# School-based pregnancy education

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Chin et al., 2012 | 4 | The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: Two systematic reviews for the guide to community preventive services | 1988-2007 | USA? | RCT, QE | to assess (1) the effectiveness of comprehensive risk-reduction and abstinence education interventions for reducing adolescent pregnancy, HIV, and other STIs and (2) the influence of moderator variables | * Significant effects on sexual activity, contraceptive use and pregnancy for “comprehensive risk reduction” approaches, incorporating school/community adult/peer targeted/untargeted * But no breakdown by type |
| DiCenso et al., 1999 | 4 | A systematic review of the effectiveness of adolescent pregnancy primary prevention programs | 1970-1998 | USA, Norway, Canada | RCT | To determine whether primary prevention programs are effective in preventing pregnancies in adolescents aged ten to 18 years. | * Inconsistent results, no clear evidence of improvements in most studies * Coyle – more contraceptive * Eisen – males less likely to initiate intercourse (no baseline) * Kirby no diff * Kvalem no diff * Mitchell-DiCenso no diff * Moberg and Piper – more sex in ‘age-appropriate’ intervention group * Schinke – more contraceptive use * Slade – no diff |
| DiCenso et al., 2002 | 4 | Interventions to reduce unintended pregnancies among adolescents: Systematic review of randomised controlled trials | 1970-2000 | USA | RCT | To review the effectiveness of primary prevention strategies aimed at delaying sexual intercourse, improving use of birth control, and reducing incidence of unintended pregnancy in adolescents | Meta-analysis:   * School based sex education no difference in initiating sexual activity, contraception use or pregnancy * Possible negative effects on young men (pooled with abstinence education) |
| Fullerton et al., 1997 | 4 | Preventing unintended teenage pregnancies and reducing their adverse effects. | -1997? | USA, Canada | RCT | a systematic review of the research evidence on approaches to preventing teenage pregnancy and alleviating the direct negative health and social effects of teenage pregnancy. | McMaster – no improvement, increased pregnancy ‘of borderline significance’. Other studies linked with community – no clear improvements from RCTs of school-based education |
| Goesling et al., 2014 | 4 | Programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors: A systematic review | 1989-2011 | USA | RCT, QE | This systematic review provides a comprehensive, updated assessment of programs with evidence of effectiveness in reducing teen pregnancy, sexually transmitted infections (STIs), or associated sexual risk behaviors. | No breakdown by intervention type |
| Lopez et al., 2016a | 4 | Theory-based interventions for contraception | -2016 | USA, UK | RCT | We included randomized controlled trials (RCTs) that tested an intervention with a theoretical basis for improving contraceptive use for contraception | Identified some successful models |
| Lopez et al., 2016 | 4 | School-based interventions for improving contraceptive use in adolescents | -2016 | UK | RCT | This review examined school-based interventions to improve the use of effective contraceptive methods among sexually active adolescents. | Only Wight et al 2002 – no difference from control |
| Marseille et al., 2018 | 4 | Effectiveness of School-Based Teen Pregnancy Prevention Programs in the USA: a Systematic Review and Meta-Analysis | 1985-2017 | USA, Canada | RCT, observational | To assess the effectiveness of school-based youth pregnancy prevention efforts in the USA | Meta-analysis (combined with STI):   * School-based, comprehensive, education showed no significant reduction * In several cases increased risk * Combining school+community and female only setting *may* contribute to more effective programmes |
| Wakhisi et al., 2011 | 4 | The effectiveness of social marketing in reduction of teenage pregnancies: a review of studies in developed countries (Structured abstract) | 1990-2008 | USA, UK | RCT, QE | To determine the effectiveness of a social marketing approach in reduction of unintended teenage pregnancies | * Studies combining community engagement with school components showed mixed effects |
| Franklin et al., 1997 | 3 | Effectiveness of prevention programs for adolescent pregnancy: A meta-analysis | -1995 | USA, Canada | RCT, QE | to evaluate the effectiveness of primary prevention programs aimed at junior high and high school teens |  |
| Kirby et al., 1994 | 3 | School-based programs to reduce sexual risk behaviors: A review of effectiveness | -1994? | USA | RCT, QE, observational | to review carefully the research on [school-based] programs and to assess their impact on behavior | Some effective programmes identified |
| Manlove et al., 2015 | 3 | Programs to improve adolescent sexual and reproductive health in the US: A review of the evidence | 1990-2014 | USA | RCT | This study examined evaluations of reproductive health programs | (less than half were effective)  Several cases of effective interventions – mostly with STI/HIV focus |

