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The winding road to womanhood

**Adolescents' attitudes towards menstruation, womanhood and
sexual health - observational and interventional studies**

by

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Abstract

Menarche is a unique marker of female maturation representing the transition from childhood to womanhood. When entering adolescence, children face a number of challenges in areas such as the parent-adolescent relationship, development of the self and identity, an expanding network of social relationships, pubertal changes and the development of sexuality. Education may improve attitudes toward menstruation among adolescents thus increasing their awareness of risks and enabling them to protect themselves accordingly. This thesis aims to provide better understanding of these phenomena and is based on four studies:

- I. Twelve-year-old girls' experiences of early puberty were described using content analysis of data from focus group interviews. Four themes were revealed: "Growing up - awareness, transition, longing", "Mother - a close and important relationship", "Menarche - a personal and important occurrence", and "Sex and relationships". The girls had many questions about sex and physical changes but felt adults had failed them in providing answers.
- II. Twelve-year-old girls' attitudes, thoughts and feelings towards menstruation and their bodies as well as the ability to communicate on aspects of womanhood was elucidated using a questionnaire. Postmenarcheal girls were less positive towards menstruation than premenarcheal. Many girls did not reaffirm the statement "I like my body" and many claimed they had been verbally sexually harassed. Mothers were thought of as most easily "chatted" with about menstruation.
- III. This study investigated the effect of a new, structured, interactive, multisensory, group learning education (IML) for 12-year-old girls compared with a standard intervention. Pre- and postmenarcheal girls answered accordingly adjusted questionnaires on attitudes toward menstruation before and six months after the intervention. If the girls received IML just prior to menarche it resulted in improvements in attitudes toward menstruation.
- IV. Second-year adolescent high school students completed a questionnaire on sexual experience, sexual risk behavior and the impact of an educational program on STI. Boys took less responsibility for STI prevention than girls. Furthermore, boys perceived themselves less influenced by STI-education than girls. Girls had greater experience of same-sex sexuality than boys.

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List of publications

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- IV. Rembeck, G I. Gunnarsson RK. Role of gender in sexual behavior and response to education in sexually transmitted infections in 17-year-old adolescents. Manuscript.

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1. Abbreviations and definitions

1.1. Abbreviations

HIV	Human immunodeficiency virus
AIDS	Acquired immune deficiency syndrome
STI	Sexually transmitted infections
UN	United Nation
UNAIDS	The Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

1.2. Definitions

Adolescence	The transitional period between childhood and maturity, occurring roughly between the ages of 10 and 19.
Adolescent	People aged 10-19 years
Menarche	Menstrual debut

2. Introduction

I began working at youth health centres in 1990 where I met young people up to 25 years of age. Most were girls between 16 and 19 years of age just entering a sexual relationship. Adolescents usually sought a nurse-midwife for help with contraception, sexual problems, concerns with their genitals and bodies, testing for sexually transmitted infections and pregnancy. Another common request was for free condoms.

I soon became frustrated over the lack of knowledge of their sex organs and the negative and foreign attitudes towards their genitals and bodies. Even if the menstrual cycle is complicated and a woman's genitals are nearly impossible for her to see, it was hard to accept their lack of words for their genitalia. Thus, I began to create words for women's genitalia and pedagogical ways of describing them, their function and at the nature of a gynaecological examination in a way I felt young girls could grasp. I soon observed how their self-esteem increased when I supplied them with names for these body parts.

The goals of the Swedish health authorities were to protect adolescents from sexually transmitted infections (STI), unwanted pregnancies and to strengthen a sense of identity during adolescence. Thus, in late 1980, youth health centres in southwestern Sweden were opened in most municipalities. The personnel had few guidelines allowing freedom to test different approaches. The youth health centre in Lerum cooperated with the research and development unit in primary healthcare in Lerum. This close cooperation was uncommon at other youth health centres in Sweden. Creativity through this cooperation led to the development of new ideas and methods.

In 1995, I read of an approach to 12-year-old girls introduced by the nurse-midwife Pia Højeberg at the Tensta youth health centre in Stockholm. The method was inspired by the African Bemba tribal rituals in Zambia for girls reaching menarche. The question of helping girls on the threshold of adulthood was raised. Could such an approach prepare them for late adolescence? A 13-year journey had begun.

2.1. *Adolescence and puberty: an important transitional phase.*

Aside from the first two years of life, there are no other periods of human development as intense as early adolescence [1]. Transition in early adolescence has been conceptualized as a developmental period with fundamental changes in life patterns [2]. Transition is characterized by flow and movement and includes identity, roles and relational skills [3]. When entering adolescence, children face many challenges in areas such as the parent-adolescent relationship, development of the self and identity, the expanding network of social relationships, pubertal changes and the development of sexuality [4-6].

2.1.1. The concept of transition

When girls receive menarche and development of a new body begins they pass from one stage of life to another. This is an important transition. Transition is a passage from one phase of life, condition, or status to another. It engulfs multiple concepts embracing processes, time, and perception [7]. Transition is an ongoing process demanding awareness of the occurring changes. There is a general structure for transitional dimensions consisting of at least three phases: entry, passage and exit.

Most characteristic for transition is disconnectedness associated with disruption of the linkages on which feelings of security depend. Meaning attributed to transitional events varies between persons, communities, and societies thus influencing outcomes. Patterns of response are, for example, distress, irritability, anxiety, changes in self-concept, changes in role performance and self-esteem. Conditions that may influence the quality of the transitional experience and the consequences of transitions are meanings, expectations, levels of knowledge, skill and planning, environment, and emotional and physical well-being [8]. A successful transition implies achieving a period of greater stability. Indicators of successful transitions are subjective wellbeing, role mastering, and healthy relationships. To fully understand responses to transition, it is important to understand how perception of the transition process and expectations of outcomes affect the transition [7].

2.1.2. Self-esteem and social relationships

Self-esteem is built up throughout childhood, affected by many factors, primarily the early interplay within the family. Furthermore, self-esteem develops in an intimate interplay with the immediate environment [6]. Self-esteem is linked to body-esteem which is partly regulated during adolescence by bodily factors beyond individual control, such as the onset of puberty [1, 9].

Some adolescents show high levels of stability in their self-esteem, whereas others do not [10, 11]. High self-esteem is related to parental approval, peer support, psycho-social adjustment, and academic success [12, 13]. However, self-esteem varies according to gender and ethnicity [4, 10, 14, 15]. Adolescents, especially girls, often develop a decline in self-esteem in early adolescence and, compared to boys, show more negative attitudes toward themselves concerning physical appearance as they enter adolescence [4, 14, 16].

Contrary to claims that adolescence implies severe conflict in terms of personal identity and social relationships [17, 18] contemporary research points to the importance of a maintained parent-adolescent relationship [19-22]. Several psychologists recognize adolescents as gradually reaching greater independence while maintaining relationships with parents for support and guidance [22, 23]. However, conflicts between adolescents and parents increases at the onset of puberty [24, 25]. Twelve-year-old adolescents usually do not agree with their parents on who decides what rules to follow [23].

As children move into adolescence, friendships evolve into more intimate, supportive, and communicative relationships [26, 27]. Adolescents choose friends with similar behavior, attitudes, and identities [28, 29]. Indeed, adolescents bring to their peer relationships many qualities developed early on in life as a result of socialization within the family [30]. Peers influence one another not through coercive pressure but through admiration and respect [4, 31]. There is some evidence that among girls, intimacy in friendship is fostered through conversation [14, 32].

2.1.2.1. *Body-image and society*

During physical development impulses initiating thoughts of becoming adult are sent to the young individual [6]. Body awareness and testing sexuality increase along with the development of puberty. Compared to boys, girls are earlier in their external pubertal development [6]. As body mass increases during puberty, adolescent females may increase a negative body image [33].

Girls are exposed to stressful societal expectations and mass medial pressure in terms of gender role expectations and ideals of beauty [9, 34, 35]. Girls in early adolescence receive many comments on their changing bodies and often feel stared at [35]. The body is for many girls an ongoing personal project with a lesser or greater possibility for self-influence [36]. The key is to try and control the project through exercise, diet, hair removal, cosmetic surgery, or make-up, presenting the result as natural, with possibly devastating effects on self-esteem [34].

2.1.2.2. *Verbal abuse*

Insults reflect current values in society [37]. They are usually made under emotional stress to provoke and gain advantage [38]. The most devastating way of insulting women is by attacking their sexual morality and is often done through sexual verbal harassment [38]. Two common words used for the sexual verbal harassment of women are “whore” and “cunt” [38]. The former is usually considered more serious than the latter [38].

2.1.3. Menarche and menstruation

Menarche is a unique marker of female maturation representing the transition from childhood to womanhood [39]. Girls reach menarche at an average age of 12.0 – 13.4 years in different studies [40-44]. Menarche seems to come slightly earlier in obese girls compared to slim girls [45].

The experience of menarche is partly dependant on previous expectations resulting in both positive and negative feelings [46-49]. However, most girls do not consider menarche as something to be happy about [48, 50].

Girls appear to have incorporated many of the prevailing cultural views of menstruation early in life. Unfortunately, most of these views are negative and non-preparative for womanhood [48, 51]. Unlike the developed countries, where menarche is treated mainly as a hygienic problem, menarche is celebrated in other societies with rituals as in, for example, the Bemba tribe [52, 53] and Navajo Indians [54].

Girls able to communicate about menstruation worry less than girls who can not [55]. Unfortunately, most girls cope by concealing menstruation. Furthermore, postmenarcheal girls are more self-conscious, embarrassed, and secretive about their bodies compared to premenarcheal girls [49, 56-60]. Consequently, Koff (1981) found that premenarcheal girls could communicate with peers about menstruation while postmenarcheal girls had difficulty [46]. Dashiff (1986) reported that menstruating girls talked about physical and emotional symptoms [58]. However, they usually spoke only of the negative aspects of menstruation [58].

In most societies mothers play an important role in informing their daughters about menstruation. Subsequently, daughters view their mothers as an important source of support [60-63]. Thus, girls living apart from their mothers may have problems finding other mature females to communicate with [64]. Unfortunately, misleading information can be transferred from mothers to daughters [65].

Fortunately, positive feelings toward menstruation exist among premenarcheal girls, 9-12 years old [48, 66]. Girls with positive feelings associated menstruation with growing up and being normal [48]. Some of them believed, however, menstruation to be an embarrassing nuisance that could not be controlled [48, 66].

Nowadays, media plays an important role in forming attitudes toward menstruation. Menstruation is often portrayed as odorous, painful, embarrassing, and shameful [67, 68]. According to the media, menstruating women are expected to act

normally while continuing daily routines [49].

2.2. Sexuality

2.2.1. Definitions of sexuality

Sexuality and sexual health are major themes at youth health centres. WHO defines sexuality as:

Sexuality is a central aspect of being human throughout life and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, ethical, legal, historical and religious and spiritual factors [69].

Furthermore, WHO defines sexual health as:

Sexual health is a state of physical, emotional, mental and social well-being related to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled [69].

2.2.2. Sex and the concept of gender

The most common definition of sex refers to the biological characteristics which define humans as female or male. These sets of biological characteristics are not mutually exclusive as there are individuals who possess both, but these characteristics tend to differentiate humans as males and females. Another definition is that the term sex often means "sexual activity". In the context of sexuality and sexual health discussions, the first definition is preferred [69].

The concept of gender was first used at the end of 1980. There is no consensus for a detailed definition. However, existing descriptions of the term usually include gender as a construction of sex and relations between women and men in a social structure of power and hierarchy [70, 71]. Gender refers to the economic, social and cultural attributes and opportunities associated with being male or female at a particular point in time [69, 70]. While sex is usually unchanged gender may change during a lifetime [70].

Gender equity means equality in the distribution of benefits and responsibilities between women and men. It often requires women-specific programmes and policies to end existing inequalities [69]. Gender discrimination refers to any distinction, exclusion or restriction made on the basis of socially constructed gender roles and norms preventing a person from enjoying full human rights [69].

If one defines girls by emphasising problems, there is a risk that this group will be subsequently stigmatised [72]. Structural powerlessness to deal with the problems becomes hidden while blame is placed instead on the individual. Thus, working with groups of girls may result in "improving" girls rather than liberating them. To avoid stereotypes for boys and girls, gender and identity should be placed in a greater and more dynamic perspective [72].

2.2.3. Sexual experience and sexual risk behaviour

The average age for sexual debut in Sweden is approximately 16.5 years for both sexes. [73-75]. A recent study showed both girls and boys in vocational programs sexually more advanced showing greater risk behavior than those in university-preparatory programs [76, 77]. Subsequently, girls in vocational programs had a significantly higher frequency of STI [76]. Boys in general take greater sexual risks than girls [76]. Early puberty in boys and menarche before age 11 in girls are associated with early sexual debut. For boys it was also related to general adolescent risk-taking behavior [75].

2.2.4. Sexually transmitted infections (STI)

The estimated number of persons living with human immunodeficiency virus (HIV) worldwide in 2007 was 33.2 million [78]. More than 6800 persons daily are infected by HIV and more than 5700 persons die from acquired immune deficiency syndrome (AIDS). During the initial phase of an epidemic, HIV will typically infect people at high-risk: prostitutes, injecting drug users, men who have sex with men, or persons with other sexually transmitted infections (STI). Factors influencing the possible “bridging” of HIV to the general population include the frequency of male utilization of prostitutes, sexual patterns in the general population, condom usage, age differences between partners, the prevalence of STI other than HIV, frequency of sexual violence, women’s empowerment, access to HIV/AIDS treatment and the capacity of the health care system [79, 80]. The number of cases of HIV in Western Europe continues to increase among heterosexuals and among men who have sex with men [81].

Aside from being a marker for sexual risk behavior, STI other than HIV enhances transmission of HIV [79, 80, 82]. One of the most common STIs is *Chlamydia trachomatis*. The prevalence of *C. trachomatis* has increased in Sweden and in other European countries [83, 84]. Since 1997 the number of *C. trachomatis* cases in Sweden has more than doubled and the increase in registered cases is highest among women 15 to 25 years of age.

There are several explanations for this increase such as greater number of sexual partners, more casual sex, less use of condoms [85-87], later family building [88] increased use of drugs [78], travel [89] and immigration [81, 90].

2.3. Educating adolescents in sexual health

2.3.1. Educating 12-year-old girls in menstruation and womanhood

Chisungu is an initiation ceremony for girls of the African Bemba tribe in Zambia when a girl receives her first menstruation [52, 53, 91, 92]. This is an initiation rite for girls where older women in the village gather round the girl and teach her how to be a woman according to the culture of the Bemba tribe. The rite includes special dances and songs along with holy figures and symbolic paintings. They emphasise possessing female genitals is something to be proud of. The older women utilise the knowledge that what is heard, seen, felt, done and tasted will not be forgotten. At the end of the month-long ceremony the girls are initiated into the tribe as women with a great celebration. At the end of the celebration the girl’s father is involved by giving her presents, usually clothing. The girls learn to feel that becoming a woman is something to celebrate. This is a form of education that is recognized as cumulative. A girl may have little intellectual understanding of what is being done at the time of her chisungu, but she may be in a highly emotional state where she is likely to be

suggestible to the general emphasis placed on the importance of marriage and childbirth. They will recall this and in the future return and seek more knowledge.

In many western countries girls are taught about the body and puberty at school. When a girl receives her first menstruation she usually turns to her mother to receive help in managing the hygienic aspects of menstruation. She emphasizes that it is normal and natural to menstruate and provides sanitary napkins. Furthermore, the girls and her parents receive a free sample of sanitary napkins and instructions from manufacturers at age 12. The message thus being that menarche is nothing other than a hygienic problem. This situation in western society is not optimal for enhancement of learning about menstruation and sexual health.

If girls fail to learn about the basics of menstruation, it will be even more difficult to teach them the risks of unprotected sexual activity [93]. Some authors suggest menarche as the best opportunity to intensify efforts to educate girls concerning risks associated with unprotected sexual intercourse [39, 94]. Previous research shows that teaching methodologies, language and timing must be on a level with the capacity for understanding [57, 95], [39].

2.3.2. Sexual health prevention

Sexual health needs of adolescents remain poorly understood in many parts of the world. This is a considerable challenge for many countries [96].

There is a consensus for reaching adolescents by preventive interventions for HIV/AIDS. This includes schools, health services, mass media and outreach programs targeting young people [97].

2.3.3. Forums of sexual health prevention

Historically, sex education was introduced in schools earlier in Sweden than in other western countries, dating back to the late 19th century [98]. A law passed in 1955 made sex education compulsory. In Sweden, girls are taught about the body in natural science courses. Furthermore, school nurses provide information about puberty and menstruation [99]. In general, pupils in Sweden are taught about the human body chiefly at the ages of 8, 11 and 14. Subjects include puberty and the reproductive organs. In many areas, school nurses teach these subjects as well. A problem is that formal education focuses on functions but not on emotions and worries concerning these functions. Furthermore, formal education does not take into consideration that girls maturing early are unprepared for the onset of menarche. Girls who have not yet developed the ability for abstract thinking may have difficulties in understanding conventional education for these issues [100].

The purpose of Swedish school healthcare is to promote student health [101]. This includes preventive medicine, health maintenance and “working toward a healthy lifestyle” for the students. The national board of health and welfare has given school healthcare services directives to cooperate with local youth health centres particularly for STI and unwanted pregnancies.

Youth health centers were opened in the 1970s and established in all Swedish communities by the late 1980s [102]. Youth health centers provide help for youths up to 25 years of age based on a holistic view, utilizing medical, social and psychological competence. Youths meet individually and in groups with a nurse-midwife, social worker, psychologist or doctor from the youth health center. Methods for creating a positive forum where youths can talk about becoming women or men have been developed in youth health centers throughout Sweden. However,

the best method has not yet been established. The Swedish youth health centers task is to cooperate with others working with youths and health problems.

Swedish authorised nurse-midwives work in the areas of sexual and reproductive health [103-105]. A nursing degree is a prerequisite for specialising as a nurse-midwife. The profession of nurse-midwife places large demands on the ability to work independently based on scientific and multicultural knowledge and professional responsibility. The national board of health and welfare describes three areas of competence for the Swedish nurse-midwife [105]:

- Sexual and reproductive health
- Research, development and education
- Management and organization

According to the new abortion legislation from 1975, nurse-midwives were authorized to prescribe oral contraception and insert intrauterine devices [105]. Preventing undesired pregnancies and the incidence and spread of STIs are important aims for midwives working with sexual and reproductive health at youth health centres [102, 104].

2.3.4. Learning and pedagogic theories

According to Pilhammar Andersson [106] learning is identified as a transformation of knowledge and valuation. Learning includes understanding, new perspectives and finally, personal change. Learning is seen first and foremost as a quest for meaning [107].

<p><i>Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand. - Confucius, 450 B.C.</i></p>

Pedagogy is the art or science of being a teacher. Pedagogic theories are of prime importance when constructing educational programs for sexual health and STI-prevention for adolescents.

2.3.4.1. Piaget's cognitive development theory

Jean Piaget (1896-1980) was a pedagogue and philosopher from Switzerland. His cognitive development theory consists of four stages, the fourth being the formal operational stage occurring at 11 years of age. At approximately 12 years of age children develop the ability for abstract reasoning where they can think with the aid of a hypothesis in addition to the tangible situation [108-111].

2.3.4.2. Vygotskij's sociocultural theory

Lev Semenovich Vygotskij (1896-1934) was a pedagogue and philosopher. He stated that words contain generations of human thought and knowledge. When a child understands words she also understands the thoughts associated with those words. Learning language provides access to an understanding of the world as perceived by mankind throughout history [112].

According to Vygotskij (1934) knowledge is not something that exists by itself, apart from reality, but a construction of reality, created to understand and describe the world around us. Vygotskij saw surroundings and human interaction (people, surroundings, nature, society etc.) as decisive for individual development and ability. Increase of knowledge occurs not within the individual alone but through interaction between individuals.

Vygotskij (1934) concludes that learning is more about tools and surroundings. It demands an active student, an active teacher and an active environment. The

environment influences the pupil by being active and dynamic and the teacher has an important role in organizing the environment. According to Vygotskij learning is first and foremost a social process demanding participation and experience. The teacher's main task is to provide beneficial and stimulating assignments and to provide opportunities for interaction. While Vygotskij emphasized the importance of society and surroundings, he also emphasized the importance of individualising learning. Thus, the dialogue between pupil and teacher is of great importance. The teacher must utilise the student's abilities and find the positive in each student. Imagination, playfulness and creativity are important key words in terms of learning.

