“For young people, sexual health is not just an issue of being informed about reproductive health and sexually transmitted infections. It is also about them being in charge of their own lives and being able to contribute to the decisions and standards that prevail in their families and communities.”

Messan Azanlekor
Communications Officer, Plan Togo

Review

Adolescent sexual and reproductive health

The sexual behaviours of young people are influenced by a variety of factors. To date, most programmes that have tried to reduce sexual risk taking among adolescents have focussed only on sexual behaviours without considering the context in which they take place. As a result, these programmes have not had much success. Now there is evidence to suggest that if we focus on the factors associated with young people’s sexual decision making, we may be more successful. To design programmes that do this, we first need to identify what these factors are.

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AstraZeneca
Young Health Programme

JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH

Plan

Credits

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The AstraZeneca
Young Health Programme
This review is a product of the Young Health Programme, AstraZeneca's global community investment programme.

The Young Health Programme is designed to help disconnected young people around the world deal with the health issues they face, protecting their health now and improving their chances for a better life in the future.

The programme is a partnership between AstraZeneca, the Johns Hopkins Bloomberg School of Public Health and Plan, a leading international, child-centred development organisation.

Plan works in 48 countries across Latin America, Africa and Asia, helping the world's poorest children to move from a life of poverty to a future with opportunity.

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Adolescent sexual and reproductive health

Analysing studies from around the world

This review draws on a wide range of studies gathered internationally and is designed to identify and examine the key risk and protective factors affecting adolescent sexual and reproductive health (ASRH) in developing countries.

It begins with a brief description of its theoretical framework and methodology, then outlines its findings based on the various different social environments that adolescents experience.

In the United States, researchers have recognised the importance of identifying these factors and have published literally hundreds of studies evaluating their impact.

Although fewer have been published in developing countries, growing numbers of studies have examined the key factors in a range of different countries and regions around the world. What follows is a summary of many of those studies.

Outlining the theoretical framework

The theoretical framework guiding this review is an ‘ecological’ model of risk and protective factors. This recognises that young people function within a complex network of individual, peer, family, school and community environments that affect their capacity to avoid risk *(Brofenbrenner, 1986).*

In each of these environments, risk factors are identified as those which increase the likelihood of negative behaviours that could lead to pregnancy or sexually transmitted infections or which discourage positive behaviours that might prevent such outcomes.

Conversely, protective behaviours are defined as those which discourage negative behaviours or which encourage positive ones that might prevent pregnancy or STIs, such as using contraception or in particular, condoms.

Establishing the methodology

This current analysis merges the result of two previous reviews of literature looking at ASRH risk and protective factors in developing countries. The first took place between 2001 and 2003 and was sponsored by the World Health Organisation.

It exhaustively reviewed studies dating from 1990 to 2002 on factors relating to outcomes which included: *the age of first sex, premarital sex, the number of sexual partners, condom and contraceptive use, pregnancy, early childbearing, HIV and STIs.*

Articles were selected for review based on the following criteria: that they were conducted in a developing country, included a sample of at least 100 young people aged 10-24 years and used multivariate analysis.

A total of 289 articles were retrieved. All were reviewed to ensure that they met the criteria and 158 were then more thoroughly reviewed and synthesised.

The second and more recent review

For the second and more recent of the two reviews, additional studies were retrieved using PubMed, PsychInfo, and the Interagency Youth Working Group (IYWG) databases.

Literature searches were conducted using the following terms: *pregnancy, childbearing, contraception, condom use, HIV, STI, STD, abortion, pregnancy termination, sexual coercion, sexual violence, sexual abuse, commercial sex work, sexual initiation and sexual debut.*

Also: *sexual partners, multiple partners, sexual health, reproductive health, adolescent, youth, teen, teenager, young adult, risk factor, protective factor, correlates, determinants and developing country.*

Using the same inclusion criteria as the previous review, a total of 118 studies published between 2003 and 2010 were retrieved and some 77 articles were retained and merged with the previous review’s findings to create this analysis – a total of 235 studies in all.