# School-based STI-focussed education

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2010 | 4 | Systematic Review and Narrative Synthesis of the Effectiveness of Contraceptive Service Interventions for Young People, Delivered in Educational Settings | 1995-2008 | USA | RCT, QE | This review focuses on interventions to provide contraceptive services (or to encourage young people to use contraceptive services) that are conducted on educational premises. | * “Safer choices” – a multicomponent intervention – reduced risk behaviours, increased contraceptive use |
| Chin et al., 2012 | 4 | The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: Two systematic reviews for the guide to community preventive services | 1988-2007 | USA? | RCT, QE | to assess (1) the effectiveness of comprehensive risk-reduction and abstinence education interventions for reducing adolescent pregnancy, HIV, and other STIs and (2) the influence of moderator variables | * Significant effects on sexual activity, contraceptive use and pregnancy for “comprehensive risk reduction” approaches, incorporating school/community adult/peer targeted/untargeted * But no breakdown by type |
| Lopez et al., 2009 | 4 | Theory-based strategies for improving contraceptive use: a systematic review | -2008 | USA, UK | RCT | This project systematically reviewed randomized controlled trials (RCTs) that examined the effect of theory-based interventions on contraceptive use. | Identified some successful models – selective inclusion (Theory-based) |
| Lopez et al., 2016 | 4 | School-based interventions for improving contraceptive use in adolescents | -2016 | USA, UK | RCT | This review examined school-based interventions to improve the use of effective contraceptive methods among sexually active adolescents. | Some evidence (three studies) for effectiveness of interventions focussing on STI/HIV |
| Marseille et al., 2018 | 4 | Effectiveness of School-Based Teen Pregnancy Prevention Programs in the USA: a Systematic Review and Meta-Analysis | 1985-2017 | USA, Canada | RCT, observational | To assess the effectiveness of school-based youth pregnancy prevention efforts in the USA | Meta-analysis:   * School-based, comprehensive, education showed no significant reduction * In several cases increased risk * Combining school+community and female only setting *may* contribute to more effective programmes |
| Cardoza et al., 2012 | 3 | Sexual Health Behavior Interventions for U.S. Latino Adolescents: A Systematic Review of the Literature | 1993-2011 | USA | RCT, QE, observational | To identify sexual health behavior interventions targeting U.S. Latino adolescents. | * HIV prevention - +ve * Safer choices 2 – some evidence of improvement over excluded group |
| Kirby et al., 1994 | 3 | School-based programs to reduce sexual risk behaviors: A review of effectiveness | -1994? | USA | RCT, QE, observational | to review carefully the research on [school-based] programs and to assess their impact on behavior | Some effective programmes identified |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | Programmes with evidence of success: *Safer Choices; Becoming a Responsible Teen; Making a Difference: A Safer Sex Approach to STD, Teen Pregnancy, and HIV/AIDS Prevention,* |
| Kirby, 2002b | 3 | Effective approaches to reducing adolescent unprotected sex, pregnancy, and childbearing | 1980-2001 | USA, Canada | USA, Canada | Investigate programmes to reduce teenage pregnancy | Several examples of effective programmes |
| Lazarus et al., 2010 | 3 | Systematic review of interventions to prevent the spread of sexually transmitted infections, including HIV, among young people in Europe | 1995-2005 | UK, Italy, Spain, Estonia | RCT, QE | To examine the effectiveness of interventions seeking to prevent the spread of sexually transmitted infections (STIs), including HIV, among young people in the European Union. | One of six teacher-led interventions showed improvement, in Spain |
| Manlove et al., 2015 | 3 | Programs to improve adolescent sexual and reproductive health in the US: A review of the evidence | 1990-2014 | USA | RCT | This study examined evaluations of reproductive health programs | (less than half were effective)   * Several cases of effective interventions – mostly with STI/HIV focus |
| Mason-Jones et al., 2012 | 3 | A systematic review of the role of school-based healthcare in adolescent sexual, reproductive, and mental health | 1990-2012 | USA, Canada, UK | QE, observational | We wanted to look at effectiveness of SBHC, to review factors influencing young people’s use of SBHC, and to describe pertinent contextual facilitating and impeding factors in the establishment of SBHC. |  |