2.3.4.3. *Marton's variation theory*

Marton pointed out the following requirements for learning [107]:

- Knowledge must be relevant
- Knowledge should be distinct
- Variation enhances learning
- Involvement of all senses

Learning involves an interactive process whereby both pupil and teacher learn. Learning is double-edged involving two or more individuals with differing knowledge bases. This implies that all parties take a stand on "why" and "for what purpose" knowledge is important. Relevance and distinctiveness of knowledge, the "what", and variation to stimulate the senses in learning, the "how", become meaningful for the result [107]. Learning, thus involves the three didactical concepts of "what", "how" and "why", as well as the concepts of relevance, distinctiveness and variation.

The actual environment where learning takes place also plays an important part in learning and the exchange of experience [106]. An isolated, calm, pleasant and secure environment with adequate time allotted and access to pedagogical aids provide a firm basis for learning. Teaching can also be enhanced by creating a positive physical and mental atmosphere. The patient/youth should feel free to ask and has the right to receive answers to these questions. This can be achieved by tearing down the hierarchy to enable the pedagogical meeting.

2.3.4.4. *Learning style and multisensory learning*

Learning style is the way in which each student begins to concentrate, process, and retain new and difficult information [113, 114]. This interaction is different for different individuals. All people utilise a mixture of learning styles. Some may find they have one dominant style of learning, with far less use of other styles. Others may find they use different styles in different circumstances. By involving more channels into the brain during learning, we remember more of what we learn. Examples of available channels are [115]:

- Visual (spatial). Preferring pictures, images, and spatial understanding.
- Aural (auditory-musical). Preferring sound and music.
- Verbal (linguistic). Preferring words, both in speech and writing.
- Physical (kinesthetic). Preferring your body, hands and sense of touch.
- Logical (mathematical). Preferring logic, reasoning and systems.
- Social (interpersonal). Preferring to learn in groups or with other people.
- Solitary (intrapersonal). Preferring to work alone and use self-study.

Combining Gardner's and Dunn and Dunn's [113, 114, 116, 117], [118] learning styles results in modern multisensory learning.

2.3.5. Unresolved educational problems

When entering adolescence, children face a number of challenges in areas such as the parent-adolescent relationship, development of the self and identity, an expanding network of social relationships, pubertal changes and the development of sexuality [4-6]. Despite the importance for preparing girls in the transitional phase of early puberty it is difficult to obtain representative research from the girl's perspective. A better understanding of girls' personal experiences would be helpful to guide service provision, clinical recommendations and educational policy. Prior research has shown that sex-education in school and health services is important but more practical interventions and evaluations are needed [76, 79, 80, 119-123].

2.4. *Aims of the thesis*

2.4.1. General aims

The aim of the present thesis was to provide better understanding of the experiences of early adolescence and to evaluate an active, educational, group program held at youth health centers for 12-year-old girls. Furthermore the aim was to investigate potential sexual risk behavior and perception of being affected by an educational program for STI in second-year high school students.

2.4.2. Specific aims

- Describe 12-year-old girls' experience of early puberty (I).
- Elucidate early adolescent girls' attitudes towards menstruation and their thoughts and feelings towards their bodies. Furthermore, the aim was to see if there were differences in these attitudes and feelings between premenarcheal and postmenarcheal girls (II).
- Compare the effect of an active, educational, group program held at youth health centers with the present standard education on 12-year-old girls' attitudes toward menstruation (III).
- Investigate gender differences in second-year high school student adolescents with respect to sexual risk behavior and perception of being affected by an educational program about STI. A secondary aim was to investigate differences between students in university-preparatory gymnasium programs compared to those in vocational programs

3. Methods

3.1. *Selection of participants (I-IV)*

3.1.1. 12-year-old girls: focus group interviews (I)

Participants in this study were eighteen 12-year-old sixth-grade girls, in a municipality in southwestern Sweden (population 36 000). After group education (in study III) at the youth health centre [102] led by nurse-midwives, girls were asked to participate. All girls, parents and guardians received verbal and written information. Informed consent was received from parents and guardians to participate in the study. The Scientific Ethics Committee, Göteborg University, approved the study.

3.1.2. 12-year-old girls: descriptive and intervention study (II, III)

Sixth grade girls from eight schools were invited to participate in the study in late 1999. Most of these girls were 12 years old. The study area consisted of three nearby geographical areas from three municipalities in southwestern Sweden. The municipalities were a mixture of urban, village and rural populations. In one (Lerum), all schoolgirls were invited, while in the other two (Härryda and Skara), it was limited to girls from two schools in each area. Verbal and written information on the study was provided at the schools. Participation was voluntary and written consent was obtained from children, parents and guardians. Headmasters and schoolteachers were also informed. A questionnaire was filled in individually at school. The Scientific Ethics Committee, Göteborg University, approved the study.

In the intervention study (III) girls were assigned to two different interventions. Due to practical reasons related to school schedules, it was necessary to use different methods to assign pupils to active or standard intervention. In both Härryda and Skara, one school was designated to receive active intervention and one school to receive standard intervention. The schools in Härryda and Skara were comparable in housing environment. However, in four schools in Lerum, classes within the same school were designated to active or standard intervention.

3.1.3. 17-year-old adolescents: descriptive study (IV)

In the fall of 2005, second-year students from two counties in southwestern Sweden were invited to participate in the study. Participants were approximately 17 years old. Headmasters were informed. Teachers were not present when the study took place. An ethical discussion took place at the research and development unit for primary health care in Southern Älvsborg County and the study was considered ethically acceptable.

During compulsory 50-minute, STI-educational sessions lead by the youth center's personnel, verbal and written information for the study was provided. Although STI-education was compulsory, participation in the study was voluntary. The questionnaire was filled in voluntarily and individually following the sessions.

3.2. *Data collection (I-IV)*

3.2.1. Focus group interviews (I)

Data was obtained from focus group interviews [124]. The aim of the focus groups was partly to follow up ordinary educational sessions from the previous week, and partly to bring forth participants' experiences of early puberty. The present study focuses only on the latter aim. Four groups of 4 to 5 girls were interviewed in the presence of an observer. Guided by open-ended interviews participants were simply asked to relate their experiences of puberty. Broad, open-ended questions, such as "tell me your experience of being a 12-year-old girl" were used. If irrelevant subject matter was raised, it was dealt with, when necessary, by guiding the interview back to relevant subjects [125]. Each focus group interview, lasting one hour, was recorded, transcribed, depersonalized and read several times before initiating the main analysis.

3.2.2. Questionnaire: 12-year-old girls (II-III)

Each girl was given a two-part questionnaire to answer confidentially. Part one explored thoughts and feelings toward menstruation using a questionnaire developed by Morse [126] and translated by Lönnroth (Appendix 8.1 and 8.2). It was a valid

and reliable instrument using Likert-scales to measure adolescent responses to menarche. The Swedish versions of the questionnaires were tested for verification. Part one was in two versions, for pre- and post-menarcheal girls. After instruction, the girls chose either the pre- or postmenarcheal form. Both versions consisted of 58 items. 47 were identical and used in the study. The items were merged to six dimensions and a total score, according to Morse et al [126]. Part two of the questionnaire explored information sources and issues related to womanhood (Appendix 8.3). Furthermore, they were asked whether they had been verbally sexually harassed and what their reactions were if so. Part two of the questionnaire explored information sources and issues related to womanhood. The content validity of the questions in part two was tested in discussions with other researchers. These questions were then tested on a small group prior to this study.

In the intervention study (III) the girls completed the questionnaire a second time, four and a half to six months later. In the intervention study the change in scores between the first and second questionnaires was the basis for further statistical analyses.

3.2.3. Questionnaire: 17-year-old adolescents (IV)

Each student was given a 22-item questionnaire (Appendix 8.4). The anonymous questionnaire contained items on sexual experience and risk behavior and questions evaluating the impact of the educational program (Table 9-11). The content validity of all items in the questionnaire was ensured by repeated discussions with other researchers.

3.3. *Interventions (III, IV)*

3.3.1. Educational approach: 12-year-old girls (III)

In the active intervention study (III) a new structured, interactive, multisensory group learning education (IML) was compared to a standard intervention. Standard intervention consisted of lessons according to the established school curriculum but also included all other influences from family, peers, media, and society. Generally, Swedish pupils learn about the body at the ages of 8, 11 and 14. Subjects include puberty and the reproductive organs. Those girls receiving active intervention were, of course, also subjected to the standard intervention in addition to the active intervention. The active intervention may be described as follows:

Participants in active intervention were informed of a visit to the youth health centre one or two weeks after the first questionnaires. A structured group session was conducted following a method described by Højeberg [91] and further developed by Rembeck [63]. The group design was intended to strengthen the group [49, 72], thus increasing self-esteem [127, 128]. Meetings at the youth health centres established the centre as a future resource [102]. Prior to the meetings the nurse-midwife prepared dialogues for the different phases of the IML. The physical and psychological changes during puberty were the subjects included.

Girls came to the youth health centre accompanied by their school nurse. Two hours were allotted together with the school nurse and nurse-midwife. The focus was on a dialogue based on their thoughts and questions. The girls were treated as young women and not as pupils. Furthermore, they were treated as subjects and not objects.

The active intervention does not include passive forms of education, such as films or anatomical pictures. The pedagogical aids used in this active intervention seemed to capture attention, thus enhancing learning. Furthermore, the ambition was to use a

jargon similar to their own [95]. The details of every meeting varied depending on the group's responses. The goal was to give a favourable impression and stimulate curiosity towards womanhood.

First, brief information about the youth health centre was provided. The meeting then had the following sections:

1. Menarche a sign of potential
2. Cultural exposé
3. The contract
4. Signs of incipient womanhood
5. Making the invisible visible
6. Standing on the threshold of womanhood
7. Functions in female genital organs
8. Delicate words
9. The rite
10. The gynaecological examination
11. Sexuality
12. Your body speaks
13. The hot seat
14. Closure

Menarche a sign of potential

The meeting then began with the following text on a flip chart.

GIRL → WOMAN

The nurse-midwife asks: “when does a girl become a woman?” The girls were encouraged to reflect and discuss. If the girls said “menarche” the nurse-midwife “jumped on board” by asking “what is possible when you have reached menarche?” “When is it natural to receive menarche?” The midwife then told them “menstruation is a sign that you are women with potential! When a girl receives menarche she has the potential of becoming a mother.”

Cultural exposé

Stories of menstruation and of women from the past and other cultures were told. In this context, pictures of girls from different cultures just receiving their first menstruation were shown. They were encouraged to discuss feelings aroused by these stories. The historical and cultural exposé aimed to emphasize the importance of being on the threshold of adulthood.

The contract

After this introduction rules for the meeting were discussed. All were to feel free to question. No question was considered stupid and it was unacceptable to laugh at others in the group. This was intended to promote mutual respect.

The midwife asked if they knew what secrecy was. They were given time to explain that all personnel were bound to secrecy. Nothing said to the personnell would be heard outside the group. A secrecy pact was made within the group.

Signs of incipient womanhood

The nurse-midwife encouraged the girls to write down the physical and psychological signs of a girl changing into a woman on a flip-chart. The nurse-

midwife turned on music and left the room. After a short while the nurse-midwife reentered. The writings on the flip-chart were discussed and experiences shared.

Among other things the girls always wrote about gaining weight. This was a good opportunity to talk about normal increase in body fat during puberty. The normal increase of girls' hips for future pregnancies needed to be discussed. Girls maturing early are at risk for perceiving themselves as overweight whether they are or not.

Making the invisible visible

The girls were then told to close their eyes and touch themselves just under their pant waists. The nurse-midwife asked if they felt a hard bone called the pubic bone. They were then told to open their eyes. They learned that the uterus lay behind this bone. If the girls seemed ashamed when touching themselves the nurse-midwife asked the reason for this.

It was then time to present a "special person", said the nurse-midwife. A life-size Waldorf doll was presented (figure 1).



Figure 1 – The life-size Waldorf doll

Two girls were asked if they would like to open her abdomen. The doll was put on the floor with the girls beside it. This moment served as an icebreaker to get the quiet

girls to talk. The girls took out internal organs from inside the doll's abdomen and gave them to the others. The internal sex organs presented were the uterus, fallopian tubes, and ovums (figure 2).



Figure 2 – The open Waldorf doll

Even the external genital organs are present on the doll, with vaginal opening, clitoris and pudenda. It was explained why the latter were also called “privates”. The girls were shown a passage from the genitals via vagina, uterus, and fallopian tubes to the abdomen. It was explained to the girls that they have very important organs and that they should take care of them. They then replaced the organs and the doll was placed beside them in a chair.

Standing on the threshold of womanhood

The nurse-midwife went to the door and opened it. She stood on the threshold of two rooms and asked: - “Where am I standing?” She explained that when they entered the youth health centre they entered a room as young girls. They then went across a threshold to another room where they sat down. This represented their present stage in life. They then went on to become young women. They were told that the youth health centre contained many rooms, which they had not yet been in. This was comparable to life containing many future “rooms” to discover. The nurse-midwife explained that; “Just as I now stand on a threshold you also stand on a threshold in life. You are on the threshold of womanhood.” A dialogue about dreams and role models took place.

Functions in female genital organs

The girls were asked to place their tongues on the sides of their mouths and asked what it was that was wet? The girls answered and the function of saliva was discussed. The nurse-midwife informed them of mucous membranes in the walls of the uterus and vagina and between the labia and that discharges there have, to some

extent similar functions as saliva. Thus, all mucous membranes need to be moist. They then talked about the use of soap. They were asked if they had ever had soap in their mouths and how that felt and that consequently it was just as unsuitable to use soap when washing their genitals as for washing their mouths. Thus, they were recommended not to use soap for the genitals. In case of problems such as local irritation they were encouraged to sleep without underwear.

The menstrual cycle was described in detail. Menstruation was described as the uterus repapering with wallpaper flowing out from the uterus via the vagina. Menstruation includes the mucous membrane, egg and blood. Irregular menstruation the first year is common and menstruation generally ceases at around 50 years of age. All girls were encouraged to participate in the dialogue. Pedagogical aids used during the dialogue were full-scale clay models of the uterus, fallopian tubes and ovums (figure 3). The uterus was presented as a muscle. The difference between menstruation and ovulation was explained.



Figure 3 – Full-scale clay models of the vagina, uterus, fallopian tubes and ovums

Advice on suitable activities during menstruation, such as bathing and swimming were discussed. Sanitary pads and tampons were shown and the use of thin sanitary pads was discussed. The latter were said suitable to absorb menstrual blood but not for discharges. Information about menstrual pain and possible treatment was presented. The nurse-midwife also informed them of what help the youth health centre provided.

They were taught when conception was possible. They were informed that the impregnated egg went from the end of the ovum to the uterus in 4-5 days. The clay uterine model was opened up to show a little hole inside. The mucous membrane within the uterus was described as a sheet that thickens during pregnancy and becomes down-like embedding the small fetus.

Delicate words

The flip chart was used again and the girls were encouraged to write names denoting female genitals, including nice, rude, childish or medical words (figure 4). The girls were then allowed to react to and talk about these words. They could mention if some words hurt when they were used as harassment.



Figure 4 – Example of girls' own names denoting female genitals (example in Swedish)

Among other words they were harassed with, words commonly mentioned were cunt, whore, slut, sow, hussy and bitch. They spoke of how it was common to be called different insulting names and how they felt when this happened. The words were then transformed by presenting the sources of the words. For example, the Swedish word "fitta" (cunt) originally had another meaning such as humid meadowland, little well or riverbed. These new meanings of the word disarmed the strong negative feeling of the words. The nurse-midwife asked if they could explain

what a “whore” was. If the girls said it was a prostitute a forum about what a prostitute was was started. Then a discussion about the word “whore” followed about who in their surroundings had been called “whore” and how they felt about it. In the continuing dialogue the nurse-midwife explained that in the past a “whore” was an unwed mother and that it was scandalous to be pregnant without a husband.

The nurse-midwife: “It was also easy for the man to deny fatherhood if they were not married since there was no medical way of proving fatherhood. Today the word “whore” is used to insult girls but usually has nothing to do with pregnancy.”

The dialogue continued depending on the girls’ responses to being harassed. The content of the dialogue illustrated how those giving insults did not often understand that some words hurt more than others and did not realise that they hurt as much as they did. The dialogue also included the importance of supporting each other when insulted and recommended them to turn to a teacher, parents or other adult when harassed in this way. A contract was made in the group promising to help each other in these situations. The clear message was that nobody ever was a whore and should never accept being called one.

The rite

A bowl of pears representing the uterus and almonds shaped like the ovum was placed before the girls (figure 5). They were told that a fruit tree after exposure to sun and rain produces immature fruit that gradually ripens. The nurse-midwife: “This is analogous to the development of the human female. She requires food, a place to live, a bed, love and human contact to begin to mature and evolve as a woman.”

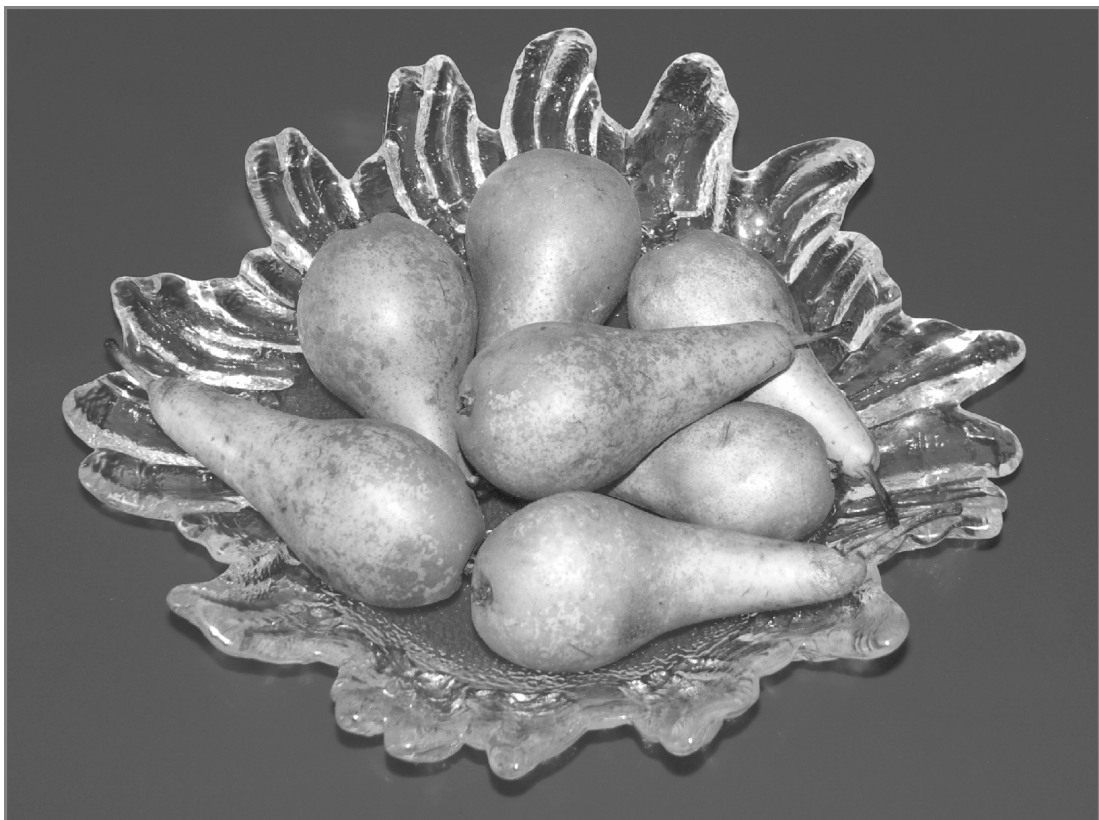


Figure 5 – Pears used to represent the uterus

Soft, relaxing, background music was played while the girls were invited to taste the uterus-sized fruit and sweet almonds formed as ovaries. The nurse-midwife ended this part of the meeting by saying: “with this fruit we at the youth health centre

wish you a good life as women”. The main purpose of this was to associate womanhood with positive feelings. Another purpose was to provide energy for the remainder of the session.

The gynaecological examination

The girls then gathered in another room where a gynaecological chair was demonstrated and the examination explained. The Waldorf doll (figure 1-2) was placed on the gynaecological chair to demonstrate a gynaecological examination.

