity, relationships, and intimacy

(SIECUS, 1991)

Goal of Sexuality Education

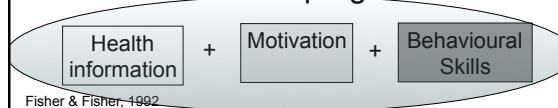
- To promote healthy sexuality
- *What does this refer to?*
- A positive and life affirming part of being human that includes knowledge of self, opportunities for healthy sexual development, and experience, capacity for intimacy, ability to share relationships, and comfort with different expressions of sexuality

(SIECCAN, 2003)

Canadian Guidelines

1. Everyone should have access
2. Education should be comprehensive and inclusive
3. Education should include methods based on Fisher's IMB model
4. Teachers should be well-trained and supported
5. Education programs should be evaluated

Components of a "good" sexuality education program



Fisher & Fisher, 1992

- Knowledge delivery
- Encouraging motivation and insight
- Development of skills
- Creating an environment conducive to positive sexual decisions

Attitudes towards sexual health education

	Parents	Teachers	Middle School Students	High School Students
Sexual health education should be provided in the schools	94%	93%	93%	92%
School and parents should share responsibility for providing children with sex ed information	95%	95%	69%	77%
Sexual health information should start in grades K – 5	65%	78%	30%	23%

Byers, 2001 BUT, 6-15% of gr 9 students get sex info from home and 41-51% get info from school

Barriers to teaching good sexuality education

- Teaching developmentally appropriate material
- Parents awkwardness in discussing sexuality with kids
- Parents and teachers lack of information
- Fear that teaching about sexuality will lead to unsafe or promiscuous sexual activity

Parents knowledge in sex education

Sulak, 2005

- N = 1,082 parents assessed for sexual knowledge before and after a 2-hour educational intervention
- Asked 10 questions pre and post:
 - E.g., condom use and efficacy, types of STIs, legal age of consent, definition of assault, factors that delay teen sex, etc.
- 25% scored all 10 correct @ pre-intervention
- 75% scored all 10 correct @ post-intervention

Conclusions: parents should be targeted in children's sexuality education

Canadian vs American sexuality education programs

- American programs: Abstinence-only education (AOE)
- Canadian programs: comprehensive programs that include:
 - Reducing risk taking
 - Theories of social learning
 - Teaching through experiences

AOE programs

- An educational or motivational program which:
- Has as its exclusive purpose teaching the social, psychological, and health gains from abstaining
- Teaches abstinence outside marriage as the expected standard
- Teaches abstinence is the only way to avoid pregnancy, STIs and other health problems
- Teaches that a mutually faithful monogamous relationship in marriage is the expected standard
- Teaches that sex outside marriage has likely harmful psychological and health effects
- Teaches that bearing children outside wedlock has negative consequences
- Teaches young people how to reject sexual advances and the negative influence of alcohol and drugs on vulnerabilities
- Teaches the importance of "self-sufficiency" before engaging in sexual intercourse

AOE programs

- US funding for AOE has grown since 1996 (\$170 million/year)
- Alleged efficacy rates ~ 100%

Problems with abstinence-only education:

- efficacy studies not based on sound science
- little evidence that they do delay initiation of sexual activity
- more effective at delaying intercourse: comprehensive programs that talk about abstinence in the context of other contraceptive options and protection from STIs
- ethical problems with AOE: inherently coercive and providing misinformation and withholding info need to make informed choices
- AOE can be considered the basis for suppression of free speech in schools
- Are usually insensitive to sexually active teens
- Discriminate against GLBT and questioning youth given federal law limits discussion of marriage in a heterosexual context

Do condoms in schools increase sexual behaviour?

- N = 4166 American students completed a survey
- Condoms not available to n = 3301 students; available to n = 865 students
- In schools with condoms:
 - More public dialogue
 - Greater range of HIV discussion
 - Twice more likely to use condoms during sexual activity
 - No increased reports of sexual intercourse. In fact, those with condoms in schools were less likely to report lifetime or recent sexual behaviour



Blake, 2003

Does the media influence sexual behaviour of pre-teens?

- In 2002, 80% of shows teens watch contain sexual content but only 1/8 discuss safer sex
- Brown (2006)
- N = 3261 12-14 year olds in 3 school districts in North Carolina
- N = 1,000 were interviewed 2 years later
- Measured "Sexual Media Diet" (SMD) = computed as the overall proportion of sexual content in the adolescents' media diet in 4 media over the previous 1 month (magazines, music, show, movies)

Brown (2006) findings

Findings:

- Higher SMD → more sexual activity 2 years later
- Stronger effects for Caucasian > African American teens
- One of the strongest predictors of having sex: "Perception that my friends are having sex"
- One of the strongest predictors of NOT having sex: good parental communication

Sources of good sexual education information

- Sexuality Information and Education Council of Canada www.sieccan.org
- Planned parenthood federation of Canada www.ppfc.ca
- Options for Sexual Health Vancouver Clinic, Women's Clinic, VGH, 731-4252 or www.optionsforsexualhealth.org
- Sexualityandu.ca

Radio shows



www.talksexwithsue.com

- Frank, honest discussions about sexuality
- Opportunity for youth (and others) to ask questions they otherwise would not