# Abstinence-based education

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Bennett et al., 2005 | 4 | School-based teenage pregnancy prevention programs: A systematic review of randomized controlled trials | 1980-2002 | USA | RCT | We compared school-based abstinence-only programs with those including contraceptive information (abstinence-plus) to determine which has the greatest impact on teen pregnancy. | * Abstinence-plus over abstinence-only can increase contraceptive use |
| Chin et al., 2012 | 4 | The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: Two systematic reviews for the guide to community preventive services | 1988-2007 | USA? | RCT, QE | to assess (1) the effectiveness of comprehensive risk-reduction and abstinence education interventions for reducing adolescent pregnancy, HIV, and other STIs and (2) the influence of moderator variables | **[ao]**  Meta-analysis   * Small effect on sexual activity in general, present only in non-RCTs, but no effect on unprotected sexual activity or pregnancy (may have increased pregnancy, but not reliable effect estimate) |
| Blank et al., 2010 | 4 | Systematic Review and Narrative Synthesis of the Effectiveness of Contraceptive Service Interventions for Young People, Delivered in Educational Settings | 1995-2008 | USA | RCT, QE | This review focuses on interventions to provide contraceptive services (or to encourage young people to use contraceptive services) that are conducted on educational premises. | Unclear and weak evidence (may be some effectiveness) |
| Dean et al., 2014 | 4 | Preconception care: Promoting reproductive planning | -2011 | USA + ? | RCT, observational | to ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes | **[ap/ao]**  “insignificantly reduce the risk of pregnancy” (3 citations) |
| Marseille et al., 2018 | 4 | Effectiveness of School-Based Teen Pregnancy Prevention Programs in the USA: a Systematic Review and Meta-Analysis | 1985-2017 | USA, Canada | RCT, observational | To assess the effectiveness of school-based youth pregnancy prevention efforts in the USA | **[ao]**  Meta-analysis:   * No clear difference from control |
| DiCenso et al., 1999 | 4 | A systematic review of the effectiveness of adolescent pregnancy primary prevention programs | 1970-1998 | USA, Norway, Canada | RCT | To determine whether primary prevention programs are effective in preventing pregnancies in adolescents aged ten to 18 years. | * Two studies, no difference in behaviours or pregnancy |
| DiCenso et al., 2002 | 4 | Interventions to reduce unintended pregnancies among adolescents: Systematic review of randomised controlled trials | 1970-2000 | USA | RCT | To review the effectiveness of primary prevention strategies aimed at delaying sexual intercourse, improving use of birth control, and reducing incidence of unintended pregnancy in adolescents | **[ao]**  Meta analysis:   * No effect on initiation of sex or pregnancy rates in women (possible negative effect on men when pooled with school-based sex education) |
| Fullerton et al., 1997 | 4 | Preventing unintended teenage pregnancies and reducing their adverse effects. | -1997? | USA, Canada | RCT | a systematic review of the research evidence on approaches to preventing teenage pregnancy and alleviating the direct negative health and social effects of teenage pregnancy. | No effect |
| Goesling et al., 2014 | 4 | Programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors: A systematic review | 1989-2011 | USA | RCT, QE | This systematic review provides a comprehensive, updated assessment of programs with evidence of effectiveness in reducing teen pregnancy, sexually transmitted infections (STIs), or associated sexual risk behaviors. | No breakdown by intervention type |
| Johnson et al., 2011 | 4 | Interventions to Reduce Sexual Risk for Human Immunodeficiency Virus in Adolescents: A Meta-analysis of Trials, 1985-2008 | -2008 | USA (unstated) | RCT, QE | To provide an updated review of the efficacy of behavioral interventions to reduce sexual risk of human immunodeficiency virus (HIV) among adolescents | **[ap/ao]**  “Abstinence focus present” subgroup saw no statistically significant differences |