The nurse-midwife explained the importance of a gynaecological examination and its importance for women’s health. The nurse-midwife said: “It deals with parts of your genitals that you do not see. But if something happens with the genital organs a nurse-midwife or gynaecologist can examine and help you to find out that everything is all right. It does not hurt and if you feel pain the examination can be stopped immediately. It usually takes only a few minutes.” The nurse-midwife further explained that before having sex with someone almost nothing happens with her genitals requiring a gynaecological examination and that an STI can only be acquired through sexual activity. They were reminded about the passage between the vagina and the abdomen with the risk for the spread of infection.

Another clay model of the genitals was shown. The parts with names and functions were described. The model showed a full-size version of the outer and inner aspects of the pudenda, vaginal opening, urethra and clitoris (figure 3). The clitoris was described as providing sexual pleasure and touching or caressing the clitoris often feels pleasant. The nurse-midwife describes the hymen by showing a wrinkled hair band (figure 6).

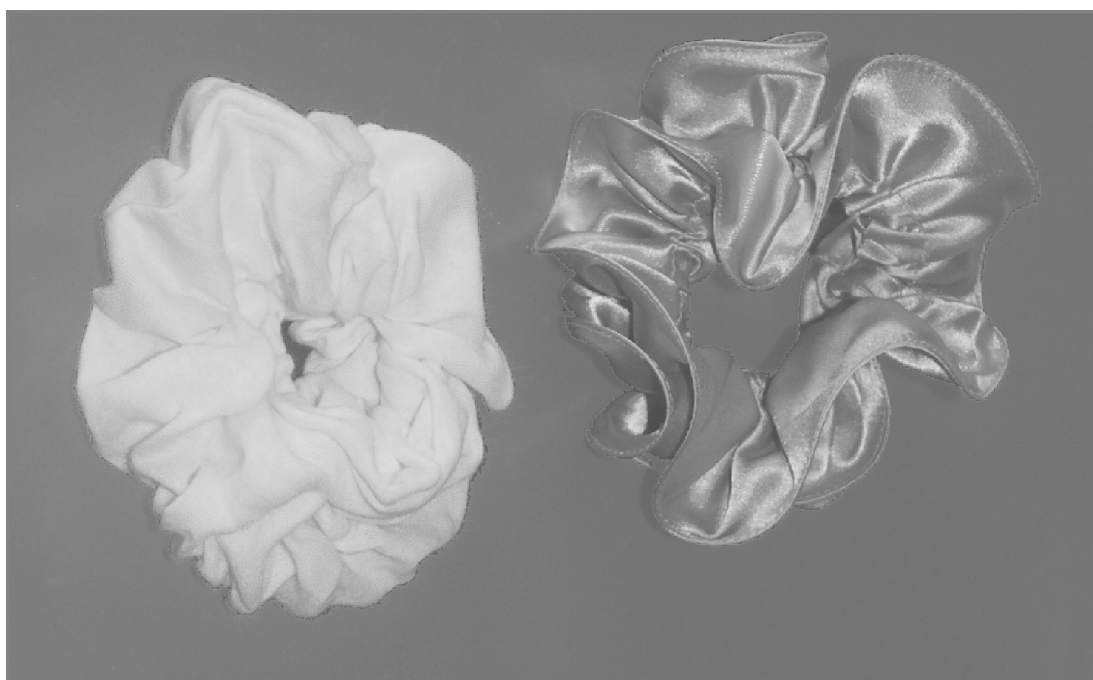


Figure 6 – Wrinkled hair band representing the hymen

The hymen was described not as a membrane but rather as a wrinkled mucous membranous ring at the entrance of the vagina [129]. Here, they were informed it was possible to guide their fingers through the vagina to the top of the lower part of the uterus known as portio vaginalis, which felt like the tip of the nose.

Sexuality

The girls were told that sexuality was threefold or that it has three functions. First comes an innate sexuality and feelings of physical pleasure that can be aroused without the involvement of others: that when they touch and caress their own sexual organs it is usually pleasurable. They were told that masturbation is something positive. Dialogue concerning sexuality was initiated from the girl's responses to the question of how sexual lust felt. Secondly, they were told of sexuality involving another person. The girls were asked if they knew when it was time for a sexual experience with a partner. The dialogue continued by discussing a suitable time for a first sexual encounter. The nurse-midwife: "Some people feel attracted to persons of the same sex and others to people of the opposite sex. It is important to respect yourselves and your partner." However, they were also told that having sexual activity with another person was not for children of their age.

Thirdly, they were told of sexuality leading to reproduction. The nurse-midwife: "It often takes many years after menarche until a woman and her partner decide to be parents. To have intercourse is to know that you can be a parent and to take responsibility for avoiding unwanted pregnancy." The girls were asked if they knew of any contraceptives and a dialogue about contraceptives followed. Information was provided about condom use and emergency contraception.

Your body speaks

The nurse-midwife told the girls to listen to their bodies. The girls were requested to point out where in their bodies they felt it when something was right or wrong. They were given time to think and talk about how they could understand themselves by listening to their bodies. The unequivocal message to the girls was that if they were uncertain of how they felt it was better to wait until they were sure. This could be applicable when considering when to start sexual activity with a partner.

"The hot seat"

After discussing the gynaecological examination and sexuality the girls were returned to the first room. Here they played the "hot seat" game, a method dealing with attitudes. During this game the nurse-midwife made a statement and those in agreement stood up and switched chairs with others in agreement. This physical activity facilitated dialogue. The intention of this activity was to have the girls take a stand and let them hear each other's opinions. If someone wanted to change their opinion they could do so.

Closure

The girls were told that if they came upon something they did not want to discuss in front of the other girls they were welcomed back for a personal meeting. A calling card was given to them with the youth health centre's telephone number.

3.3.2. Education: 17-year-old adolescents (IV)

It was not intended to objectively evaluate the effect of the educational sessions given to 17-year-old adolescents. Focus was on comparing girls' and boys' subjective reactions or experiences of a given lesson.

The purpose of the 50-minute sessions was to provide information and discuss matters of STI including risk taking, sexual behavior, responsibility, condoms, Swedish law and contact tracing. Furthermore, information on testing and physical and psychological aspects of STI was provided.

In a class of girls and boys, sessions began with a presentation by the center's personnel. The importance of STI-education was explained and a discussion was initiated to establish sexuality as something positive, exciting, pleasurable and fun. Furthermore, emphasis was placed on risk, responsibility and prevention. Students were informed of symptoms, incubation time, testing, consequences and treatment. Information on the STI-protection law and contact tracing was provided. Students were then informed about how and where they could be tested.

The educational process included encouraging students to relate their knowledge of STI whereby the personnel then provided additional information. During the session students were encouraged to ask questions. Thus, sessions were adapted to the student's level of knowledge. Dialogue and discussion were encouraged. An STI brochure and the youth center's calling card were provided at the close of the sessions.

3.4. Data analysis (I-IV)

3.4.1. Qualitative data (I)

The interviews were subjected to a method of qualitative content analysis in which both the manifest and the latent content was sought out [130]. The transcribed interviews were first read for an overall understanding of the content related to the research question. Thereafter, meaning units relating to the aim of the study were identified, condensed, grouped and interpreted. The data was re-examined and reassessed. The transcripts were discussed with the co-author for comparison and validation [124]. Codes were identified, designated and grouped into sub-themes. The data was then further analyzed by reading the sub-themes searching for new associations and meanings. In the final stage, sub-themes were transformed to main themes according to Graneheim and Lundman [131].

3.4.2. Descriptive data (II)

Student's t-test was used when comparing continuous data, such as age, between groups. Mann-Whitney's test was used in case of skewed data and for group comparison of ordinal data. Because there is no international consensus on how to present ordinal scales or analyse their differences between groups we have presented data with both mean and median. Furthermore, when comparing groups we used both the parametric Students t-test and the non-parametric Mann-Whitney's test, although the authors preferred the latter. For group comparison of dichotomous data Chi square with Yates correction was used.

In covariance analysis at least one variable was measured by ordinal scale. Variables measured by ordinal scale were transformed to a rank variable. Logistic regression was performed in case the dependent variable in a covariance analysis was dichotomous.

Items with ordered response alternatives (Table 3) had five response alternatives. When presenting them in Table 3 the understanding of data was simplified by

merging to three responses. However, when further analysing data in Table 3 with covariance analysis all five response alternatives were used.

All P values ≤ 0.01 were considered statistically significant. The program SAS version 8.02 (SAS-institute) was used for covariance analysis and Epi Info version 3.2.2 – Windows version (CDC, Atlanta) for logistic regression. Epi-Info version 6.04d – DOS version (CDC, Atlanta) was used for other analyses.

3.4.3. Intervention data (III)

Changes in attitudes were constructed by calculating raw differences between the first and second questionnaire. Furthermore, these raw differences were transformed to improvement, worsening or unchanged, given the values +1, -1 and 0, respectively. This was performed for each of the six dimensions and total score (part 1 of the questionnaire). Differences in variance between groups were tested using Bartlett's test for homogeneity of variance. Student's t-test was not performed in case of different variances between groups.

Because there was no international consensus on how to compare changes in ordinal scales between groups we used both the parametric Students t-test and the non-parametric Mann-Whitney's test applied to both raw and transformed differences, although the authors preferred the latter [132].

3.4.4. STI-questionnaire (IV)

Differences in proportions of girls and boys were analyzed with two-tailed chi-square with Yate's correction (Table 9). Mean age differences for girls and boys were analyzed with Student's t-test (Table 9). Differences in ordinal scales between girls and boys were analyzed with Student's t-test and Mann-Whitney's test (Table 9).

To further analyze gender differences in the perception of STI-education a logistic regression was performed with sex as the dependent variable. Independent variables were "going steady", "had experience of sexual intercourse", "type of high school program" and the item being evaluated. Students in an individual program were excluded. One regression was made for each evaluated item (Table 10).

To further analyze differences between students in the two main educational programs in their perception of STI-education a logistic regression was performed with educational program as the dependent variable. Independent variables were "going steady", "had experience of sexual intercourse", sex and the item being evaluated. Students in an individual program were excluded in this analysis. One regression was made for each item evaluated (Table 11). The program Epi-Info version 3.3.2 (CDC, Atlanta) was used.

4. Results

4.1. *Transition to puberty: Experiences of 12-year-old girls (I)*

In the following section 12-year-old girls' experiences of entering puberty are presented. Four themes were extracted from the data showing the variation of the experiences of first entering puberty (Table 1).

Table 1 – Main themes and Sub themes from focus group interviews

Main themes	Sub themes
Growing up - awareness, transition and longing	<ul style="list-style-type: none"> • The new body • Relationships • Longing to decide for themselves
Mother – a close and important relationship	<ul style="list-style-type: none"> • Mother close at hand • A dynamic relationship • Seeing themselves as mothers
Menarche - a personal and important occurrence	<ul style="list-style-type: none"> • Seeking someone to trust and confide in • Menstruation: intimate and private
Sex and relationships	<ul style="list-style-type: none"> • Expression of sex and feelings • Observing boys' sexual behaviour • Knowledge of sex

4.1.1. Growing up: awareness, transition and longing

Twelve year-old girls were well aware of their own and other's physical development. Some girls entered puberty earlier and some later but they always compared themselves to others. Girls were impressionable and the media's image of young women's appearance had a great influence on them. They reached out for new friends. They longed for the "free" life older girls appeared to have but deep down felt incapable of dealing with the responsibility.

Developing a completely new body was experienced as strenuous. The girls were concerned about not knowing how their bodies would look later on. Some girls in this study expressed feeling that adults should more frequently inform them of their physical development.

The relationships were constantly changing with awareness that puberty strongly affected social lives. People of the same age developed differently where some entered puberty earlier and others later.

The girls longed to behave like older girls. They attempted to influence parents and test limits. Some parents were more permissive than others.

4.1.2. Mother: a close and important relationship

In this study, girls often talked about their mothers. The girls described their mothers as someone close, someone they could talk to and trust. Mothers bore the brunt of the girls' emotional outbursts and struggle towards independence. It also became apparent that the girls thought much about what it would be like to be a parent. They believed that it would be both fun and tough. For example, would they be able to maintain a relationship while caring for the needs of a child? But to become a mother was something most saw as self-evident.

It was evident that the girls longed for a deep and warm relationship with their mothers. The girls wanted to be respected and listened to even if they had another opinion than their mothers. It was apparent that mother stood for security.

A close mother-daughter relationship was important, but this was not conflict-free. The girls' desire for independence sometimes put a strain on the relationship.

They wanted to be in agreement and understand their mothers but to also have their own way. These conflicting feelings aroused a sense of guilt.

Most girls in this study had positive expectations of being a mother. They were aware that a child-parent relationship influenced parenthood. The girls could see both the positive side of motherhood, at the proper age, and the difficulties.

4.1.3. Menarche - a personal and important occurrence

Menarche was a very personal and important event. Most girls were very selective and discrete about discussing menarche with others, especially with the opposite sex. It was the mother the girls turned to in this situation.

The girls felt they could trust and talk to their mothers about puberty and menstruation. They felt their mothers wanted to prepare them, were open and capable of communicating. The girls agreed that their mothers should be the first to know when they received menarche, but needed them to treat the questions of menstruation discreetly. Who took the initiative to dialogue differed. Sometimes it was the daughter and sometimes the mother.

Menarche was a powerful experience entailing many emotions and thoughts. For many girls menarche was a mixture of excitement, anxiety, pride and embarrassment.

4.1.4. Sex and relationships

Girls were very interested in sex and were frustrated by not knowing more. They felt adults wanted to wait until the girls were older before talking about sex but couldn't understand why. They felt sexuality physically and could also verbalize these feelings. The girls had observed that a boy's way of expressing sex was different from their own. They observed that in the company of boys they were quieter and more discreet about sex. They were anxious about and resigned to frequent verbal sexual harassment.

It came to light that girls thought considerably about sex, but didn't talk about it publicly. Most of the girls talked quite a lot about sex with their friends. The girls noticed while growing up that adults were disturbed when the girls touched their genitals.

The girls wanted to talk about boys and their sexuality. They noticed a difference in how boys communicated about sex.

Knowledge of sex describes the need to talk about sex and discuss it to gain more knowledge. The girls understood that adults avoided speaking and informing about sex because they were concerned it would hasten their sexual debut. The girls were disappointed with teachers and adults who were not telling them about sex. However, the girls said most of the teachers could handle talking about sex.

4.2. Attitudes and feelings towards menstruation and womanhood in 12-year-old girls (II)

Of 403 pupils invited to participate in the study, 58 (14.4 %) chose not to participate. Not all attended school when the study took place, so of the remaining 345 pupils, 309 (90 %) participated and answered the questionnaires. Some did not answer all questions.

Name lists of the 403 invited girls revealed that 1.2% had Finish names and 8.4% other non-Swedish names indicating possible non-Swedish origin. The corresponding figures for the 309 girls answering the questionnaire were 1.6% and 9.4%. The proportion of girls with a possible non-Swedish origin did not differ between the invited girls and those answering the questionnaire ($p=0.82$, chi-square). The girls'

living accommodations were flats in 15.4%, town houses in 20.8% and houses in 63.8%. There were no statistically significant differences in living accommodations between pre- and post menarcheal girls.

4.2.1. Premenarcheal and postmenarcheal girls

Most girls 216/309 (70 %) had not reached menarche. The mean age (standard deviation, range) for girls not yet menstruating was 12.4 (0.35, 11.4-13.8) years and for girls who had had their first period 12.6 (0.39, 11.8-14.3) years. Thus, girls not yet menstruating were slightly younger than girls who had had their first period ($p=0.00003$). In 57 of the 93 girls who experienced menarche we had reliable information on how long they had menstruated. They had menstruated for a mean of 0.58 years with SD 0.42 (median 0.5 with interquartile range 0.25-0.83).

Postmenarcheal girls were less positive towards menstruation compared to premenarcheal girls ($p=10^{-6}$, Student's t-test and Mann-Whitney's test, Table 2).

Table 2. Comparison of premenarcheal versus postmenarcheal girls' attitudes towards menstruation (part one in questionnaire)

	Number ^a		Mean ^b		Median		P-value ^c	
	Pre ^d	Post ^d	Pre	Post	Pre	Post	T-test	M&W
Positive feelings ^e	186	85	28.3 (7.55)	23.4 (6.83)	28.0	23.0	10⁻⁶	10⁻⁶
Negative feelings ^f	186	81	38.8 (7.21)	38.8 (9.07)	39.0	38.0	1.0	0.82
Menstrual symptoms ^g	198	87	13.6 (2.28)	13.7 (3.65)	14.0	14.0	0.82	0.73
Openness ^g	200	88	15.5 (3.49)	16.1 (4.13)	15.0	16.0	0.24	0.25
Acceptance of menarche ^h	206	87	12.6 (2.06)	13.1 (2.76)	13.0	13.0	0.062	0.049
Living with menstruation ⁱ	202	89	22.3 (3.29)	22.7 (3.93)	22.0	22.0	0.38	0.42
Total score ^j	143	62	141 (16.6)	136 (21.4)	142	139	0.065	0.17

- ^a Number of girls providing complete answers to the first questionnaire
^b Mean score with standard deviation within paranthesis
^c P-value for comparison of groups; T-test: Students t-test; M&W: Mann-Whitney's U-test
^d Pre: Premenarcheal girls; Post: Postmenarcheal girls
^e Ten questions with a maximum of 50 scores (high scores indicate more positive feelings)
^f Thirteen questions with a maximum of 65 scores (high scores indicate less negative feelings)
^g Five questions with a maximum of 25 scores (high scores indicate less symptoms or more openness)
^h Four questions with a maximum of 20 scores (high scores indicate greater acceptance)
ⁱ Six questions with a maximum of 30 scores (high scores indicates easier living)
^j Forty-seven questions with a maximum of 235 scores (high scores are more positive)

4.2.2. Experiences and feelings of their bodies

Many girls (43 %) did not affirm the statement "I like my body" and almost one fourth stated being teased for their appearance (Table 3).

In covariance analyses with Morse dimensions 1-6 (described in Table 2) as dependent variable, all statements according to Table 3, girl's age, having experienced menarche or not and the possible housing conditions as independent variables (dimension and statements as rank variables, menarche and housing conditions as class variables) showed that the statement "I want to be an adult" was important. The more the girl agreed to this statement the greater positive feeling ($p=0.0002$, Covariance analysis) and the greater her openness ($p<0.004$, Covariance analysis). Another important statement was "I like that my body develops". The more the girl agreed to this statement the higher positive feeling ($p<0.0001$, Covariance analysis) and the greater her openness ($p<0.004$, Covariance analysis). The more they agreed to the statement "I have been teased for my appearance" the

lower the score for negative feelings indicating more negative feelings ($p=0.009$, Covariance analysis).

Table 3. Experiences and feelings among 12-year old girls about their bodies (part two in questionnaire)

	N	Do not agree	Do not know	Agree
I like my body	303	17.5%	25.7%	56.8%
I like my self	304	9.9%	18.4%	71.7%
I have been teased for my appearance	299	64.9%	12.7%	22.4%
I like that my body develops	305	9.8%	36.4%	53.8%
I want to be an adult	303	21.5%	33.7%	44.9%
I decide over my body	304	8.6%	20.4%	71.1%

In this analysis adjusting for covariates it seemed that being pre- or postmenarcheal still remained as a variable correlated to the dimension positive feelings ($p<0.001$, covariance analysis) and also slightly to acceptance of menarche ($p=0.058$, covariance analysis). These p-values are almost the same as corresponding unadjusted p-values in Table 2.

In covariance analyses with Morse dimensions 1-6 (described in Table 2) as dependent variable, all statements according to Table 3, girl's age, having experienced menarche or not and the possible housing conditions as independent variables (dimension and statements as rank variables, menarche and housing conditions as class variables) showed that the statement "I want to be an adult" was important. The more the girl agreed to this statement the higher positive feeling ($p=0.0002$, covariance analysis) and the greater her openness ($p=0.004$, covariance analysis). Another important statement was "I like that my body develops". The more the girl agrees to this statement the higher positive feeling ($p<0.0001$, covariance analysis) and the greater her openness ($p=0.004$, covariance analysis). The more they agreed to the statement "I have been teased for my appearance" the lower the score on negative feelings indicating more negative feelings ($p=0.009$, covariance analysis). In this analysis adjusting for covariates it seemed that being pre- or postmenarcheal still remained as a variable correlated to the dimension positive feelings ($p<0.001$, covariance analysis) and also slightly to acceptance of menarche ($p=0.058$, covariance analysis). These p-values are almost the same as corresponding unadjusted p-values in Table 2.