As well as the outcomes analysed for the first review, this second one also tried to identify key risk and protective factors related to abortion and sexual coercion, but because so few articles on abortion met the inclusion criteria, this outcome is not included in the analysis.

As a consequence, the present review reports on the risk and protective factors related to: *age of first sex, ‘ever had sex’, number of sexual partners, condom and contraceptive use, pregnancy and early childbearing, HIV and STIs, and sexual coercion.*

“Here at my local youth club, we’re like a family. We’ve been learning a lot, but I’ve especially got to know myself better as a girl, how to protect myself from STIs and HIV through abstinence, how to use condoms and how you should stay loyal to your partner in a relationship. Before, talking about sex was forbidden. But it’s no longer like that. My parents have changed a lot thanks to us all learning more.

Now I’ve become a member of the village development and youth committees and we organise discussions with other women and girls on topics related to sexuality. We’ve also been taught about income generating activities, so I won’t have to rely on anyone else to support me.”

Nadia (15) Togo

Nadia has been a member of her local youth club in Togo for the last two years. The youth clubs which are supported by Plan provide a forum for young people to come together to discuss issues that affect them and are dedicated to the promotion of sexual health and sexual rights of adolescents aged 15 to 19 years. Over a period of three years, over 1,000 young people took part in these youth clubs, which are firmly established in their community.

Photography: Plan/Mark Read

Findings: factors affecting adolescent sexual and reproductive health

Over 40 different factors have been found to affect one or more adolescent sexual health outcomes. Most involve characteristics of the adolescents themselves, while others involve those of the family, peers, and sexual partners.

The results also show that the majority of studies focus on early sexual initiation and ‘ever had sex’ *(64 studies)*, followed by condom use *(55 studies)*, and HIV and STIs *(39 studies)*. The least studied is sexual coercion, with only nine studies matching the inclusion criteria.

To be categorised as a key risk or protective factor for each outcome, at least two thirds of the studies reporting on a given factor had to show it as such consistently.

This rule excluded many factors, but increased the chances that the factors selected would be important to the particular outcome of interest.

Adolescent sexual and reproductive health

Factors at an individual level

Biological factors
As young people get older, they are more at risk of a variety of negative sexual health behaviours and outcomes, including an early age of sexual initiation *(39 out of 48 studies),* and contracting HIV or other STIs *(7 out of 12 studies).*

The only time when being older serves as protective factor is in the use of contraceptives, with older adolescents much more likely to use them as compared to their younger peers *(5 out of 9 studies).*

In addition to age, gender seems to matter, with males much more likely to have had sex compared to females *(15 out of 17 studies),* while being female seems in itself to be a protective factor for those having multiple sexual partners *(3 out of 4 studies).*

The single instance of an outcome that showed a protective effect of being male was for HIV, with males much less likely to have HIV compared to their female counterparts *(2 out of 3 studies).*

Schooling and education
Around the world, young people who are in school and doing well in school are much more likely to protect themselves from negative sexual health outcomes as compared to their peers who are not in school.

Interestingly, of all the factors that were analysed in relation to any adolescent sexual health outcomes, school and education were among the most common.

Approximately 20 studies examined in-school status in relation to a number of outcomes and 16 found that being in school and/or having more years of schooling was protective against early sexual initiation, pregnancy and early childbearing, and for encouraging condom and contraceptive use,

At the same time, two studies found that adolescents who drop out of school are much more likely to have an earlier age of sexual debut compared to those who remain in school.

Drug and substance use
Smoking, alcohol use and using drugs were all found to be risk factors for an earlier age of sexual debut, as well as for early childbearing. Alcohol use, in particular, was also associated with having multiple sexual partners *(2 out of 2 studies)* and not using condoms *(2 out of 3 studies).*

Knowledge and attitudes
The knowledge and attitudes that young people have about sex and other reproductive health issues can greatly affect their own sexual behaviours and outcomes.

For example, two studies found that adolescents with greater knowledge of condom use are also more likely to use them. Similarly, adolescents with greater knowledge of contraceptives are more likely to use them too *(4 out of 5 studies).*

The relationship between attitudes and particular reproductive health outcomes seems to be equally significant.

For instance, the relationship between self-efficacy (belief in one’s ability to reach a goal, accomplish a task or deal with challenges) and condom use was found to be a positive one *(7 out of 8 studies),* while adolescents with a positive attitude towards family planning were more likely to use contraceptives as well.

Previous sexual risk behaviours
Young people with an earlier age of sexual initiation are much more likely to have a higher number of sexual partners *(2 out of 3 studies)* and are also more likely to have an STI or even HIV *(2 out of 3 studies).*

Related to this, adolescents who were forced at their sexual debut are less likely to use condoms *(2 out of 3 studies)* and more likely to become pregnant *(2 out of 2 studies),* as well as much more likely to have an STI or HIV *(2 out of 2 studies).*

Factors at peer or partner level

Peer or partner-level factors are particularly important in contraceptive and condom use, as well as in sexual coercion.

For example, it was found that if partners had a professional job or approved of contraception, adolescents were more likely to use it *(2 out of 3 studies).* But if partners had a lower level of education, the use of contraception would be less likely.

Young people were also more likely to use condoms if they felt that they could discuss condom use with partners *(2 out of 2 studies).*

Perceiving that friends are already sexually active or talking with friends about sex and other reproductive health issues were found to be risk factors both for early sexual initiation *(10 out of 10 studies)* and having multiple sexual partners *(3 out of 4 studies).*

In cases of sexual coercion, it was found that being beaten by a partner *(2 out of 2 studies),* having a friend who is of the opposite sex *(2 out of 2 studies)* and having a partner use alcohol before sex *(2 out of 2 studies)* were all key risk factors.

Factors at community level

Across all the outcomes addressed in this review, no factors at community level were found to be significant as key risk or protective factors.