To investigate how items in Table 3 were associated with each other a covariance analysis was performed with the item "I want to be an adult" as dependent variable. All other items in Table 3 and having experienced menarche or not were independent variables (items in Table 3 as rank variables and menarche as class variable). The only association found was that the more the girl liked that their body developed the more they wanted to be an adult ($p<0.0001$, covariance analysis).

4.2.3. Who informed the girls and who they could talk to

Seventy-nine per cent stated they were informed about menstruation by their mothers (Table 4). Postmenarcheal girls felt they were more often informed by their mothers compared to premenarcheal girls ($p=0.007$, chi square). The mother was also cited the person they could most easily "chat" with about their period (Table 4). Female friends are, after mothers, the ones that girls "chat" most often with about menstruation (73 %) (Table 4). Male friends are not usually the ones girls talk to about menstruation, sex and relations (Table 4). Postmenarcheal girls could talk

about menstruation with male friends to a greater extent compared with premenarcheal girls ($p=0.001$, chi square).

In other covariance analyses with Morse dimensions 1-6 (described in Table 2) as dependent variable, all responses according to Table 4, girl's age, having experienced menarche or not and the possible housing conditions as independent variables (dimension as rank variable, response to items, menarche and housing conditions as class variables) showed that the dimension openness was highly correlated to several items in Table 4. Higher openness was correlated to being told about menstruation by female friend ($p<0.0001$, covariance analysis), being told/informed about menstruation by magazines ($p<0.0009$, covariance analysis), can talk about menstruation with female friend ($p<0.0001$, covariance analysis), being informed about sex by TV-program ($p<0.004$, covariance analysis) being informed about sex by magazines ($p<0.01$, covariance analysis) and can talk about sex with female friend ($p<0.004$, covariance analysis). Lower openness was correlated to being informed about sex by no one ($p<0.003$, covariance analysis) and can talk about relations with no one ($p<0.01$, covariance analysis). Being informed about menstruation by sister was associated with higher acceptance of menarche ($p<0.01$, covariance analysis). Being able to talk about menstruation with the father was associated with having less negative feelings (higher scores on the dimension negative feeling) towards menstruation.

When analysing responses to items described in Table 4 for the 57 postmenarcheal girls for whom we had reliable records for the time since menarche we used a logistic regression model where response to item was the dependent variable and girl's age and time since menarche were independent variables. Girls who had had menarche earlier were more likely to say yes to the statement that they could talk about relationships with male friends compared with girls having had menstruation later on ($p=0.005$, logistic regression). Time after menarche did not influence the responses for other items in Table 4.

Table 4. Who told the girls and with whom could they talk ($n=307$) (part two in questionnaire)

	Was told about ... by...		Could talk about ... with ...		
	Menstruation	Sex	Menstruation	Sex	Relations
Mom	79.1 %	34.9%	83.1%	44.6%	63.0%
Dad	4.9 %	7.6%	10.1%	7.5%	19.3%
Sister	15.4 %	8.6%	22.9%	14.8%	25.2%
Brother	0.7 %	2.3%	2.0%	3.0%	8.2%
TV-program	16.0 %	27.7%	---	---	---
Female friend	43.5 %	58.4%	73.0%	73.1%	86.0
Male friend	0.0 %	8.6%	2.6%	9.2%	18.6%
Teacher	40.9 %	32.5%	10.8%	5.6%	5.1%
School nurse	67.1 %	36.5%	46.6%	27.2%	20.6%
Magazines	29.6 %	33.9%	---	---	---
Other person	6.2 %	4.3%	9.1%	6.9%	8.8%
No one	1.6 %	9.5%	1.3%	8.2%	2.9%

4.3. Improving pre- and post menarcheal, 12-year-old girls' attitudes toward menstruation (III)

Of 403 pupils invited to participate in the study 58 (14.4 %) chose not to participate. Of the remaining 345 pupils, 283 (82 %) participated and were followed up with a

second questionnaire. The follow-up rate was 80% in the active intervention group and 84% in the standard intervention group. Loss of follow-up was due to; sickness, relocation, attended special lectures, teachers neglecting to call students, incorrect questionnaires and incorrectly reported personal code numbers.

The mean, standard deviation for the mean and median age were for the active intervention group 12.5, 0.37, and 12.5 respectively and for the standard intervention group 12.4, 0.36, and 12.4 respectively. The difference between groups was not statistically significant.

At the time of the first questionnaire there were 111/159 (74 %) in the standard intervention group and 99/151 (66 %) in the active intervention group that had not reached menarche. These differences were not statistically significant.

There was a small difference between the standard intervention group and the active intervention group in the “Acceptance of menstruation” dimension (Table 5). The two groups were otherwise comparable.

Table 5. Baseline values for active and standard intervention groups

	Number ^a		Mean		Median		SD ^b		P-value ^c	
	SI ^d	AI ^d	SI	AI	SI	AI	SI	AI	T-test	M&W
Positive feelings ^e	142	129	27.0	26.5	28.0	26.0	7.8	7.6	0.58	0.45
Negative feelings ^f	137	130	38.0	39.6	38.0	40.0	7.7	7.8	0.098	0.086
Menstrual symptoms ^g	143	142	13.5	13.8	14.0	14.0	2.9	2.7	0.45	0.53
Openness ^g	145	143	15.7	15.7	16.0	15.0	3.6	3.8	0.93	0.92
Acceptance of menarche ^h	153	140	12.5	13.1	13.0	13.0	2.1	2.5	0.029	0.053
Living with menstruation ⁱ	148	143	22.0	22.8	22.0	23.0	3.3	3.6	0.052	0.053
Total score ^j	104	101	139	141	141	142	17.7	18.9	0.49	0.45

^a Number of girls providing complete answers to the first questionnaire

^b Standard deviation of mean

^c P-value for comparison of groups; T-test: Students t-test; M&W: Mann-Whitney’s test

^d SI: Standard Intervention group; AI: Active Intervention group

^e Ten questions with a maximum of 50 scores (high scores indicate more positive feelings)

^f Thirteen questions with a maximum of 65 scores (high scores indicate less negative feelings)

^g Five questions with a maximum of 25 scores (high scores indicate less symptoms or more openness)

^h Four questions with a maximum of 20 scores (high scores indicate more acceptance)

ⁱ Six questions with a maximum of 30 scores (high scores indicate easier living)

^j Forty-seven questions with a maximum of 235 scores (high scores are more positive)

Girls experiencing their first period between the two questionnaires showed greater improvement in their attitudes in the active intervention group compared to the standard intervention group. This favor for the active intervention group was seen in the “Positive feelings” and “Openness” dimensions (Table 6). It was also seen in the total score (Table 6). In Lerum, we saw an even larger difference between the two groups in the “Positive feelings” (p=0.0050, t-test, p=0.019, Mann & Whitney’s test, p=0.0037, Mann-Whitney’s test on transformed data) and “Openness” dimensions (p=0.014, t-test, p=0.0062, Mann-Whitney’s test, p=0.0072, Mann-Whitney’s test on transformed data).

Table 6. Change in attitudes for girls experiencing menarche during the interval between the two questionnaires

	Number ^a		Mean		Median		SD ^b		T-test	P-value ^c	
	SI ^d	AI ^d	SI	AI	SI	AI	SI	AI		M&W	MWT
Positive feelings	20	12	-3.4	+0.4	-2.0	+2.0	6.0	6.5	0.11	0.14	0.043
Negative feelings	22	14	+0.77	+2.6	0.0	+3.0	6.7	6.8	0.94	0.43	0.56
Menstrual symptoms	18	12	-1.0	+0.92	-0.50	+1.0	3.1	3.1	---- ^e	0.11	0.18
Openness	22	15	+0.32	+2.9	0.0	+3.0	3.8	4.2	0.060	0.027	0.073
Acceptance of menarche	25	13	+1.1	+1.5	+1.0	+1.0	3.0	3.6	0.73	0.49	0.27
Living with menstruation	24	14	+1.2	+1.4	0.0	+1.5	3.2	2.7	0.80	0.60	0.40
Total score	8	8	-2.1	+10.3	+2.0	+10.0	13.5	4.0	---- ^e	0.013	0.063

^a Number of girls providing complete answers to the first questionnaire

^b Standard deviation of mean

^c P-value for comparison of groups; T-test: Students t-test; M&W: Mann-Whitney's test MWT: Mann-Whitney's test using transformed data

^d SI: Standard Intervention group; AI: Active Intervention group

^e Variances differ between groups

When focusing on all pre-menarcheal girls at the first questionnaire, which also included girls that were pre-menarcheal at the time of the second questionnaire, no differences could be seen between groups (Table 7).

Table 7. Change in attitudes for all girls who were pre-menarcheal at first questionnaire

	Number ^a		Mean		Median		SD ^b		T-test	P-value ^c	
	SI ^d	AI ^d	SI	AI	SI	AI	SI	AI		M&W	MWT
Positive feelings	81	71	+0.21	+0.24	0.0	0.0	5.9	5.9	0.64	0.41	0.47
Negative feelings	77	74	+0.74	+0.84	0.0	+0.50	6.3	6.2	--- ^e	0.87	0.98
Menstrual symptoms	82	83	-0.62	-0.012	0.0	0.0	2.6	2.4	0.12	0.26	0.64
Openness	86	85	+1.1	+1.3	+1.0	+1.0	3.2	3.2	0.63	0.71	0.73
Acceptance of menarche	94	84	+0.70	+0.31	0.0	0.0	2.4	2.2	0.26	0.22	0.29
Living with menstruation	92	79	+1.5	+1.5	+1.0	+2.0	3.3	3.5	0.91	0.51	0.81
Total score	43	51	+2.9	+4.9	+2.0	+6.0	13.9	10.3	0.43	0.49	0.11

^a Number of girls providing complete answers to the first questionnaire

^b Standard deviation of mean

^c P-value for comparison of groups; T-test: Students t-test; M&W: Mann-Whitney's test MWT: Mann-Whitney's test using transformed data

^d SI: Standard Intervention group; AI: Active Intervention group

^e Variances differ between groups

Girls who had had menarche before the first questionnaire improved more in the “Living with menstruation” dimension in the standard intervention group compared to the active intervention group (Table 8).

Table 8. Change in attitudes for girls who had had menarche before first questionnaire

	Number ^a		Mean		Median		SD ^b		T-test	P-value ^c	
	SI ^d	AI ^d	SI	AI	SI	AI	SI	AI		M&W	MWT
Positive feelings	30	39	-1.4	+0.62	-1.5	+1.0	6.9	5.3	0.18	0.11	0.15
Negative feelings	31	36	+1.0	-0.44	+2.0	-2.5	8.4	6.3	0.42	0.19	0.12
Menstrual symptoms	29	37	-1.1	-1.4	-1.0	-1.0	3.6	3.9	0.76	0.74	0.81
Openness	32	41	+0.94	+0.93	+1.5	+1.0	3.6	3.0	0.99	0.89	0.96
Acceptance of menarche	36	41	-0.056	+0.20	0.0	0.0	2.9	3.0	0.71	0.68	0.64
Living with menstruation	34	39	+2.1	+0.26	+2.0	+1.0	3.3	3.0	0.018	0.022	0.16
Total score	18	19	-2.6	-2.8	-1.0	-6.0	15.0	14.3	0.96	0.73	0.68

^a Number of girls providing complete answers to the first questionnaire

^b Standard deviation of mean

^c P-value for comparison of groups; T-test: Students t-test; M&W: Mann-Whitney’s test MWT: Mann-Whitney’s test using transformed data

^d SI: Standard Intervention group; AI: Active Intervention group

4.4. Role of gender in sexual behaviour and response to education in sexually transmitted infections in 17-year-old adolescents (IV)

610 second-year students in the two schools were listed. Of these, 451 attended schools the lecture the questionnaire was distributed. Two non-Swedish speaking exchange students were excluded. Of the 449 students invited, five returned blank questionnaires. Some of the remaining 444 students chose not to answer all questions. 237 (53.4%) students were preparing for higher studies, and 195 were in vocational programs (43.9%) while 12 (2.7%) were in individual programs.

4.4.1. Gender differences in sexual experience and sexual risk behaviour

Girls attended programs preparing for higher studies more frequently than boys (Table 9). Girls had greater experience of sexual intercourse than boys (Table 9). Furthermore, girls had more frequent sexual experiences with someone of the same sex (Table 9). Girls tested for STI more often than boys (Table 9). The most common STI test was for *C. Trachomatis*. HIV was rarely tested for. Boys used condoms more often than girls (Table 9).

Table 9. Gender differences in sexual experience and sexual risk behavior^a

Item ^b	Female	Male	P
Preparing for study at university (194/195 ^c ; 238/239 ^c)	62 %	49 %	0.011
Going steady (199/200 ^a ; 241/244 ^a)	38 %	26 %	0.013
Going steady with someone of the same sex (70/75 ^d ; 56/63 ^d)	5.7 %	5.4 %	0.62
<i>Sexual experience</i>			
Experience of oral sex (124/200 ^a ; 124/244 ^a)	8.1 %	8.1 %	0.82
Experience of sexual intercourse (199/200 ^a ; 241/244 ^a)	64 %	54 %	0.046
Age at first sexual intercourse – Years (SD) (126/127 ^e ; 119/130 ^e)	15.2 (1.0)	15.2 (1.2)	0.74
Had sex with someone of the same sex (197/200 ^a ; 238/244 ^a)	6.1 %	1.7 %	0.014
<i>Sexual risk behavior</i>			
Tested for STI (95/94 ^f ; 86/86 ^f)	64 %	22 %	< 10 ⁻¹⁰
Used condom for protection (126/127 ^d ; 125/130 ^d)	1.6 (1.1) ^g	1.9 (1.0) ^g	0.012 ^g
	2 (0-3) ^g	2 (1-3) ^g	0.015 ^g
Had intercourse in a foreign country (124/127 ^d ; 124/130 ^d)	8.1 %	8.1 %	0.82

^a 444 questionnaires returned by 200 female students and 244 male students.

^b Estimation of response rate: If replying “no” to some items they were encouraged to skip some other items. Response rate for each item is given within parenthesis (actual number of responses for females / theoretical number for females if all answered; actual number of responses for males / theoretical number for males if all answered)

^c Twelve students in a special program not preparing for university and not studying at a vocational program were excluded. 5 females, 6 males and 1 unidentified sex.

^d Only those first answering “yes” to the question “are you going steady with someone?” were encouraged to answer if they went steady with someone of the same sex.

^e Only those with experience of sexual intercourse were to answer this item.

^f Only those with experience of sexual intercourse not always using condom were encouraged to answer this item. As seen, slightly more than 100% of those encouraged to answer this item did so. Apparently one girl misunderstood the instructions.

^g Students were encouraged to describe their use of condoms in a four-grade ordinal scale; 0=Never, 1=Rarely, 2=Sometimes, 3=Always. First line is mean (SD) and p-value calculated with Student’s t-test. Second line is median (interquartile range) and p-value calculated with Mann-Whitney’s test.

Boys, far less than girls, perceived that STI-education influenced them (Table 10).

Table 10. Odds ratio for boys compared to girls responding to education about sexually transmitted infections^a

Item ^b	Odds ratio ^c	P
STI-education is of value ^d (418/444)	0.51 (0.37- 0.70)	< 10 ⁻⁴
STI-education will influence my sexual behavior ^e (412/444)	0.50 (0.38-0.65)	< 10 ⁻⁴
I will follow advice given in STI-education ^f (418/444)	0.41 (0.29-0.58)	< 10 ⁻⁴
STI-education increases propensity for testing ^g (353/368)	0.55 (0.41-0.75)	0.0001

^a 444 questionnaires returned by 200 female students and 244 male students.

^b All students were encouraged to answer these items. In the last item the response “don’t know” (provided by 76 students) was removed before analysis. Within parenthesis actual number of responses / theoretical number if all answered.

^c For first three items students were encouraged to answer using a four-grade ordinal scale. For the last item a three-grade scale was used. Odds ratio for each increasing step in ordinal scale is given. 95% confidence interval for odds ratio is given within parenthesis.

^d The ordinal scale was; 0=Of no importance, 1=Little importance, 2=Great importance, 3=Greatest importance.

^e The ordinal scale was; 0=Not at all, 1=Little, 2=Much, 3=Greatly.

^f The ordinal scale was; 0=Never, 1=Rarely, 2=Sometimes, 3=Always.

^g The ordinal scale was; 1=No, 2=Probably, 3=Yes

4.4.2. Students in programs preparing for university compared to vocational programs

Type of study program did not affect the perception that STI-education influenced them (Table 11).

Table 11. Odds ratio for students in programs preparing for higher studies compared to students in vocational programs responding to education about sexually transmitted infections^a

Item ^b	Odds ratio ^c	<i>P</i>
STI-education is of value ^d (418/444)	0.84 (0.62-1.14)	0.26
STI-education will influence my sexual behavior ^e (412/444)	0.95 (0.74-1.23)	0.71
I will follow advice given in STI-education ^f (418/444)	1.26 (0.92-1.73)	0.15
STI-education increases propensity for testing ^g (353/368)	0.79 (0.58-1.08)	0.14

^a 444 questionnaires returned by 200 female students and 244 male students.

^b All students were encouraged to answer these items. In the last item the response “don’t know” (provided by 76 students) was removed before analysis. Within parenthesis is given actual number of responses / theoretical number if all answered.

^c For first three items students were encouraged to answer using a four-grade ordinal scale. For the last item a three-grade scale was used. Odds ratio for each increasing step in ordinal scale is given. 95% confidence interval for odds ratio is given within parenthesis.

^d The ordinal scale was; 0=Of no importance, 1=Little importance, 2=Great importance, 3=Greatest importance.

^e The ordinal scale was; 0=Not at all, 1=Little, 2=Much, 3=Greatly.

^f The ordinal scale was; 0=Never, 1=Rarely, 2=Sometimes, 3=Always.

^g The ordinal scale was; 1=No, 2=Probably, 3=Yes

5. Discussion

Twelve-year-old girls were characterized by transition (I). It is important to inform these girls of their sexuality and of the transition to womanhood. Girls in early adolescence require attention and understanding in their quest for independence. Parents, particularly mothers are, in this respect, of the utmost importance.

In the descriptive study (II) it was shown that 12-year-old girls seek information about menstruation and sex from a variety of sources, indicating a need for information. The fact that a large proportion did not like their bodies may indicate that their transition into womanhood will not be optimal. An education based on multisensory learning (III) may facilitate this transition.

In 17-year-old adolescents (IV) boys did not test for presence of STI as much as girls. Furthermore, it was seen that boys to a lesser extent perceived that they were affected by STI-education than girls.

5.1. Methodological aspects

5.1.1. Qualitative method (I)

In the first study the aim was an open data collection. Thus, a qualitative (empiric-holistic) approach was chosen instead of a questionnaire. For this particular type of participant and considering the sensitive topic, focus group interviews as data collection seemed to have several advantages compared to individual interviews. In a group discussion they could refrain from questions they felt too sensitive. On the other hand, participants tend to open up more easily in focus group interviews

whereby anxiety can be shared and thus reduced [124]. Data collection by focus group interview gained strength through the utilization of two persons cooperating during interviews. Furthermore, participants in this study shared similar backgrounds and experiences, which was a help throughout the interviews.

Content analysis was originally applied exclusively to text interpretation but has been developed into a research method for the analysis of data in regard to expressive contents, symbols and meanings. Of possible approaches content analysis was considered slightly more appropriate than phenomenology to analyse data from focus group interviews. Furthermore focus was on identifying emerging patterns but not specifically a life world perspective, as in phenomenology, or social interactions, as in grounded theory. Furthermore, since there was no aim to combine main themes to a theory, content analysis became the choice. One cannot claim that these results are the only way to describe the phenomenon but the result can be applied under similar circumstances with people in the same situation.

5.1.2. Choice of questionnaires (II, III, IV)

For the descriptive study (II) a questionnaire with two parts was used. Part one was the same as the questionnaire used in the intervention study (III). Part one did not cover all areas of interest. A preexisting questionnaire covering all these areas was not found. Thus new items were constructed and put in part two. Before use the questionnaire was thoroughly discussed with several other researchers and tested in a small group of girls before launching the study.