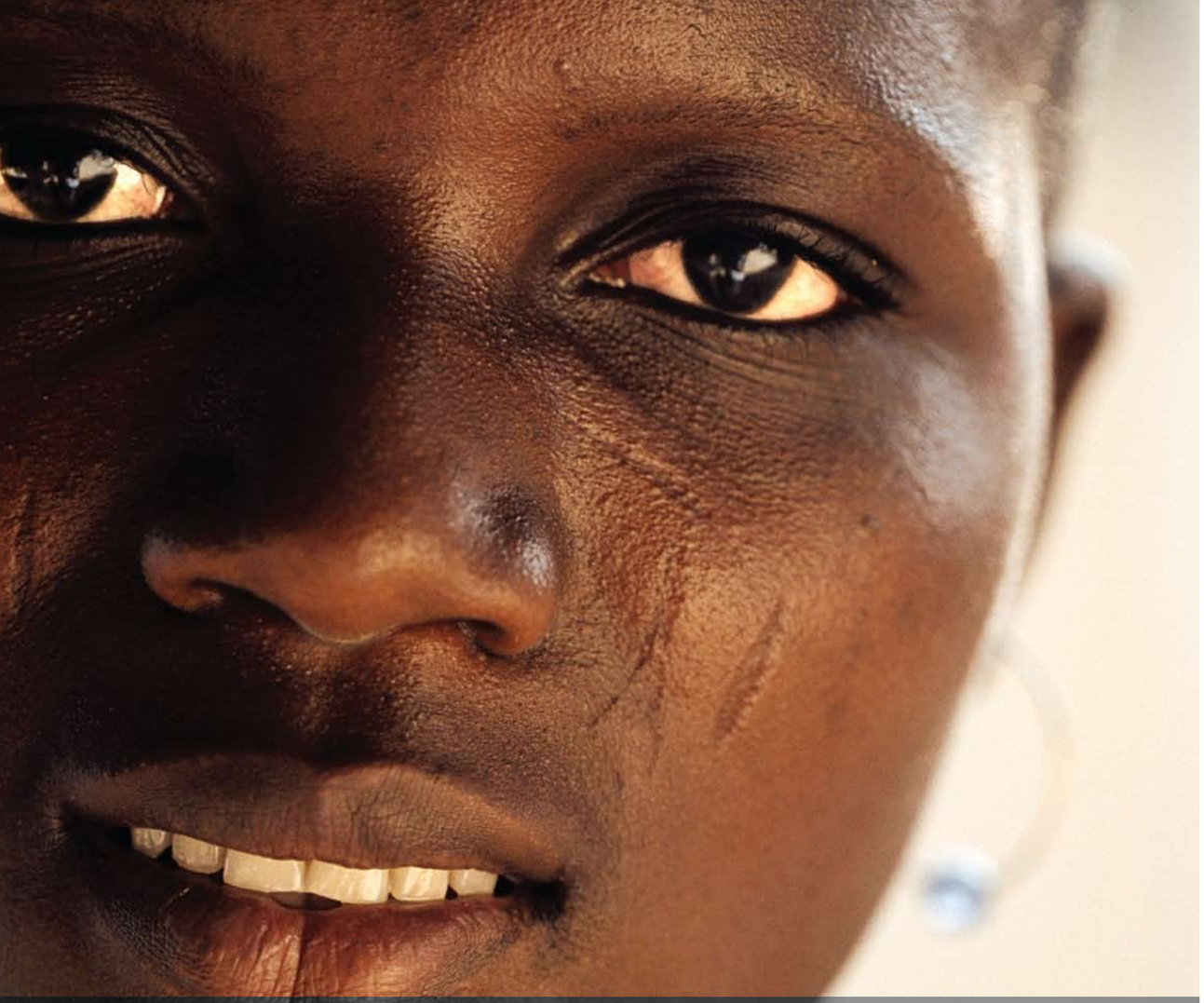
Factors at family level

Family structure
Young people who live with both parents are protected against a number of different negative sexual health outcomes, including early sexual debut *(9 out of 16 studies),* pregnancy and early childbearing *(2 out of 2 studies),* as well as being more likely to use condoms *(3 out of 4 studies).*

Having a father present in the household is also found to be protective against early sexual debut *(2 out of 2 studies),* pregnancy and early childbearing *(3 out of 3 studies).*

Parental monitoring and support
A further risk factor at family level was found to be a lower level of perceived parental monitoring and support. For instance, when adolescents perceived a lower level of support from their parents for using condoms, they are actually less likely to use them *(2 out of 3 studies).*

Likewise, when the relationship between parental monitoring and early sexual debut was examined, it was shown that adolescents who perceived a lower level of parental monitoring were also more likely to have an earlier sexual initiation *(5 out of 5 studies).*



“Helping adolescents become more responsible and active in regard to sexual health is very important. They say youth is the future of a nation. This statement brings with it an obligation for adults to help children and youth right from the start to become active citizens and help build the world of tomorrow.

We need to put children and youth, especially girls, at the centre of development, to give them the opportunity to have confidence in their own abilities and show their potential to contribute to good sexual health in their environment – for example, through informing peers or other people around them.”

Sophie (23)

Sophie is a 23 year old who has been working alongside Plan to improve the sexual health information for her peers since her adolescence. She explains that her experiences are reflective of young people in her country and that her story demonstrates why it is so important to support the empowerment of young people, especially girls, as a solution to their sexual problems.

Photography: Plan

Notes for now and in the future

This review brings together the findings of many hundreds of studies, but readers should be aware that it comes with a number of limitations. They are as follows:

Restricted sample sizes
Some of the studies included in the review used restricted samples, such as using only adolescents in school or visiting clinics. Different studies used different age groups, which affects the comparability of the findings.

Sites and settings
Data was collected from a wide range of sites, including schools, households, clinics and community settings – all of which can impact on the ability to compare findings across sites.

Publication bias
This review is based only on published data which tends to bias results as usually only significant findings are published.

Study designs
The majority of studies considered in this review were cross-section designs and these limit the ability to determine causality.

Requirements for future research

As mentioned earlier in the review, there was a lack of evidence found about abortion. The studies that examine community factors were shown to be very limited and there is a clear need for more long-term studies.

Should you need any further information about this review, please email:
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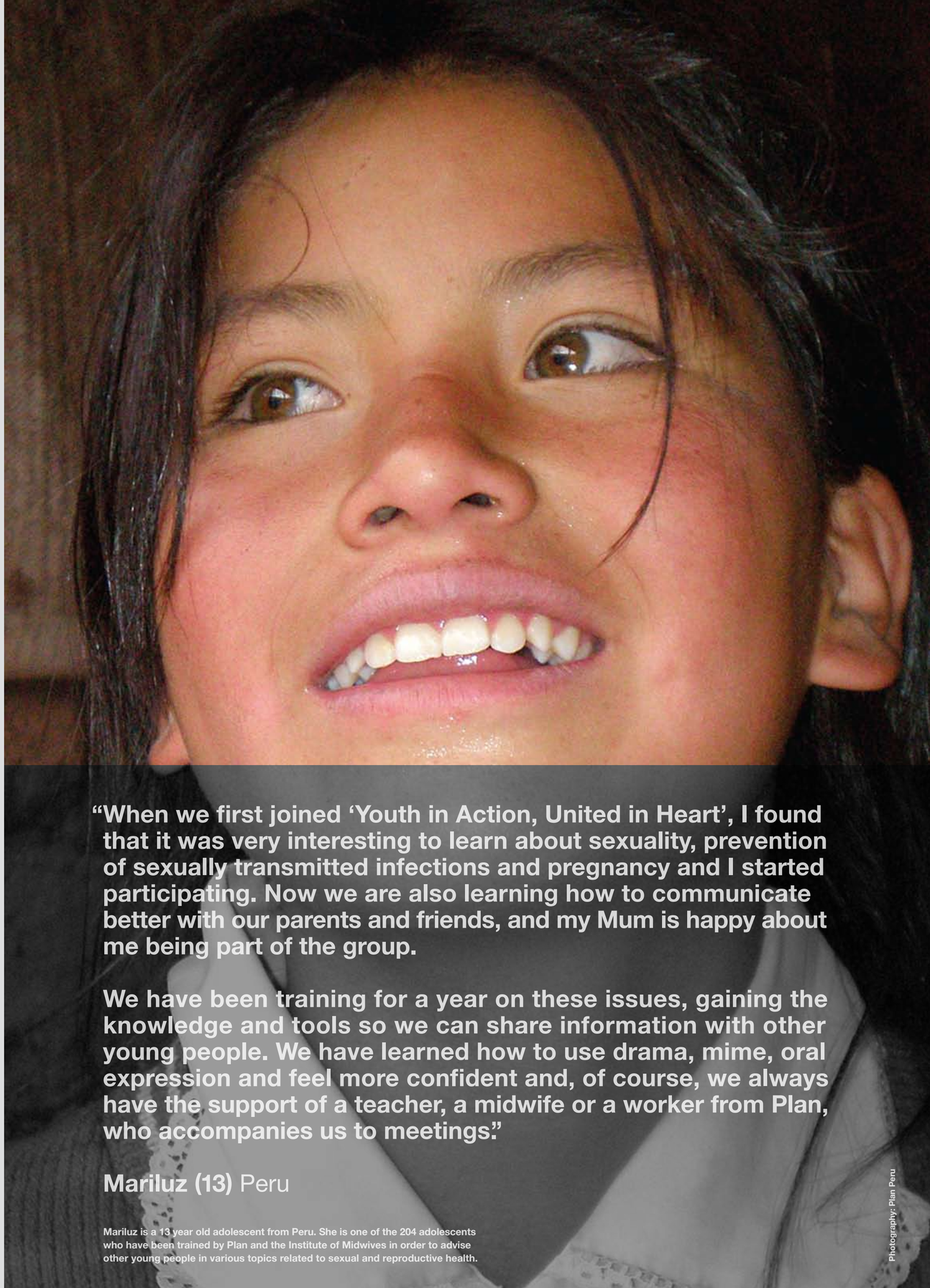
Table: List of Key Risk and Protective Factors for ASRH outcomes, 1990-2010

(Total number of studies:235)