In the intervention study (III) focus was to evaluate the new intervention (IML), compared to a control group with standard intervention. For this purpose a quantitative (empiric-atomistic) approach with a questionnaire using items that easily transformed to a measure was an obvious choice. The questionnaire used in the intervention study was particularly useful for comparisons in pre- and post-intervention measures for influencing attitudes through health and sexual education programs [126]. However, the questionnaire did not measure attitude influences in all aspects of the active intervention, such as towards names for the external genitals, aspects of maturation unrelated to menstruation, and information about a gynecological examination. Thus, there might have been an effect of the active intervention in areas not measured by the questionnaire.

In the STI-education study (IV) a quantitative approach was chosen because the aim strongly focused on the comparison between sexes and different educational directions. A qualitative approach may have provided other valuable information but would not have fulfilled the study goals. No previously validated questionnaire encompassing both risk taking and how an STI-education was perceived to affect behavior was found. Thus, a new questionnaire was constructed. Construct validity was ensured by extensive discussions with experienced researchers prior to data collection. The questionnaire used in this study did not measure dimensions constructed through combining responses from several items. The unique situation of the interactive STI-education was not reproducible within the same group of students. Thus, measurement of test-retest reliability of the questionnaire was not possible.

5.1.3. Potential problems when interpreting questionnaires (II, IV)

In other studies, older sisters often provided important support [55]. However, we could not confirm this in the descriptive study (II) (Table 4). One possible reason for this might be that fewer girls in our study actually had a sister compared to the study

by Frank et al [55]. Unfortunately we did not ask them if they had brothers, sisters or parents still living, thus we could not compensate for this possible bias.

Since many statistical calculations were performed in the descriptive study (II) $p < 0.05$ might be found purely by chance. Thus, p -values 0.02-0.05 were ignored and only p -values ≤ 0.01 were considered statistically significant.

Questionnaires in the descriptive study (II) were answered confidentially but not anonymously. One might imagine that some girls of non-Swedish origin would have agreed to answer the questionnaire if knowing that they would be totally anonymous, whereas they would perhaps hesitate to answer if they were to be treated only confidentially. Unfortunately ethnicity was not asked for in the questionnaire. However, name lists of students invited to participate and students actually answering the questionnaire suggest that this potential methodological error was very small.

In the STI-education study (IV), the item at the bottom of Tables 10 and 11 initially had an extra "I do not know" response alternative. Responses to this alternative were excluded prior to analysis because they could not naturally be fitted into the ordinal scale. In the STI-education study (IV) in Table 9, the response rate for the item on oral sex was low. The sex educators discovered that many avoided this question. We then decided to divide the pages lifting this item to the top of the following page. Avoidance could also be explained by uncertainty of the question's implications. Thus, the results from this item were unreliable.

In the STI-education study (IV) The item concerning intercourse in Table 9 might be subject to different interpretations. It was unclear if adolescents referred to intercourse as vaginal or anal penetration or as oral sex. Although we are not certain of their interpretation of the word intercourse, the figures presented in Table 9 indicate the proportions of girls and boys involved in risk activities for acquiring an STI.

5.1.4. Possible alternative explanations of intervention results (III)

All information and the questionnaires prior to the active intervention may have influenced results. It is possible that girls in the standard intervention group began a process affecting attitudes on menarche that would not have otherwise occurred. This might have diminished the outcome differences between the active and standard intervention groups.

The different methods employed to assign pupils to active or standard intervention might have affected the results. In schools having classes receiving both the active and the standard intervention, information may have been exchanged between the groups. This might have diminished the differences in outcome between the groups.

5.1.5. Statistical significance versus clinical relevance (II, III, IV)

In the descriptive study (II), the intervention study (III) and the STI-education study (IV) there were several findings that were statistically significant. However, the actual clinical relevance of these findings were not always obvious.

In covariance analysis (II) the dependent variable consisted of ordinal data and as such was transformed to their rank. This was a problem when regression coefficients (β) were to be interpreted and are therefore not presented. Thus, p -values for regression coefficients measuring the statistical significance are provided while a numerical measure indicating clinical relevance is not.

The favourable statistical findings in the intervention study (III) were comparison of changes between groups in ordinal scales. They cannot be given a plain clinical

interpretation other than that the difference in change favours the new active education.

In the STI-education study (IV) odds ratio for the differences between boys and girls (Table 10) may be interpreted as a measure of clinical relevance indicating that the gender difference was large.

5.2. Gender

5.2.1. Gender differences in sexual risk behaviour and responsibilities (IV)

Awareness in Sweden of the risk of acquiring *C. trachomatis* is much higher than for HIV/AIDS [86]. However, the experience at youth centers has been that fear of acquiring *C. trachomatis* has been low. This is probably because *C. trachomatis* has been perceived as easily cured. The low fear of HIV/AIDS in Sweden is probably due to low Swedish prevalence [86]. A greater awareness that acquisition of *C. trachomatis* also increases the risk for acquiring HIV might increase responsibility and decrease sexual risk behavior. Girls learn about menstruation and their reproductive organs early on from their mothers (study II) and take responsibility for prevention of pregnancy [133-135]. This concern brings them to the nurse-midwives at the youth center mainly through the need for contraception. They are informed at the youth center of the importance of taking an STI test. Thus, girls take an STI test more often than boys [84, 136].

Traditionally, Swedish boys do not have their sex organs examined at the youth centers to the same extent as girls. Furthermore, boys seeking help are perceived as weak [137]. This and Christenson's study suggests that boys avoid responsibility and rely on girlfriends to take necessary tests [134]. Christiansson's study (2003) showed that girls felt they were bearers of *C. trachomatis* while boys were chiefly concerned with where they were infected. More time with young men is required to encourage them to take sexual responsibility. It is, thus, important to increase awareness and understanding of increased risk for STI and urge them not to jeopardize their health and the health of others [138].

5.2.2. Pornography and Internet

Pornography is one of the most sought after topics on the Internet, and is easily available for anyone, including children and adolescents [139]. Among 18-year-old adolescents men (98%) consumed more pornography than women (72%) [140].

Many had contradictory feelings towards pornography and felt that sexuality was separated from intimacy [139]. However, pornography has an impact on sexual behaviour for both young women [141] and men [142].

Data collection for study I occurred between 1998 and 1999. Data collection for study II occurred between 1999 and 2000. At that time the Internet was not as widely used as it is today. Thus, pornography on the Internet was not a topic in study I-II. However, information on TV such as cable TV was asked about in study II. Data collection for study IV took place autumn 2005. However, pornography or other sources of information were not in focus in this study and was thus not included.

5.2.3. Same sex sexual experience and STI

Female-to-female transmission of STI including HIV is a research field with wide knowledge gaps [143]. Even if it has been suggested that the overall probability of

female-to-female transmission is lower than male-to-female, investigators have identified several STIs among lesbians [144-146].

Girls, more often than boys, have same-sex sexual experiences (Table 9). From prior studies we know that girls have a more permissive attitude toward homosexuality than boys [86]. However, both girls and boys have had the same extent of experience of “going steady” with someone of the same sex (Table 9). Our results suggest that homosexual girls in similarity to heterosexual girls start sexual relationships earlier compared to boys. These results may indicate that same-sex sex is an experience girls have without defining themselves as either homosexual or heterosexual.

5.3. *Influencing 17-year-old adolescents in sexual risk behaviour*

The romantic ideology of the 17th century where sexual activity belonged exclusively to the realm of marriage is now being challenged [147]. A consequence of this is that the weakened connection between sexuality and reproduction has led to an increase in risk behaviour for STI. It is important for sex-educators and health services to focus more on sexual practice, such as vaginal or anal intercourse, than on sexual identity, such as homosexuality or heterosexuality, when assessing risk for STI [143].

In the STI-education study (IV) it seems to be important to analyze how boys catch the educators’ message and find out how to reach boys learning styles. It appears that STI-education used in our study might not have appealed to boys’ learning styles as it did to girls’. Knowledge of different learning styles may help to change this [116, 118]. Girls’ learning styles are reported as more self-motivated, responsible and conforming while boys’ are more kinesthetic dynamic and learn by doing [148]. One major question is whether girls and boys should be separated during STI-education. In a prior intervention study where this was the case, condom use increased [149]. Thus, some differences in STI-education for girls and boys seem justified. However, since learning styles may differ more between individuals than between girls and boys [148] the challenge of developing an improved STI-education is not an easy task.

5.4. *Girls in early puberty - a time of transition*

5.4.1. Life in transition (I)

The focus group study (I) showed that participants were in transition and that when puberty began social life was affected creating a need for increased social relations. This was in agreement with earlier studies [4, 150]. At the end of puberty, girls should be able to deal with their new lives with greater well-being while maintaining functional relationships [6, 8]. The girls in the study were on their way to discovering new roles and relationships while trying to maintain self-esteem.

The ability to deal with feelings and physical well-being eases this transformation. In clinical work parents and professionals should take heed to the phases of development [151]. Girls turn to their mothers for testing their wills and extending boundaries. This challenges a mother’s ability to be distinct; firm but sensitive. This dynamic relationship is an important step towards independence.

Almost all girls longed to become mothers which could be interpreted as a desire to become adult. Girls who had experienced a rift between their parents or saw them burdened by too much responsibility were aware that parenting was not always easy

but could still consider becoming parents which is in agreement with a prior study [35].

5.4.2. The private and secret (I)

For a positive transformation during adolescence girls need to feel meaningfulness while possessing knowledge of what is happening to them [3, 8]. The girls in the focus group study (I) sought someone close who they could trust to help them place menstruation and puberty in a wider perspective. It became apparent that the girls felt that the happiness and pride of having a properly functioning body was mixed with thoughts of menstruation as embarrassing [35]. It would be reasonable to assume that girls would benefit from an open atmosphere both inside and outside the home to gain support in this phase of life.

Almost all the girls said that mother was the person to turn to when they reached menarche which was in agreement with previous studies [60, 93, 152] (II). Mothers and daughters sought ways of communicating on these intimate questions. The girls were sensitive and felt their mothers went beyond the boundaries of integrity by telling others of their daughter's menarche without permission. This study confirmed other research results that when a girl reached menarche her genitalia became her own, both private and secret [48].

Most girls in the focus group study (I) wanted to keep males outside the discussion of menstruation [62] possibly due to their cultural inheritance [153] and an ambivalence toward their own physical development (study II). Chrisler & Zittel's study from 1998 showed cultural differences in the experience and impact of menarche on girls' lives [154].

5.4.3. Awareness of sexuality (I, II)

It was seen in the focus group study (I) how girls physically experienced their sexuality and their awareness of it. They were curious, wanting to know more and talking often to each other about sex. It appeared that there were gender differences regarding communication of sexuality. The girls were aware of social codes where it was not acceptable to talk about sex in the same manner as boys. This behaviour was so integrated that it was considered normal. Earlier studies have shown that teenage girls constantly communicate and interact with those around them concerning sex [155]. Forsberg (2005) found that it was important for girls to not lose their respectability [156] or status through rumours [155].

The descriptive study (II) and earlier studies have shown that girls who had been victims of verbal sexual harassment felt hurt [157]. However, most of the 12-year-old girls in the descriptive study had someone to talk to about this type of verbal sexual harassment. Another way of dealing with this was seen in Ambjörnsson's [158] study of girls taking initiative and incorporating harassment words as their own to destigmatise them [158]. Unlike older girls in Ambjörnsson's study, a 12-year-old is more vulnerable during the early stage of pubertal development. Having been exposed to verbal sexual assaults can negatively affect self-esteem and the experience of the new body.

Girls have a need of adult support to help them sort their feelings of sexuality, but feel neglected and let down when this fails to occur. One way to deal with these questions is for the nurse-midwife [105] at the youth health centre [102], to use an educational model employing conversation and simple and concrete pedagogic means to provide answers to the girls' questions as was used in the intervention study (III).

5.4.4. Attitudes toward menarche (II)

A century ago, girls received menarche approximately 2-4 years later in life than today's girls [42, 153]. Furthermore, the number of pregnancies were higher in the 19th century compared to the 20th and 21th century, so the number of menstruations in life were less than in today's Western society [159]. Thus, maturity has become more involved with physical and sexual development than with reproduction and motherhood. Thus, for some girls, it may be puzzling to receive menarche in early adolescence and not supposed to become mothers until 28 [160, 161]. The increasing gap between menarche and motherhood makes menstruation a symbol not of motherhood but of sexuality.

Girls in the descriptive study (II) were on average 12.5 years old, subsequently only 30% had reached menarche. Menarche signals that the body is functioning properly and makes girls feel more grown up [48]. Usually, girls prefer to have menarche at the same time as their peers [47]. Although the descriptive study (II) found no difference in self-esteem between premenarcheal and postmenarcheal girls, the latter seemed to better accept menstruation (Table 2). Thus, our results indicate that postmenarcheal girls accept menstruation, which might indicate that they are in some way prepared. However, premenarcheal girls were more positive to menstruation than postmenarcheal girls (Table 2) [51]. This indicates that experiencing menarche might worsen their attitude. Thus the question arises whether they could be even better prepared?

Girls who were able to talk about menstruation with their fathers were associated with less negative feelings towards menstruation. It seemed to be important to engage fathers to take the opportunity and responsibility to talk openly with their daughters about menstruation. Fathers might thereby prevent anxiety and destructive concern that someone notices they have begun to menstruate.

Negative beliefs about menarche and menstruation exist in many countries and cultures [51, 58, 152]. Should we, as in other cultures, introduce an initiation rite for girls receiving menarche [52-54, 92]. The intervention study (III) suggests that we should.

5.4.5. Anticipation of womanhood (II)

It is important to ask the question – must the girls want to become adult? The results in the descriptive study (II) indicated a strong association between wanting to be an adult and openness in discussion issues around menstruation. Furthermore, openness in this study was associated with having greater communication with others while girls remaining uninformed were less open. Our assumption is that not wanting to become an adult indicates a risk of potential future problems.

In the descriptive study (II), the majority of the girls were uncertain about becoming adults. The transition from childhood to womanhood is comparable to the transition from womanhood to motherhood. Something new, unknown and incomprehensible occurs. Girls in early puberty need to understand what's happening to them and place it in a meaningful context [162]. Girls need to have influence over their lives and not feel like "victims". They also need support to verbalise their feelings. They must dare to ask questions such as: "What does it mean to be a woman? What is expected of me?" Women close to the girl, are especially important as models for girls with no mother living close to them [64].

5.4.6. Self-esteem (II)

From the descriptive study (II) we may conclude that self-esteem, especially body-esteem, is lower than expected (Table 3). We saw no major difference in overall self-esteem or physical self-esteem between premenarcheal and postmenarcheal girls. This is in concordance with McGrory's findings [163]. Why do some girls have high self-esteem and others not? During puberty, awareness of the body and its development contribute to the formation of self-esteem [164, 165]. Furthermore, development of their bodies will have consequences for how they are perceived by others. The prevailing western culture prefers girls to be small and feminine and the responsibility for being so lies wholly on themselves [48, 166]. Developing a more rounded, mature, body collides with the prevailing culture in their age group [9]. The results in the descriptive study (II) is that 12-year-old girls felt ambivalent to their maturing bodies and were insecure. Images in the media of ideal body shapes are not in concordance with the body the girl is developing. Movies usually present female bodies from a male perspective, thus forcing girls to view female bodies from this male perspective [167].

During puberty, girls must frequently find their own way of accepting themselves [9, 165]. Fifteen-year old girls with a positive body attitude have high self-esteem whereas low self-esteem is linked to unhealthy habits and overweight [168]. However, it is not as simple as just liking or disliking the body [9]. The joy of a healthy body may quickly change to discouragement in front of the mirror. The maturation process is difficult, even if considered natural. It is a long process where self-esteem goes up and down before finally achieving high self-esteem. Female identity is contradictory, both attractive and frightening [9]. These issues are important where low self-esteem might lead to increased risk-taking.

5.4.7. Verbal sexual harassment and teasing due to appearance (I, II)

The focus group study (I), the descriptive study (II), and earlier studies, confirm that many girls are exposed to and frustrated by verbal insults with sexual harassment [37, 169, 170]. It is therefore necessary to find strategies to cope with harassment. It seems that girls unexposed to insults fear harassment more strongly than exposed girls. Thus, fear of harassment is worse than harassment itself. Some girls gradually adjust to it until harassment loses its effect [158]. One important mechanism in the immunization process is probably the transformation of feelings into words and sharing them with others. The descriptive study (II) suggests that a majority found a way of coping with harassment.

School is the most likely place for verbal harassment [171], usually without parental knowledge. International studies of sexual harassment in school show that a "hostile" environment correlates with self-confidence [169, 172]. Girls harassed in school are less inclined to study, have lower self-esteem and expect less of their future careers. Adults have a central role of initiating discussion, and intervening in the occurrence of verbal harassment with sexual connotations [171, 173]. Teachers' attitudes toward verbal aggression is important because they contribute to legitimatising or condemning it [169, 170, 173]. Education, proactive intervention and prevention helps identify, conceptualize and decrease the occurrence of sexual harassment in school [37].

5.4.8. Persons influencing 12-year-old girls' attitudes (I-II)

Girls and women's attitudes towards and behavior associated with menstruation is developed in a complex interplay of cultural beliefs, socialization factors, and actual experience [51, 153, 174]. The female informant's attitudes toward menstruation and their body-esteem affect the message content delivered to the girl seeking information.

Girls put their trust in many people at the time of menarche, such as mothers, peers, school nurses and teachers (Table 1, 4). Peers within or outside school are important as individuals and as a group [55]. The mother, however, is the most important person for information and discussion [46, 152] (Table 4). Although school nurses are very important informant, the descriptive study (II) indicates their importance decreases slightly after menarche in favour of mothers and female friends. Independence from adults is gradually reinforced by closer relations to peers, thus making peers more important [6, 9, 32]. Seventeen per cent of girls stated they were not informed by their mothers (Table 4). Since premenarcheal girls stated that they were informed by their mothers to a lesser extent compared to postmenarcheal girls, it may be concluded that some mothers withheld information until menarche. Other possible explanations might be that not all mothers understand their importance. Mothers may have difficulties with communication about these issues or they may miss the optimal opportunity for such discussions. Perhaps mothers more should actively inform their daughters prior to menarche. It is, however, important to discuss the content and quality of this information. A reasonable explanation is also that some girls do not live close to their mother [64].

As in prior studies our findings in study I indicated that girls felt embarrassed about telling their fathers about menarche [175]. At the same time study II showed that being able to talk to their fathers about menstruation could reduce concern that menstruation should be concealed.

Adult informants, fathers and mothers in particular, should be both aware of their importance and encouraged to obtain adequate information to assure that positive and realistic expectations are transferred to the girl. Well-informed girls with high self-esteem will provide preparedness in the future when it is time to help their own daughters. It is important that schools, youth health centers and families realize this and influence group dynamic processes so that the transformation to womanhood may become a positive experience. Achieving this may help to reduce sexually transmitted diseases, teenage pregnancies and increase quality of life.

5.4.9. Educating and positively influencing attitudes toward menstruation (III)

Active intervention given to premenarcheal girls just before menarche improved some of their attitudes towards menstruation. However, 12-year old girls' change in attitudes as a result of active intervention, differed, depending on the time of menarche. These finding may have implications for the development of educational programs.

5.4.9.1. *Experienced benefits from active intervention*

Previous research has concluded that girls seem to have incorporated many of the prevailing cultural views of menstruation early in life [93, 174]. Most of these views are negative and do not prepare girls for womanhood. Girls "totally" unprepared usually have more negative attitudes. The media conveys a negative message concerning menstruation [67, 68]. Despite the prevailing cultural views, the active

intervention increased positive attitudes towards menstruation and womanhood. This caused a positive change in attitudes towards maturing and menstruation. This entailed pride in menstruating, eagerness to have their first period and happiness about their first menstruation. Overall, they felt better and more pleased toward menstruation with the active intervention compared to the standard intervention.

In the intervention study (III), “negative feelings” such as fear others would notice menstruation was difficult to influence [174]. It might be easier to affect “negative feelings” if teaching emphasizes both the positive as well as the negative aspects of menstruation [46, 57, 59]. It might be important to offer a balanced view of menstruation with some problems such as dysmenorrhoea [176]. The “Openness” dimension used in the intervention study (III) embraces the attitude towards communicating with peers about menstruation and feeling more comfortable/less embarrassed when talking about menstruation. The combination of increased openness and increased positive feeling found in this study might enhance improved body image.

5.4.9.2. The importance of timing

We learned from the intervention study (III) that best results were achieved when active intervention was given just before menarche to girls having their menarche on time. The active intervention improved attitudes in the on-time matured girls. If we want to improve attitudes in early-matured girls as well, we will probably have to reach them earlier. Further research is needed to determine if girls under 11 or 12 are psychologically ready for this active intervention.

Girls need to feel accepted in the classroom and by peers independent of their stage of development. The best approach might be to educate girls gradually over several years beginning when premenarcheal [1, 39, 62]. That kind of approach has not yet been scientifically evaluated.

5.4.9.3. Early-matured girls

At the beginning of the intervention study (III), 32 % of the girls had already had their first period. If the active intervention is given to girls during their 12th year, we may reach the “on-time” menarcheal girls with an understandable education. However, we will not reach girls who already had their first menstruation. This may have implications since these girls reacted differently to active intervention compared to on-time girls.

Early development implies that they, their parents and their neighborhood perceive them as older [46]. Early-matured girls have more externalizing problems with a riskier life-style, such as earlier sexual debut, earlier alcoholic debut and lower scholastic achievement [47, 177, 178] [177]. Furthermore, early-matured girls also have more internalizing problems such as higher scores on depressive feelings, sadness, psychosomatic symptoms and perceived instability of self [47, 178, 179]. Early-matured girls generally have lower self-esteem compared to boys and non-pubertal girls [178, 180]. Girls` dissatisfaction with weight, a great problem in western countries, seems to follow pubertal maturation. Some authors assert that this worry affects early maturing girls more than other girls [47, 181-184].

We know that early-matured girls may have a lack of cognitive ability and complex abstract thinking at the time of menarche [108, 109, 111, 185-188]. Before the age of 11 to 12, the child does not realize what menstruation actually entails [55]. If an intervention similar to the active intervention in this study is given before the early-matured girls receive menarche will they also change their attitudes? The early-

matured girls probably require earlier intervention to change their attitudes positively [59]. Furthermore, we can assume that educating early-matured girls must take consideration to their undeveloped, abstract thinking.

5.4.9.4. Late-matured girls

In the intervention study (III), girls who were pre-menarcheal also at the time of the second questionnaire did not improve their attitudes. Since investigation was terminated after the second questionnaire, we do not know if the active intervention had a positive effect that would have been seen after menarche. Furthermore, would the effect of the active intervention be even greater if received later?

In contrast to early-matured girls, no authors suggest that late-matured girls experience life-styles problems. On the contrary, late-matured girls have a higher level of education and career than early-matured girls [47]. Furthermore, late-matured girls worried less about menstruation while having more positive experience of menarche than other girls [49, 55].

Late-matured girls have developed an abstract thinking which might help them understand and accept menarche in a positive way [108, 109, 111, 185-188].

5.5. A new approach (III)

The experience of the “fruit session” during the active intervention is a good example of the new approach. The girls were quiet and listened intensely. They gently took the pears and almonds one at a time. It was experienced as a ceremony and an important occasion.

The new approach (IML) utilizes multisensory learning, variation and different learning styles. All these seemed to be important keys in reaching early adolescent girls. Presumably, most prevailing education on menstruation, sexuality and womanhood given to early adolescent girls has not contained these components. Thus, more effort should be put into incorporating these components in the future. It is reasonable to assume that this is also important for younger girls.

5.6. Educational obstacles to overcome and future challenges

The IML for 12-year-old girls (III) has been presented for nurse-midwives at 60 Swedish youth health centres and at five seminars for school nurses from about 80 different schools. Lack of resources may complicate implementation and spreading of this method.

The intervention described for 12-year-old girls (III), or parts of it, has been used for boys, intellectually challenged adolescents and the visually handicapped. However, it remains to evaluate the effect on these groups of individuals.

It seems that 17-year-old boys do not take responsibility in STI-prevention as fully as girls do. Present STI-education has not succeeded in reaching them. Another educational model, similar to the model developed for the 12-year-old girls (study III), should be developed for older adolescents.

The Örebro Prevention Program (ÖPP) developed at Örebro University [189] was a successful programme for the prevention of alcohol intoxication and crime for youth. Short parent meetings were carried out every half year at schools with pupils in grades 7-9 (aged 13-16 years). This raises the interesting question of whether parental involvement in STI-education could affect sexual risk behaviour in adolescents.

6. Summary and conclusions

The period around 12 years was characterized by transition. The girls were fully aware of their ongoing physical and social changes and were in need of attention and understanding of occurrences in this phase of life. They longed for a deep and close relationship with their mothers but also tested their independence on them. The relationship to people around them changed and they longed for new social relationships. When receiving menarche they experienced a greater need for integrity, not always understood by their mothers.

The girls expressed a need to know more about sexuality and felt that adults in their surroundings had failed them in this regard. They felt sexuality physically and had many advanced questions about sex and their bodily changes. It is important to inform girls of their sexuality at an early age which is in agreement with a prior study.

Girls in early adolescence require attention and understanding in their quest for independence. Parents, particularly mothers, should be informed and supportive whereby their roll is of the utmost importance. To better support girls in early puberty we need to developed methods and provide knowledge of what they consider important. The professional role of school nurses and nurse-midwives provides an excellent opportunity to meet these needs in early puberty. Further research is needed to gain more knowledge of girls' transitional processes from an individual perspective.

An unacceptable proportion disliking their bodies may indicate the transformation to womanhood will not be optimal. Wanting to be an adult and liking their body develops seems to be associated with a more positive feeling towards menstruation. Furthermore, mothers and others timing and ability to communicate attitudes around menstruation and the body are important.

Adolescence is a time of rapid change and psychological adjustment. Education may improve understanding and attitudes towards menstruation, thus making girls more aware of risks enabling them to protect themselves accordingly. This addresses problems of increased teenage pregnancy and sexually transmitted infections.

Controlled trials evaluating different interventions are rare. This study of a new group intervention is one of the first controlled trials evaluating approaches to educating girls in the transformation to womanhood. We compared the effect of an active intervention with a standard intervention on attitudes towards menstruation. If the active intervention was given to premenarcheal girls just before menarche, it seemed beneficial. Our interpretation of these results is that girls should be reached actively by offering group education, if possible, just prior to menarche. Education should be held in groups, interactive, concrete and based on multisensory learning. Because early and late-matured girls' attitudes remained unchanged towards menstruation using our approach, further research is needed.

When planning STI-education it is important to focus more on sexual practice than on sexual identity. It is also important to consider gender traditions and learning styles where reaching boys presents the greatest challenge. If we are unsuccessful in reaching boys with STI-education we will not be able to see a decrease in infection rates. Further research is needed to develop and evaluate methods in the STI-education area to specifically influence boys' behavior. A result in decreased risk behavior is not easily achieved. Time and proper educational resources will always be needed and there are no shortcuts for achieving these goals.

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- To all the school nurses at Lerum, Härryda and Mölnlycke who have been involved in this research and who have helped me so much with the many heavy administrative tasks involved. Also humble thanks for standing by me in the important work with the girls.
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- To the headmasters and teachers at the Lerum, Härryda and Skövde schools, Alströmer school in Alingsås and Sven Erikson school in Borås for their kind cooperation.
- To Solveig Kärrman and Ulla Sandwall who have always had the youngsters best interest at heart and for supporting my visions and ambitions.
- To all personell at the youth health centre in Lerum who throughout the years gave me so much encouragement and feedback.
- To Kristina Dalenius, Gun-Britt Eriksson for their cooperation in running a project for youth health centers och school healthcare and realizing a researcher's third mission- to make known the results of research. Also thanks to the municipalities Lerum, Alingsås, Vårgårda and Herrljunga för financial support to make known the results of research.
- To all nurse-midwives and school nurses through out Sweden that have been working with the IML method and have shown interest in my results. This has inspired me to carry on.
- To Leila Lönnroth, Bengt Höjer and Björn Nilsson for valuable advice, Erika Nettelbladt and Martin Rembeck for registering data and Ulla Wessman for transcribing the interviews.
- To Bengt Dahlin who introduced me to the world of research and development.
- To Annika Billhult, Göran Jutengren at the research and development unit of primary health care Södra Älvsborg for preparing me with questions during the preliminary hearings and kindly answering all sorts of research questions these last years.
- To Eva Almqvist at the research and development unit of primary health care Södra Älvsborg for her excellent photos for the cover and pages of the thesis.
- Greta Jonasson and Jörgen Månsson for preparing me with questions during the preliminary hearings.
- Special thanks to the research and development council and primary health care in Södra Älvsborg for financial support.

8. Appendix

On the following pages these appendix are found:

Appendix 8.1: Questionnaire part 1 for premenarcheal girls (II, III)

Appendix 8.2: Questionnaire part 1 for postmenarcheal girls (II, III)

Appendix 8.3: Questionnaire part 2 for girls (II, III)

Appendix 8.4: Questionnaire to 17-year-old adolescents (IV)

8.1. Questionnaire part 1 for premenarcheal girls (II, III)

Några frågor om vad du tycker och känner om mens

Enkät utvecklad av Leila Lönnroth och Gun Rembeck 1999.

Frågorna 1-57 är hämtade från AMAQ (Morse JM et al. The Adolescent Menstrual Attitude Questionnaire, part 1: Scale construction. Health Care for Women International 1993;14:39-62), och översatta till svenska av Leila Lönnroth. Några frågor från ursprungliga AMAQ har strukits.

1 = Håller definitivt inte med 2 = Håller inte med 3 = Ingen åsikt eller vet inte 4 = Håller med 5 = Håller definitivt med

- | | 1 | 2 | 3 | 4 | 5 |
|---|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. När jag får mens kommer jag att vara rädd för att pojkarna skall få reda på det | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Jag kommer att bli väldigt glad över att jag äntligen fått mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Jag tänker inte berätta för någon när jag får mens. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Jag blev glad när jag hörde talas om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Jag oroar mig för att jag skall börja blöda utan att jag märker det. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. De flesta flickor tycker att det är jobbigt att köpa bindor och tamponger i affären. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Jag tror att jag kommer att känna mig besvårad när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Jag blir livrädd när jag tänker på att jag skall få mens | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Jag pratar ofta med mina kompisar om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Jag oroar mig mycket för att få mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Flickor tycker det är pinsamt om någon ser att de slänger bindor i skräpkorgen. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Det är normalt att flickor har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Jag kommer att känna mig precis som vanligt när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Flickor som säger att de mår dåligt när de har mens hittar bara på ursäkter. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Jag kommer att må helt OK när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Jag tycker det är pinsamt när jag pratar om mens med mina kompisar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. När flickor har mens borde de få lov att stanna hemma. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Flickor oroar sig mycket för att det skall läcka blod på kläderna. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Jag kommer att vänja mig snabbt vid att ha mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Flickor som har mens är sura och irriterade | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Jag ser fram emot att få mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Jag tycker om att prata om mens med mina kompisar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Jag tycker det är pinsamt att ställa frågor om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. När jag får mens kommer jag att må bra. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Flickor som har mens skall helst inte att sporta. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Jag kommer att bli glad när jag får mens | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Jag känner mig rädd för jag vet inte vad som kommer att hända när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Jag kommer att känna mig vuxen när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. När flickor har sin mens ska de inte tvätta håret. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Flickor som har mens är ofta griniga. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. När jag får mens kommer jag att må illa. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Jag blir glad när jag tänker på att få mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. Jag är livrädd att folk ska få reda på när jag har fått mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. Jag tror att mitt humör kommer att svänga mer än vanligt när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. Flickor som har mensvärk borde oroa sig att det är något fel på dem. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1 = Håller definitivt inte med 2 = Håller inte med definitivt med

3 = Ingen åsikt eller vet inte 4 = Håller med 5 = Håller definitivt med

- | | 1 | 2 | 3 | 4 | 5 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 36. Att ha mens är lätt. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. De flesta flickor vet vad som händer i kroppen när de får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. Flickor tycker det är pinsamt att ha skolundervisning om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. Jag tycker det är OK att prata om mens med pojkar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. Flickor tycker inte att det är nåt särskilt med att köpa bindor och tamponger. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. Jag oroar mig för att folk kommer att märka att jag har fått mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. Jag blir nervös bara någon säger ordet "mens". | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. Jag är glad att jag håller på att bli så pass vuxen och mogen att jag kan få mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. De flesta flickor tycker att det är mycket pinsamt att köpa bindor och tamponger ur automater på offentliga toaletter. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. Jag kommer att känna mig speciell på ett positivt sätt när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 46. Det är OK att simma när man har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. Jag kommer att känna mig stolt när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. Jag har svårt att vänja mig vid tanken på att jag skall få mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 49. Jag bryr mig inte om ifall jag får eller inte får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50. Jag tror att jag kommer att gå på ett annorlunda sätt när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 51. Det är inget särskilt med att få mens | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. Jag tycker att mens är mycket smutsigt. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. Flickor som har mens skall inte bada badkar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. Flickor som har mens skall duscha oftare. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. Att ha mens är besvärligt. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. Flickor vill helst inte prata med någon om sånt som är besvärligt med mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. Jag kommer att bli chockad när jag får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. De flesta flickor vet precis vad de skall göra när de får sin första mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8.2. Questionnaire part 1 for postmenarcheal girls (II, III)

Några frågor om vad du tycker och känner om mens

Enkät utvecklad av Leila Lönnroth och Gun Rembeck 1999.

Frågorna 1-57 är hämtade från AMAQ (Morse JM et al. The Adolescent Menstrual Attitude Questionnaire, part 1: Scale construction. Health Care for Women International 1993;14:39-62), och översatta till svenska av Leila Lönnroth. Några frågor från ursprungliga AMAQ har strukits.

Några frågor om vad du tycker och känner om mens

Du som har eller har haft mens skall svara på de här frågorna.

När är du född? År 19 __ __ Månad __ __ Dag __ __

Bor du i lägenhet? Ja Nej
villa? Ja Nej
radhus Ja Nej

Har du fått din första mens? Ja Nej

Om du svarat ja, hur gammal var du när du fick mens första gången?
__ __ år och __ __ månader

Instruktioner

Den här enkäten handlar om hur flickor tänker och känner om menstruation. Vi vill att du markerar med ett kryss i vilken grad du håller med /inte håller med om olika påståenden, så här:

Jag tycker att pojkar skall få veta allt om flickors menstruation. 1 2 3 4 5

- 1 = Håller definitivt inte med
- 2 = Håller inte med
- 3 = Ingen åsikt eller vet inte
- 4 = Håller med
- 5 = Håller definitivt med

Nu skall du tänka på påståendet och markera den fyrkant som stämmer överens med vad du själv tycker. Det finns inget som är rätt eller fel. Vi är intresserade av **din egen** åsikt. Du måste inte svara på en fråga om du inte vill. Du kan när som helst besluta dig för att inte svara på några frågor alls, det är helt OK, men då ber vi dig gå till ett annat rum.

Kom ihåg att ju högre siffra du kryssar för, desto mer håller du med om ett påstående.

Du skall inte skriva ditt namn på det här papperet. Det du svarar här är dina egna personliga åsikter och vi tycker att det är dina privata tankar.

1 = Håller definitivt inte med 2 = Håller inte med definitivt med

3 = Ingen åsikt eller vet inte 4 = Håller med 5 = Håller

- | | 1 | 2 | 3 | 4 | 5 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. När jag har mens är jag rädd för att pojkarna skall få reda på det. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Jag är väldigt glad över att jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Jag har inte berättat för någon att jag har fått mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Jag blev glad när jag hörde talas om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Jag oroar mig för att någon gång börja blöda utan att jag märker det. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. De flesta flickor tycker att det är jobbigt att köpa bindor och tamponger i affären. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Bara det att jag har mens gör att jag känner mig besvärad. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Jag var livrädd när jag fick min första mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Jag pratar ofta med mina kompisar om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Jag oroar mig mycket för att få mens helt oväntat. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Flickor tycker det är pinsamt om någon ser att de slänger bindor i skräpkorgen. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Det är normalt att flickor har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Jag känner mig precis som vanligt när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Flickor som säger att de mår dåligt när de har mens hittar bara på ursäkter. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Jag mår helt OK när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Jag tycker det är pinsamt när jag pratar om mens med mina kompisar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. När flickor har mens borde de få lov att stanna hemma. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Flickor oroar sig mycket för att det skall läcka blod på kläderna. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Jag vande mig snabbt vid att ha mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Flickor som har mens är sura och irriterade. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Jag kunde knappt vänta tills jag skulle få min mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Jag tycker om att prata om mens med mina kompisar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Det är pinsamt att ställa frågor om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. När jag har mens mår jag bra. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Flickor som har mens skall helst inte sporta. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Jag blir glad när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Jag känner mig rädd för jag vet inte vad som händer när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Jag känner mig vuxen när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. När flickor har mens ska de inte tvätta håret. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Flickor som har mens är ofta griniga. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. När jag har mens mår jag illa. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Jag blir glad när jag tänker på att ha mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. Jag blir livrädd att folk ska veta om när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. Flickors humör svänger mer än vanligt när de har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. Flickor som har mensvärk borde oro sig att det är något fel på dem. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1 = Håller definitivt inte med 2 = Håller inte med

3 = Ingen åsikt eller vet inte 4 = Håller med 5 = Håller definitivt

- | | 1 | 2 | 3 | 4 | 5 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 36. Att ha mens är lätt. . | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. De flesta flickor vet vad som händer i kroppen när de får mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. Flickor tycker det är pinsamt att ha skolundervisning om mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. Jag tycker det är OK att prata om mens med pojkar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. Flickor tycker inte det är nåt särskilt med att köpa bindor och tamponger. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. Jag tror att folk vet när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. Jag blir nervös bara någon säger ordet "mens". | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. Jag är glad att jag blivit så pass vuxen och mogen att jag fått mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. De flesta flickor tycker att det är mycket pinsamt att köpa bindor och tamponger ur automater på offentliga toaletter. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. Jag känner mig speciell på ett positivt sätt när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 46. Det är OK att simma när man har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. Jag känner mig stolt när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. Mina menssmärtor är väldigt plågsamma. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 49. När man har mens så är det viktigt att vara som vanligt så att ingen märker det. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50. Flickor får mycket ont i ryggen när de har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 51. När flickor får mens känns det ofta som om de vill kräkas. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. När jag fick mens blev jag kvinna. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. Det är OK att vara borta från skolan när man har mensvärk. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. Jag känner mig ful och äcklig när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. Jag känner mig som vanligt när jag har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. Flickor börjar gråta lättare när de har mens. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. Flickor tycker inte om att röra vid sig själva när de byter bindor och tamponger. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. När flickor har mens borde de slippa vara med på gymnastiken. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8.3. Questionnaire part 2 for girls (II, III)

Tag ställning till följande påståenden på samma sätt som du gjort ovan:

1 = Håller definitivt inte med 2 = Håller inte med 3 = Ingen åsikt eller vet inte 4 = Håller med 5 = Håller definitivt med

	1	2	3	4	5
Jag tycker om min kropp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag tycker om mig själv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag har blivit retad för mitt utseende	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag tycker om att min kropp utvecklas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag vill bli vuxen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag bestämmer över min kropp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Vi vet att många flickor får höra skällsord i skolan eller på andra ställen. Nu följer några frågor som handlar om dina erfarenheter av detta.