Outcome of Interest	Key Risk Factors	Key Protective Factors
Sexual coercion* *(Number of studies:9)*	• Alcohol use before sex by at least 1 partner* (2/3)✧ • Ever experienced RTI symptoms* (2/2) • Beaten by partner* (2/2) • Ever worked (2/2) • Had friend of opposite sex (2/2)	
Condom use *(Number of studies:55)*	• Married (3/3) • Forced first sex (2/3) • Do not perceive social support for condoms from parents (2/3) • Use alcohol (2/3)	• More years/level of educational attainment (11/14) • Knowledge on condoms (2/2) • Self-efficacy for condom use (7/8) • Discussed HIV with current partner (2/2) • Perceived ability to discuss condoms with partner (2/2) • Live with both parents (3/4)
HIV/STIs *(Number of studies:39)*	• Older age (7/12) • Forced first sex (2/2) • Younger age at first sex (2/3) • History of STI (4/6) • Exchanged sex for money and gifts (2/2) • Higher number of sexual partners (5/5)	• Sex: male (2/3) • Currently use condoms (2/3)
Contraception *(Number of studies:25)*	• Partner has lower education* (2/2) • No children* (4/4)	• Older age (5/9) • Higher education level* (11/16) • Spousal communication* (7/7) • Visited by FP worker* (3/3) • Attended FLE class (2/2) • Knowledge about contraception (4/5) • Desire fewer children* (3/4) • Positive attitude about family planning* (2/2) • Frequent sex (2/2) • Partner has professional job* (2/2) • Partner approves of FP (2/3)
Number of sexual partners *(Number of studies:19)*	• Earlier age of sexual debut (2/3) • Alcohol use (3/4) • Peers/friends have had sex (3/4) • Discusses RH issues with friends (2/2) • Drinks alcohol with friends (2/2)	• Sex: female (3/4)
Sexual experience (premarital or otherwise) *(Number of studies:64)*	• Sex: male (15/17) • Older age (39/48) • School drop out (2/2) • Use drugs (4/4) • Use alcohol (9/10) • Perceive that friends have sex (10/10) • More liberal attitude towards sex (8/8) • Viewed X-rated materials▫ (3/4) • Carries a weapon▫ (3/3) • Residentially mobile (2/2) • Lived away from home (3/3) • Perceive parents have unstable marital union (2/2) • Older sibling became pregnant as an adolescent (2/2) • Higher level or perceived risk for HIV infection (2/2) • Weak intention to remain a virgin/remain a virgin until married (2/3) • Lower parental monitoring (5/5) • Substance use (4/6)	• Lives with both parents (9/16) • Father present in household (2/2) • Ever had a boyfriend/girlfriend (5/6) • Marital status: unmarried* (3/5) • High grade point average (GPA) (2/2) • In school (5/5) • High educational aspirations (2/2)
Pregnancy/Early childbearing *(Number of studies:24)*	• Early sexual debut* (2/2) • Younger age at first sex (2/3) • Forced first sex* (2/2) • Ever experienced sexual violence/abuse (4/6) • Use drugs (2/2) • Did not use contraception at first sex (2/3) • Higher frequency of sex (2/2) • Lived away from home (2/2)	• Live with both parents (2/2) • Father present in household (3/3)

▫ *ASRH outcomes that were not included in 1990-2003/4 literature review*
• *Effect observed especially among females*
✧ *Effect observed especially among males*
◆ *Numbers in parenthesis refer to the number of studies which found that particular factor significant out of the total number of studies that examined the factor in relation to the outcome.*



“When we first joined ‘Youth in Action, United in Heart’, I found that it was very interesting to learn about sexuality, prevention of sexually transmitted infections and pregnancy and I started participating. Now we are also learning how to communicate better with our parents and friends, and my Mum is happy about me being part of the group.

We have been training for a year on these issues, gaining the knowledge and tools so we can share information with other young people. We have learned how to use drama, mime, oral expression and feel more confident and, of course, we always have the support of a teacher, a midwife or a worker from Plan, who accompanies us to meetings.”

Mariluz (13) Peru

Mariluz is a 13 year old adolescent from Peru. She is one of the 204 adolescents who have been trained by Plan and the Institute of Midwives in order to advise other young people in various topics related to sexual and reproductive health.

Photography: Plan Peru