Har du någon gång blivit kallad "fitta"? Ja Nej
Har du någon gång blivit kallad "hora"? Ja Nej

Tag ställning till följande påstående på samma sätt som du gjort ovan:

	1	2	3	4	5
Om jag blir kallad för hora eller fitta kan jag prata om det med mina kompisar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Om jag blir kallad för hora eller fitta kan jag prata om det med mina föräldrar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag tar illa vid mig om jag blir kallad hora eller fitta.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag känner mig ensam om jag blir kallad for hora eller fitta.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jag blir arg om jag blir kallad för hora eller fitta.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Vem har berättat för dig om mens? (Kryssa för ett eller flera alternativ)

<input type="checkbox"/> Mamma	<input type="checkbox"/> Tjejkompis	<input type="checkbox"/> Annan person, vem? _____
<input type="checkbox"/> Pappa	<input type="checkbox"/> Killkompis	<input type="checkbox"/> Ingen
<input type="checkbox"/> Syster	<input type="checkbox"/> Lärare	
<input type="checkbox"/> Bror	<input type="checkbox"/> Skolsköterska	
<input type="checkbox"/> TV-program vilka _____	<input type="checkbox"/> Tidningar, vilka _____	

Vem kan du prata med om mens? (Kryssa för ett eller flera alternativ)

<input type="checkbox"/> Mamma	<input type="checkbox"/> Tjejkompis	<input type="checkbox"/> Annan person, vem? _____
<input type="checkbox"/> Pappa	<input type="checkbox"/> Killkompis	<input type="checkbox"/> Ingen
<input type="checkbox"/> Syster	<input type="checkbox"/> Lärare	
<input type="checkbox"/> Bror	<input type="checkbox"/> Skolsköterska	

Vem har berättat för dig om sex? (Kryssa för ett eller flera alternativ)

- | | | |
|--|--|---|
| <input type="checkbox"/> Mamma | <input type="checkbox"/> Tjejkompis | <input type="checkbox"/> Annan person, vem? _____ |
| <input type="checkbox"/> Pappa | <input type="checkbox"/> Killkompis | <input type="checkbox"/> Ingen |
| <input type="checkbox"/> Syster | <input type="checkbox"/> Lärare | |
| <input type="checkbox"/> Bror | <input type="checkbox"/> Skolsköterska | |
| <input type="checkbox"/> TV-program
vilka _____ | <input type="checkbox"/> Tidningar,
vilka _____ | |

Vem kan du prata med om sex? (Kryssa för ett eller flera alternativ)

- | | | |
|---------------------------------|--|---|
| <input type="checkbox"/> Mamma | <input type="checkbox"/> Tjejkompis | <input type="checkbox"/> Annan person, vem? _____ |
| <input type="checkbox"/> Pappa | <input type="checkbox"/> Killkompis | <input type="checkbox"/> Ingen |
| <input type="checkbox"/> Syster | <input type="checkbox"/> Lärare | |
| <input type="checkbox"/> Bror | <input type="checkbox"/> Skolsköterska | |

Vem kan du prata med om kärlek och relationer? (Kryssa för ett eller flera alternativ)

- | | | |
|---------------------------------|--|---|
| <input type="checkbox"/> Mamma | <input type="checkbox"/> Tjejkompis | <input type="checkbox"/> Annan person, vem? _____ |
| <input type="checkbox"/> Pappa | <input type="checkbox"/> Killkompis | <input type="checkbox"/> Ingen |
| <input type="checkbox"/> Syster | <input type="checkbox"/> Lärare | |
| <input type="checkbox"/> Bror | <input type="checkbox"/> Skolsköterska | |

Finns det något du skulle vilja fråga oss?

Tack för din hjälp!

8.4. Questionnaire to 17-year-old adolescents (IV)

UTVÄRDERING

Det är viktigt att du läst informationsbladet före du fyller i enkäten. Det är frivilligt att svara på frågorna. Du kan hoppa över de frågor du inte vill svara på eller avbryta helt.

Dagens datum: _____

Vad heter din skola? _____ ort _____

Vilket program går du på? _____ årskurs _____

Hur många är ni i klassen? _____

1. Kön: Tjej Kille

2. Innebär undervisningen idag att du kommer att testa/kontrollera dig för någon könssjukdom om du skulle behöva?

Ja Troligen Vet inte Nej

3. Var någonstans skulle du helst vilja testa dig om du behövde (kryssa i ett svarsalternativ)?

Ungdomsmottagningen Barnmorskemottagningen

På skolan av ungdomsmottagningspersonal

Vårdcentralen STD-mottagning/hud- och könsmottagning

Annan mottagning Spelar ingen roll

4. Har du stadigt förhållande med flickvän/pojkvän?

Ja Nej

Om du svarat Nej på fråga 4 gå vidare till fråga 6

5. Har du stadigt förhållande med någon av samma kön?

Ja Nej

6. Har du erfarenhet av samlag?

Ja Nej

Om du svarat Nej på fråga 6 gå vidare till fråga 14

7. Hur gammal var du när du hade samlag första gången? _____

8. Använder du kondom?

Alltid Ibland Sällan Aldrig

Om du svarat Alltid på fråga 8 gå vidare till fråga 13

9. Här skriver du orsaker till att du inte alltid använder kondom? _____

10. Har du någon gång testat/kontrollerat om du har någon könssjukdom?

Ja Nej

Om du svarat Nej på fråga 10 gå vidare till fråga 13.

11. Vilken/vilka könssjukdomar har du testat/kontrollerat dig för (kryssa i flera svarsalternativ om du behöver)?

Klamydia Gonorré Hiv Hepatit Herpes
Kondylom Syfilis Annan, vilken? _____ Vet ej vilken

12. Vart gick du när du testade/kontrollerade dig för någon könssjukdom (du kan kryssa i flera svarsalternativ)?

Ungdomsmottagningen Vårdcentralen Barnmorskemottagningen
STD-mottagningen/hud- och köns-mottagningen Annan mottagning

13. Har du haft samlag med någon när du varit utomlands (räkna ej fast partner)?

Ja Nej

14. Har du erfarenhet av oralsex (munsex)?

Ja Nej

Om du svarat Nej på fråga 14 gå vidare till fråga 17

15. Använder du säkrare sex när du har oralsex (kondom/slicklapp)?

Alltid Ibland Sällan Aldrig

Om du svarat alltid på fråga 15 gå vidare till fråga 17

16. Här skriver du orsaker till att du inte alltid använder säkrare sex vid oralsex (kondom/slicklapp) _____

17. Har du varit sexuellt tillsammans med någon av samma kön?

Ja Nej

18. Innebär undervisningen idag att du kommer att försöka följa de råd du fått?

Alltid Ibland Sällan Aldrig

19. Tror du att undervisningen idag påverkar dina sexuella vanor framöver?

Väldigt mycket Ganska mycket Ganska lite Inte alls

20. Så här betydelsefull var undervisningen idag för mig

Av allra största betydelse Av stor betydelse Av liten betydelse Av ingen betydelse

21. Från vem tar du bäst emot undervisning inom området könssjukdomar (du kan kryssa i flera svarsalternativ)?

Kunniga
lärare

Kunnig personal från
Ungdomsmottagningen

Kunniga
ungdomar

Annan
person

Spelar ingen
roll vem

Denna enkät är sekretesskyddad och ingen obehörig har tillgång till dina svar. Vi önskar eventuellt göra en uppföljning om ett år.

22. Jag kan tänka mig att delta i en uppföljande enkät?

Ja

Nej

Skriv på baksidan om det är något du vill tillägga eller om det är något du saknade i undervisningen idag.

9. References

- [1]. Wavering MJ. Early or late maturation. In Educating young adolescents. Wavering MJ. New York & London: Garland Publishing, Inc; 1995, pp 73-6.
- [2]. Lauer K. Transition in adolescence and its potential relationship to bulimic eating and weight control patterns in women. *Holist Nurs Pract* 1990;**4**(3):8-16.
- [3]. Meleis AI, Sawyer LM, Im EO, Hilfinger Messias DK, Schumacher K. Experiencing transitions: an emerging middle-range theory. *ANS Adv Nurs Sci* 2000;**23**(1):12-28.
- [4]. Steinberg L, Morris AS. Adolescent development. *Annu Rev Psychol* 2001;**52**:83-110.
- [5]. Steinberg L. We Know Some Things: Parent-Adolescent Relationships in Retrospect and Prospect. *J Res Adolesc* 2001;**11**:1-19.
- [6]. Berg-Kelly K. Ungdomsmedicin. Stockholm, Sweden: Liber AB; 1998.
- [7]. Chick N, Meleis AI. Transitions: A nursing concern. In Nursing research methodology. Issues and implementation. Chinn PL. Aspen, US: Apen publishers; 1986, pp 237-57.
- [8]. Schumacher KL, Meleis AI. Transitions: a central concept in nursing. *Image J Nurs Sch* 1994;**26**(2):119-27.
- [9]. Göthlund A. Bilder av tonårsflickor. Om estetik och identitetsarbete. Linköping, Sweden: University of Linköping, Tema Kommunikation; 1997.
- [10]. Bos HM, Sandfort TG, de Bruyn EH, Hakvoort EM. Same-sex attraction, social relationships, psychosocial functioning, and school performance in early adolescence. *Dev Psychol* 2008;**44**(1):59-68.
- [11]. Deihl LM, Vicary RC, Deike JR. Longitudinal Trajectories of Self-Esteem from Early to Middle Adolescence and Related Psychosocial Variables among Rural Adolescents. *J Res Adolesc* 1997;**7**:393-411.
- [12]. Luster T, McAdoo HH. Factors Related to Self-Esteem Among African America Youths: A Secondary Analysis of the High/Scope Perry Preschool Data. *J Res Adolesc* 1995;**5**(4):451-67.
- [13]. DuBois DL, Bull CA, Sherman MD, Roberts M. Self-Esteem and Adjustment in Early Adolescence: A Social-Contextual Perspective. *J Youth Adolesc* 1998;**27**(5):557-83.
- [14]. Ouveinen-Birgerstam P. Development of identity in children - A comparative study of Finnish, Yugoslavian, and Swedish children. Lund, Sweden: Studentlitteratur; 1984.
- [15]. Kling KC, Hyde JS, Showers CJ, Buswell BN. Gender differences in self-esteem: a meta-analysis. *Psychol Bull* 1999;**125**(4):470-500.
- [16]. Usmiani S, Daniluk J. Mothers and Their Adolescent Daughters: Relationship Between Self-Esteem, Gender Role Identity, Body Image. *J Youth Adolesc* 1997;**26**(1):45-62.
- [17]. Blos P. The Adolescent Passage. Developmental Issues. Madison: International Universities Press; 1979.
- [18]. Eriksson E. Identity, Youth, and Crisis. New York, USA: Norton; 1968.
- [19]. Ryan R, Lynch J. Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. *Child Dev* 1989;**60**:340-56.
- [20]. Smetana JG, Yau J, Hansson S. Conflict resolution in families with adolescents. *J Res Adolesc* 1991;**1**:189-206.

- [21]. Lamb ME, Hwang CP, Ketterlinus RD, Fracasso MP. Parent-child relationships: Development in the context of the family. In *Developmental psychology: An advanced textbook*. Bornstein MH, Lamb ME. Mahwah, NJ, USA: Erlbaum; 1999, pp 411-50.
- [22]. Trost T. A new look at parenting during adolescence: Reciprocal interactions in everyday life. Örebro Studies in Psychology No. Doctoral dissertation. Örebro, Sweden: Örebro University; 2002.
- [23]. Smetana JG, Asquith P. Adolescents' and parents' conceptions of parental authority and personal autonomy. *Child Dev* 1994;**65**(4):1147-62.
- [24]. Laursen B, Coy KC, Collins WA. Reconsidering changes in parent-child conflict across adolescence: a meta-analysis. *Child Dev* 1998;**69**(3):817-32.
- [25]. Sagrestano LM, McCormick SH, Paikoff RL. Pubertal Development and Parent-Child Conflict in Low-Income, Urban, African American Adolescents. *J Res Adolesc* 1999;**9**(1):85-107.
- [26]. Buhrmester D. Intimacy of friendship, interpersonal competence, and adjustment during preadolescence and adolescence. *Child Dev* 1990;**61**(4):1101-11.
- [27]. Levitt MJ. Convoys of social support in childhood and early adolescence: Structure and function. *Dev Psychol* 1993;**29**(5).
- [28]. Houge A, Steinberg L. Homophily of Internalized Distress in Adolescent Peer Groups. Homophily of Internalized Distress in Adolescent Peer Groups. *Dev Psychol* 1995;**31**(6):897-906.
- [29]. Akers JF, Jones RM, Coyl DD. Adolescent Friendship Pairs: Similarities in Identity Status Development, Behaviors, Attitudes, and Intentions. *J Adolesc Res* 1998;**13**(2):178-201.
- [30]. Brown BB, Mounts N, Lamborn SD, Steinberg L. Parenting practices and peer group affiliation in adolescence. *Child Dev* 1993;**64**(2):467-82.
- [31]. Sussman S, Dent CW, McAdams LA, Stacy AW, Burton D, Flay BR. Group self-identification and adolescent cigarette smoking: a 1-year prospective study. *J Abnorm Psychol* 1994;**103**(3):576-80.
- [32]. McNelles L, Connolly JA. Intimacy between adolescent friends: Age and gender differences in intimate affect and intimate behaviors. *J Res Adolesc* 1999;**9**:143-59.
- [33]. Archibald AB, Graber JA, Brooks-Gunn J. Associations among parent-adolescent relationships, pubertal growth, dieting, and body image in young adolescent girls: A short-term Longitudinal study. *J Res Adolesc* 1999;**9**(4):395-415.
- [34]. Ambjörnsson F. A separate class. Gender, class and sexuality among adolescent girls. Stockholm, Sweden: Ordfront; 2004.
- [35]. Lyckéus C, Richardsson A, Belfrage K. Girl Child Projekt, Sweden. Stockholm, Sweden: Vårdförbundet; 2004.
- [36]. Bengs C. Kropp, kultur och stigma i medicinsk sociologi. Lund, Sweden: Lunds studentlitteratur; 1997.
- [37]. Witkowska E, Eliasson M, Menckel E. Sexual harassment in Swedish schools. Developing an environmental model based on available data and models. *Int J Psychol* 2000;**35**:437.
- [38]. Svahn M. The Licentious woman and the Unmanly Man. Insults, Stereotypes and Gender Constructions. Stockholm: Carlsson Bokförlag; 1999.
- [39]. McGrory A. Education for the menarche. *Pediatr Nurs* 1995;**21**(5):439-40.
- [40]. Karlberg P, Taranger J, Engstrom I et al. I. Physical growth from birth to 16 years and longitudinal outcome of the study during the same age period. *Acta Paediatr Scand Suppl* 1976;**258**:7-76.

- [41]. Liu YX, Wikland KA, Karlberg J. New reference for the age at childhood onset of growth and secular trend in the timing of puberty in Swedish. *Acta Paediatr* 2000;**89**(6):637-43.
- [42]. Juul A, Teilmann G, Scheike T et al. Pubertal development in Danish children: comparison of recent European and US data. *Int J Androl* 2006;**29**(1):247-55 DISCUSSION 28.
- [43]. Biro FM, Huang B, Crawford PB et al. Pubertal correlates in black and white girls. *J Pediatr* 2006;**148**(2):234-40.
- [44]. Biro FM, Khoury P, Morrison JA. Influence of obesity on timing of puberty. *Int J Androl* 2006;**29**(1):272-7 DISCUSSION 286.
- [45]. Slyper AH. The pubertal timing controversy in the USA, and a review of possible causative factors for the advance in timing of onset of puberty. *Clin Endocrinol (Oxf)* 2006;**65**(1):1-8.
- [46]. Koff E, Rierdan J, Jacobson S. The personal and interpersonal significance of menarche. *J Am Acad Child Psychiatry* 1981;**20**(1):148-58.
- [47]. Stattin H, Magnusson D. Pubertal maturation in female development. New Jersey, US: Lawrence Erlbaum; 1990.
- [48]. Golub S. Menarche: The Onset of Menstruation. Periods From Menarche to Menopause. London, Great Britain: SAGE Publications, Inc.; 1992, pp 24-52.
- [49]. Morse JM, Doan HM. Adolescents' response to menarche. *J Sch Health* 1987;**57**(9):385-9.
- [50]. Brooks-Gunn J, Ruble DN. Menarche. In The menstrual cycle vol 1. Dan AJ, Graham EA, Beecher CP. New York: Springer; 1980, pp 141-59.
- [51]. Brooks-Gunn J, Ruble DN. The development of menstrual-related beliefs and behaviors during early adolescence. *Child Dev* 1982;**53**(6):1567-77.
- [52]. Richard A. Chisungu. A girl's initiation ceremony among the Bemba. The Chaucer Press Ltd; 1982.
- [53]. Højeberg P. Moder av de heliga föremålen. Tröskelkvinnor. Oskarshamn, Sweden: Carlssons Bokförlag; 2000, pp 198-214.
- [54]. Wright A. Attitudes towards childbearing and menstruation among Navajo. In Anthropology of human birth. Kay M. Philadelphia, US: F. A. Davis Company; 1982, pp 377-94.
- [55]. Frank D, Williams T. Attitudes about menstruation among fifth-, sixth-, and seventh-grade pre-and post-menarcheal girls. *J Sch Nurs* 1999;**15**(4):25-31.
- [56]. Kestenberg JS. Phases of adolescence: with suggestions for a correlation of psychic and hormonal organizations. II. Prepuberty diffusion and reintegration. *J Am Acad Child Psychiatry* 1967;**6**(4):577-614.
- [57]. Rierdan J, Koff E, Flaherty J. Guidelines for preparing girls for menstruation. *J Am Acad Child Psychiatry* 1983;**22**(5):480-6.
- [58]. Dashiff C. Education for menarche. *J Sch Health* 1986;**56**(2):56-60.
- [59]. Rierdan J, Koff E. Premenarcheal predictors of the experience of menarche: a prospective study. *J Adolesc Health Care* 1990;**11**(5):404-7.
- [60]. Patiel F. Coming of age in the metropolis. *Can Nurse* 1996;**9**:22-6.
- [61]. Liukku A. Del III. Kroppsvikt och relationer till andra. Food, body and social identity. Stockholm: Pedagogiska institutionen; 1996, pp 121-78.
- [62]. Koff E, Rierdan J. Preparing girls for menstruation: recommendations from adolescent girls. *Adolescence* 1995;**30**(120):795-811.
- [63]. Rembeck G. Becoming a woman: A nuisance or something to look forward to? In Book of proceedings, 25th triennial congress of the international confederation of midwives in Manila, Philippines. Midwifery and safe motherhood beyond the year

2000. Anonymous. Manila, Philippines: Medcom International Inc; 1999, pp 462-7.
- [64]. Kalman BM. Taking a different path: Menstrual preparation for adolescent girls living apart from their mothers. *Health Care Women Int* 2003;**24**(10):868-79.
- [65]. Andrews S. The experience of menarche: an exploratory study. *J Nurse Midwifery* 1985;**30**(1):9-14.
- [66]. Williams LR. Beliefs and attitudes of young girls regarding menstruation. In Menarche. Golub S. Lexington, US: Health D. C.; 1983, pp 139-48.
- [67]. Kalman M. Adolescent menstrual lay literature. *The journal of multicultural nursing & health* 2000;**6**:34-8.
- [68]. Simes MR, Berg DH. Surreptitious learning: menarche and menstrual product advertisements. *Health Care Women Int* 2001;**22**(5):455-69.
- [69]. [World Health Organization - Gender and reproductive health - Glossary]. Available at: <http://www.who.int/reproductive-health/glossaryhtml>, Accessed March 31, 2008 2002;.
- [70]. [United nations international research and training institute for the advancement of women]. <http://www.un-instraw.org/en/glossary/all-5html?page=1>, Accessed April 16, 2008 2008;.
- [71]. Hovellius B, Johansson EE. Begrepp och teorier. In Kropp och genus i medicinen. Hovellius B, Johansson EE. Lund, Sweden: Studentlitteratur; 2004, pp 35-45.
- [72]. Börjesson A. Flickorna och frigörelsen. Forskning om flickor och arbete med tjejprojekt. Ungdomsstyrelsens utredningar, 12. Stockholm, Sweden: Ungdomsstyrelsen; 1998.
- [73]. Häggström-Nordin E, Tydén T. Swedish teenagers' attitudes toward the emergency contraceptive pill. *J Adolesc Health* 2001;**28**(4):313-8.
- [74]. Edgardh K. Sexual behaviour and early coitarche in a national sample of 17 year old Swedish girls. *Sex Transm Infect* 2000;**76**(2):98-102.
- [75]. Edgardh K. Sexual behaviour and early coitarche in a national sample of 17-year-old Swedish boys. *Acta Paediatr* 2002;**91**(9):985-91.
- [76]. Holmberg L. Health, risk-taking behavior and sexuality in Swedish adolescents. Uppsala, Sweden: Acta Universitatis Uppsaliensis; 2007.
- [77]. Häggström-Nordin E, Hanson U, Tydén T. Sex behavior among high school students in Sweden: improvement in contraceptive use over time. *J Adolesc Health* 2002;**30**(4):288-95.
- [78]. UNAIDS, Worldhealth O. AIDS epidemic update. Joint united nations programme on HIV/AIDS (UNAIDS) and World health organization. Geneva, Switzerland: WHO library Cataloguing-in-Publication Data; 2007.
- [79]. Egerö B, Hammarskjöld M, Lazarus JV, Liljestränd J, Mårtensson D. HIV/AIDS and gender relations. Men have yet to take part of it seriously. Department for democracy and Social Development (SIDA). Art. no.: 29962en. Lund: Lunds Universitet; 2006.
- [80]. Socialstyrelsen. National strategy to combat HIV/AIDS and certain other diseases, Socialstyrelsen (the national board of health and welfare). ; 2006.
- [81]. Alix J, Bernillon P, Devaux I, Fletcher R, Likatavicius G, Nardone A. HIV/AIDS Surveillance in Europe. ; 2007.
- [82]. Cohen MS. Sexually transmitted diseases enhance HIV transmission: no longer a hypothesis. *Lancet* 1998;**351** Suppl 3:5-7.
- [83]. Matic S, Lazarus JV, Donogoe MC. HIV/AIDS in Europe: Moving from death sentence to chronic disease management. Copenhagen, Denmark: ; 2006.

- [84]. Smittskyddsinstitutet. EPI-aktuellt, Nyheter från Smittskyddsinstitutet. ; 2007;6(28-31):.
- [85]. Tydén T, Olsson S, Häggström-Nordin E. Improved use of contraceptives, attitudes toward pornography, and sexual harassment among female university students. *Womens Health Issues* 2001;**11**(2):87-94.
- [86]. Herlitz C. Allmänheten och hiv/aids. Kunskaper, attityder och beteenden 1987-2003. Stockholm, Sweden: Statens folkhälsoinstitut; 2004.
- [87]. Larsson M, Tydén T. Increased sexual risk taking behavior among Swedish female university students: repeated cross-sectional surveys. *Acta Obstet Gynecol Scand* 2006;**85**(8):966-70.
- [88]. European C. D. Fertility. Population statistics. Luxemburg, Belgien: European Communities; 2006, pp 71-81.
- [89]. Mabey D. Sex and travel. *Br J Hosp Med* 1995;**54**(6):264-6 275.
- [90]. Kramer MA, van den Hoek A, Coutinho RA, Prins M. Sexual risk behaviour among Surinamese and Antillean migrants travelling to their countries of origin. *Sex Transm Infect* 2005;**81**(6):508-10.
- [91]. Höjeberg P. Att bli kvinna - Löftesrikt eller bara besvärligt? Stockholm: Västra Stockholms sjukvårdsområde; 1994.
- [92]. Höjeberg P, Rembeck G. Möten med flickor på tröskeln till vuxenlivet. Stockholm, Sweden: Hälsopedagogik HB; 2001.
- [93]. Koff E, Rierdan J. Early adolescent girls' understanding of menstruation. *Women Health* 1995;**22**(4):1-21.
- [94]. Soefer EF, Scholl TO, Sobel E, Tanfer K, Levy DB. Menarche: target age for reinforcing sex education for adolescents. *J Adolesc Health Care* 1985;**6**(5):383-6.
- [95]. Vessey JA. Teaching children about their internal bodies. *Pediatr Nurs* 1990;**16**(1):29-33.
- [96]. WHO, Reproductive Health. Available at: <http://www.who.int/reproductive-health/adolescent/indexhtml>, Accessed 16 April 2008.
- [97]. Ross DA, Dick B, Ferguson J. Preventing HIV/AIDS in young people. A systematic review of the evidence from developing countries. World's health organization (WHO). WHO technical report series; no. 938. Geneva, Switzerland: WHO; 2006.
- [98]. Statens offentliga utredningar. Utredningar rörande sexual- och samlevnadsfrågor i undervisning och upplysande syfte. Malmö: Liber; 1974:59.
- [99]. Krantz M. The profession of school nurse related to the health of schoolchildren. Göteborg, Sweden: Nordiska Hälsovårdshögskolan; 1998.
- [100]. Ruble DN, Brooks-Gunn J. The experience of menarche. *Child Dev* 1982;**53**(6):1557-66.
- [101]. Socialstyrelsen riktlinjer för skolhälsovård. Artikel nummer 204-130-2. Stockholm, Sweden: Socialstyrelsen; 2004.
- [102]. Policy programme for Sweden's Youth Health Centres. Stockholm, Sweden: Swedish Society for Youth Centers; 2002.
- [103]. Hermansson E. Akademisering och professionalisering - barnmorskans utbildning i förändring. Göteborg, Sweden: Acta Universitatis Gothoburgensis; 2003.
- [104]. Häggström-Nordin E. Worlds Apart? Sexual Behaviour, Contraceptive Use, and Pornography Consumption Among Young Women and Men. Uppsala, Sweden: Uppsala University; 2005.
- [105]. Forsgren M et al. Kompetensbeskrivning för legitimerad barnmorska. Stockholm, Sweden: Socialstyrelsen; 2006:105.

- [106]. Pilhammar Andersson E. Centrala begrepp av betydelse för patientundervisningen. In Patientundervisning och patienters lärande. Svensk sjuksköterskeförening. Stockholm, Sweden: Gothia förlag AB; 2007, pp 12-24.
- [107]. Marton F, Booth S. Learning and Awareness. Mahwah, NJ, US: Lawrence Erlbaum Associates, Inc., Publishers; 1997.
- [108]. Piaget J. Six études de psychologie. Paris, France: Les éditions Gonthier; 1964.
- [109]. Piaget J. Psychologie et Pédagogie. Paris, France: Editions Denoel; 1969.
- [110]. Piaget J. Où va l'éducation. Paris, France: UNESCO; 1972.
- [111]. Piaget J. Development and learning. In Readings in developmental psychology. Second edition. Gardner JK. Boston, US: Little, Brown and Company; 1978, pp 276-85.
- [112]. Vygotskij LS. Tänkande och språk. Göteborg, Sweden: Daidalos; 1934.
- [113]. Dunn R, Dunn K. Understanding learning style and the need for individual diagnosis and prescription. Teaching secondary students through their individual learning styles. Practical approaches for grades 7-12. Massachusetts, US: Allyn and Bacon; 1993, pp 1-30.
- [114]. Boström L. Lärstilar - att utgå från individuella styrkor och behov. Lärande & Metod. Lärstilsanpassad undervisning jämfört med traditionell undervisning i svenk grammatik. Jönköping, Sweden: Jönköpings University Press Dissertation; 2004, pp 48-64.
- [115]. Gardner H. The theory of multiple intelligences. Intelligence. Reframed. Multiple intelligences for the 21st century. New York, NY, US: Basic Books; 1999, pp 27-46.
- [116]. Dunn R, Griggs SA. Multicultural and learning style: Teaching and counseling adolescents. Westport, US: Praeger Publisher; 1995.
- [117]. Dunlap E, Golub A, Johnson BD. Girls' sexual development in the inner city: from compelled childhood sexual contact to sex-for-things exchanges. *J Child Sex Abus* 2003;**12**(2):73-96.
- [118]. Lovelace, Kiely M. Meta-Analysis of Experimental Research Based on the Dunn and Dunn Model. *J Educ Res* 2005;.
- [119]. Socialdepartementet. Kapitel 7. En samlad strategi mot hiv/aids. Regeringens proposition 2005/06:60. Nationell strategi mot hiv/aids och vissa andra smittsamma sjukdomar. Stockholm, Sweden: ; 2005, pp 30-99.
- [120]. Kirkby D, Laris BA, Rolleri L. Impact of sex and HIV education programs on sexual behaviors of youth in developing and developed countries. Family health International (FHI). Youth research working paper no. 2. ; 2005.
- [121]. UNAIDS. 2006 report on the global AIDS epidemic. Geneva, Switzerland: UNAIDS; 2006.
- [122]. Christiansson M. What's behind sexual risk taking? Umeå, Sweden: Umeå Universitet; 2006.
- [123]. Larsson M, Tydén T, Hanson U, Häggström-Nordin E. Preventivt arbete behövs för att främja ungdomars sexuella hälsa. *Lakartidningen* 2007;**104**(26-27):1992-5.
- [124]. Wibeck V. Fokusgrupper. Om fokuserade gruppintervjuer som undersökningsmetod. Lund, Sweden: Studentlitteratur; 2000.
- [125]. Kvale S. Den kvalitativa forskningsintervjun. Lund, Sweden: Studentlitteratur; 1997.
- [126]. Morse JM, Kieren D, Bottorff J. The Adolescent Menstrual Attitude Questionnaire, Part I: Scale construction. *Health Care Women Int* 1993;**14**(1):39-62.

- [127]. Olsson E. På spaning efter gruppens själ: gruppen i teori och praktik. Lund, Sweden: Studentlitteratur; 1998.
- [128]. Richter, Horst E. Die Gruppe. Hoffnung auf einen neuen Weg, sich selbst und andere zu befreien: Psychoanalyse in Kooperation mit gruppeninitiativen. Hamburg, Germany: Reinbek; 1972.
- [129]. Christiansson M, Eriksson C. Myter om mödomshinnan - en genusteoretisk betraktelse av mödomshinnans natur och kultur. In Kropp och genus i medicinen. Hovellius B, Johansson EE. Lund, Sweden: Studentlitteratur; 2004, pp 317-23.
- [130]. Krippendorff K. Content Analysis. An Introduction to its methodology. Thousand Oaks, California, US: Sage Publications, Inc.; 2004.
- [131]. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today* 2004;**24**(2):105-12.
- [132]. Rosenfeld M, Seferiadis A, Carlsson J, Gunnarsson R. Active intervention in patients with whiplash-associated disorders improves long-term prognosis: a randomized controlled clinical trial. *Spine* 2003;**28**(22):2491-8.
- [133]. Ekstrand M, Larsson M, Von Essen L, Tydén T. Swedish teenager perceptions of teenage pregnancy, abortion, sexual behavior, and contraceptive habits--a focus group study among 17-year-old female high-school students. *Acta Obstet Gynecol Scand* 2005;**84**(10):980-6.
- [134]. Christianson M, Johansson E, Emmelin M, Westman G. "One-night stands" - risky trips between lust and trust: qualitative interviews with Chlamydia trachomatis infected youth in North Sweden. *Scand J Public Health* 2003;**31**(1):44-50.
- [135]. Ekstrand M, Tydén T, Darj E, Larsson M. Preventing pregnancy: a girls' issue. Seventeen-year-old Swedish boys' perceptions on abortion, reproduction and use of contraception. *Eur J Contracept Reprod Health Care* 2007;**12**(2):111-8.
- [136]. [Swedish institute for infectious disease control]. Available at: <http://www.smittskyddsinstitutet.se/statistik/klamydiainfektion/?t=com&p=10546#statistics,-nav>, Accessed March 31 2008.
- [137]. Courtenay WH. Constructions of masculinity and their influence on men's well-being: a theory of gender and health. *Soc Sci Med* 2000;**50**:1385-401.
- [138]. Rivers K, Aggleton P. 6. Principles for success. Adolescent Sexuality, gender and the HIV epidemic. United Nations development programme (UNDP) HIV and Development programme. New York, US: United Nation; 1999, pp 16-7.
- [139]. Häggström-Nordin E, Sandberg J, Hanson U, Tydén T. 'It's everywhere!' young Swedish people's thoughts and reflections about pornography. *Scand J Caring Sci* 2006;**20**(4):386-93.
- [140]. Häggström-Nordin E, Hanson U, Tydén T. Associations between pornography consumption and sexual practices among adolescents in Sweden. *Int J STD AIDS* 2005;**16**(2):102-7.
- [141]. Rogala C, Tydén T. Does pornography influence young women's sexual behavior? *Womens Health Issues* 2003;**13**(1):39-43.
- [142]. Tydén T, Rogala C. Sexual behaviour among young men in Sweden and the impact of pornography. *Int J STD AIDS* 2004;**15**(9):590-3.
- [143]. Westerståhl A. Why lesbian studies in medicine. Encounters in the medical context - issues of gender and sexuality. Göteborg, Sweden: Department of primary health care, Göteborg university; 2003, pp 20-6.

- [144]. Marrazzo JM, Stine K, Koutsky LA. Genital human papillomavirus infection in women who have sex with women: a review. *Am J Obstet Gynecol* 2000;**183**(3):770-4.
- [145]. Bauer GR, Welles SL. Beyond assumptions of negligible risk: sexually transmitted diseases and women who have sex with women. *Am J Public Health* 2001;**91**(8):1282-6.
- [146]. Campos-Outcalt D, Hurwitz S. Female-to-female transmission of syphilis: a case report. *Sex Transm Dis* 2002;**29**(2):119-20.
- [147]. Giddens A. The transformation of intimacy. Sexuality, Love and Eroticism in Modern Societies. Oxford, UK: Polity Press, Blackwell Publishers; 1992.
- [148]. Honingsfeld A, Dunn R. High School Male and Female Learning-Style Similarities and Differences in Diverse Nations. *J Educ Res* 2003;**96**(4):195-206.
- [149]. Larsson M, Eurenus K, Westerling R, Tydén T. Evaluation of a sexual education intervention among Swedish high school students. *Scand J Public Health* 2006;**34**(2):124-31.
- [150]. Larson R, Richards MH. Daily companionship in late childhood and early adolescence: changing developmental contexts. *Child Dev* 1991;**62**(2):284-300.
- [151]. Wrangsjö B, Winberg Salomonsson M. Tonårstid : utveckling, problem och psykoterapeutisk behandling. Stockholm, Sweden: Natur och Kultur; 2007.
- [152]. Logan D. The menarche experience in twenty-three foreign countries. *Adolescence* 1980;**15**(58):247-56.
- [153]. Malmberg D. The red flower of shame? Menstruation and the menstruating woman in Swedish tradition. Uppsala, Sweden: Etnologiska institutionen, Uppsala universitet; 1991.
- [154]. Chrisler JC, Zittel CB. Menarche stories: reminiscences of college students from Lithuania, Malaysia, Sudan, and the United States. *Health Care Women Int* 1998;**19**(4):303-12.
- [155]. Forsberg M. Brunettes and Blondes. Youth and sexuality in multi cultural Sweden. Göteborg, Sweden: Göteborg University; 2005.
- [156]. Skegg B. Formations of Class and Gender: Becoming Respectable. London, Great Britain: Sage Publication Ltd; 1997.
- [157]. Eliasson MA, Laflamme L, Isaksson K. Verbal abuse, gender and well-being at school. *Int J Adolesc Med Health* 2005;**17**(4):367-78.
- [158]. Ambjörnsson F. The worst word. A separate class. Gender, class and sexuality among adolescent girls. Stockholm, Sweden: Ordfront; 2004:5, pp 184-216.
- [159]. How many children will I have? Fertility in a life-perspective. Stockholm: Statistiska Centralbyrån; 2002:5.
- [160]. D-9: Mean age of women at first birth, 1960-2001. Theme 3: Population statistics. Luxembourg: European Communities; 2004, pp 83.
- [161]. Sleenbos JE. OECD social, employment and migration working papers no. 15. Low Fertility Rates in OECD Countries: Facts and Policy Responses. Paris: Publications OECD; 2003:15.
- [162]. Antonovsky A. Unraveling the mystery of health. ; 1991.
- [163]. McGrory A. Menarche: responses of early adolescent females. *Adolescence* 1990;**25**(98):265-70.
- [164]. Simmons RG, Blyth DA, Van Cleave EF, Bush DM. Entry into early adolescence: the impact of school structure, puberty, and early dating on self-esteem. *Am Sociol Rev* 1979;**44**(6):948-67.

- [165]. Ambjörnsson F. The art of making a feminine body. A separate class. Gender, class and sexuality among adolescent girls. Stockholm: Ordfront; 2004, pp 140-83.
- [166]. Bengs C. Looking Good, a study of gendered body ideals among young people. Umeå: Department of Sociology; 2000.
- [167]. Mulvey L. Visual Pleasure and Narrative Cinema. In Issues in Feminist Film Criticism. Evans P. Indiana University Press; 1990
- [168]. Rasmusson F, Eriksson M, Bokedal C, Schäfler Elinder L. Fysisk aktivitet, matvanor, övervikt och självkänsla bland ungdomar. Compas - en studie i sydvästra Storstockholm. Rapport. Stockholm: Samhällsmedicin, SLL/Statens folkhälsoinstitut; 2004.
- [169]. Larkin J. Walking through Walls: The sexual harassment of high school girls, Department of Applied Psychology, The Ontario Institute for Studies in Education, Canada. *Gend Educ* 1994;**6**(3):263.
- [170]. Paludi MA. Sexual harassment in schools. In Sexual Harassment, theory, research, and treatment. O'Donohue W. Needham Heights, MA 02194, USA: Allyn & Bacon; 1991, pp 225-49.
- [171]. Eliasson M, Menckel E. Ord och mening. Könsperspektiv på verbal aggression och våld mellan elever i grundskolan. *Arbetslivsrapport, Arbetslivsinstitutet* 2003;**08**.
- [172]. Rospenda KM, Richman JA, Nawyn SJ. Doing Power, The confluence of Gender, Race, and Class in Contrapower Sexual Harassment. *Gend Soc* 1998;**12**(1):40-60.
- [173]. Menckel E, Witkowska E. Allvar eller skämt? En nationell undersökning av språkbruk och sexuella beteenden bland gymnasieelever. Solna: Arbetslivsinstitutet och författarna; 2002.
- [174]. Koff E, Rierdan J. Premenarcheal expectations and postmenarcheal experiences of positive and negative menstrual related changes. *J Adolesc Health* 1996;**18**(4):286-91.
- [175]. Marván ML, Vacio A, García-Yañez G, Espinosa-Hernández G. Attitudes toward menarche among Mexican preadolescents. *Women Health* 2007;**46**(1):7-23.
- [176]. Sharma P, Malhotra C, Taneja DK, Saha R. Problems related to menstruation amongst adolescent girls. *Indian J Pediatr* 2008;**75**(2):125-9.
- [177]. Bratberg GH, Nilsen TI, Holmen TL, Vatten LJ. Perceived pubertal timing, pubertal status and the prevalence of alcohol drinking and cigarette smoking in early and late adolescence: a population based study of 8950 Norwegian boys and girls. *Acta Paediatr* 2007;**96**(2):292-5.
- [178]. Andersson-Ellström A. Age of sexual debut related to life-style and social background factors in a group of Swedish female students. Sexuality and sexually transmitted diseases in young women. Karlstad, Sweden: Center for public health research, county council of Värmland; 1996, pp III.
- [179]. Alsaker FD. Annotation: the impact of puberty. *J Child Psychol Psychiatry* 1996;**37**(3):249-58.
- [180]. Kaltiala-Heino R, Kosunen E, Rimpelä M. Pubertal timing, sexual behaviour and self-reported depression in middle adolescence. *J Adolesc* 2003;**26**(5):531-45.
- [181]. Duncan PD, Ritter PL, Dornbusch SM, Gross RT, Carlsmith M. The effects of pubertal timing on body image, school behavior, and deviance. *J Youth Adolesc* 1985;**14**(3):227-35.
- [182]. Alsaker FD. Pubertal timing, overweight, and psychological adjustment. *J Early Adolesc* 1992;**12**:396-419.

- [183]. Byely L, Archibald AB, Graber J, Brooks-Gunn J. A prospective study of familial and social influences on girls' body image and dieting. *Int J Eat Disord* 2000;**28**(2):155-64.
- [184]. Graber JA, Brooks-Gunn J. Co-occurring eating and depressive problems: an 8-year study of adolescent girls. *Int J Eat Disord* 2001;**30**(1):37-47.
- [185]. Piaget J. Quantification, conservation, and nativism. Quantitative evaluations of children aged two to three years are examined. *Science* 1968;**162**(857):976-81.
- [186]. Craig RC, Mehrens WH, Clarizio HF. Cognitive readiness. Contemporary educational psychology. Concepts/issues/applications. New York: John Wiley & Sons, Inc; 1975, pp 26-57.
- [187]. Stensmo C. Naturalism. Pedagogisk filosofi. Lund, Sweden: Studentlitteratur; 1994, pp 107-29.
- [188]. Stensmo C. Pedagogik och teoretisk filosofi. Pedagogisk filosofi. Lund, Sweden: Studentlitteratur; 1994, pp 25-36.
- [189]. Koutakis, Stattin. [Örebro preventionsprogram]. Available at: <http://www.oru.se/bsr/koutakis>, Accessed March 31, 2008.

10. Original publications

- I. Rembeck, G I. Hermansson E. Transition to puberty. Experiences of 12-year-old Swedish girls. Submitted.
- II. Rembeck G I. Möller M. Gunnarsson R K. (2006). Attitudes and feelings towards menstruation and womanhood in girls at menarche. *Acta Paediatrica*. 95:707-714
- III. Rembeck, G I. Gunnarsson RK. (2004). Improving pre- and postmenarcheal 12-year-old girls' attitudes toward menstruation. *Health Care Women Int*. Aug;25(7):680-98.
- IV. Rembeck, G I. Gunnarsson RK. Role of gender in sexual behavior and response to education in sexually transmitted infections in 17-year-old adolescents
Manuscript.

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