| Lopez et al., 2016a | 4 | Theory-based interventions for contraception | -2016 | USA, UK | RCT | To review randomized controlled trials that tested a theoretical approach to inform contraceptive choice and encourage or improve contraceptive use. | (same studies as Lopez 2016 et al. below) |
| Lopez et al., 2016 | 4 | School-based interventions for improving contraceptive use in adolescents | -2016 | USA, UK | RCT | This review examined school-based interventions to improve the use of effective contraceptive methods among sexually active adolescents. | **[ap]**   * Two studies of RR – one no diff, one RR reduced unprotected sex   **[ao]**   * One positive outcome of RA in one trial at two time points |
| Underhill et al., 2007[1]a | 4 | Sexual abstinence only programmes to prevent HIV infection in high income countries: Systematic review | 1980-2007 | USA | RCT, QE | To assess the effects of sexual **abstinence only** programmes for HIV prevention | **[ao]**   * No positive effects, several negative effects in one trial |
| Underhill et al., 2007[2]a | 4 | Systematic review of abstinence-plus HIV prevention programs in high-income countries | 1980-2007 | USA | RCT, QE | to investigate the effectiveness of **abstinence-plus** interventions for HIV prevention | **[ap]**   * Several examples of effective programmes * Limited evidence for reduction in pregnancy rates |
| Cardoza et al., 2012 | 3 | Sexual Health Behavior Interventions for U.S. Latino Adolescents: A Systematic Review of the Literature | 1993-2011 | USA | RCT, QE, observational | To identify sexual health behavior interventions targeting U.S. Latino adolescents. | **[ao]**  Three of four programmes had some success |
| Franklin et al., 1997 | 3 | Effectiveness of prevention programs for adolescent pregnancy: A meta-analysis | -1995 | USA, Canada | RCT, QE | to evaluate the effectiveness of primary prevention programs aimed at junior high and high school teens | Programmes emphasising contraception were more effective |
| Kirby et al., 1994 | 3 | School-based programs to reduce sexual risk behaviors: A review of effectiveness | -1994? | USA | RCT, QE, observational | to review carefully the research on [school-based] programs and to assess their impact on behavior |  |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | **[ao]**  Little evidence of effects |
| Kirby, 2002b | 3 | Effective approaches to reducing adolescent unprotected sex, pregnancy, and childbearing | 1980-2001 | USA, Canada | USA, Canada | Investigate programmes to reduce teenage pregnancy |  |
| Manlove et al., 2015 | 3 | Programs to improve adolescent sexual and reproductive health in the US: A review of the evidence | 1990-2014 | USA | RCT | to identify and implement effective programs that will help improve teen sexual and reproductive health | **[ap]**   * (selecting for effective programmes) 4 out of 14 were effective – one mixed * One outcome for pregnancy – positive effects |

# Counselling or medical staff one-to-one

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2012 | 4 | Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings | 1995-2008 | USA, UK, Sweden, Canada | RCT, QE, observational | To determine the effectiveness of contraception service interventions for young people delivered in health care premises | * Two categories: “Condom provision and advice”, “Hormonal contraceptive use and advice” * Three studies measuring condom use – all reported increase (2 significant) * Two hormonal contraceptive counselling studies – both effective (one not replicated) |
| DiCenso et al., 1999 | 4 | A systematic review of the effectiveness of adolescent pregnancy primary prevention programs | 1970-1998 | USA, Norway, Canada | RCT | To determine whether primary prevention programs are effective in preventing pregnancies in adolescents aged ten to 18 years. | * Hanna – no difference in contraceptive use * Herceg-Baron – no difference in contraceptives or pregnancy |
| Lin et al., 2008 | 4 | Behavioral counseling to prevent sexually transmitted infections: A systematic review for the U.S. Preventive Services Task Force | 1988-2007 | USA + ? | RCT, QE | To systematically review the evidence for behavioral counseling interventions to prevent STIs in adolescents and adults (nonpregnant and pregnant). | * Moderate- to high-intensity behavioural counselling may decrease pregnancy (3 studies) and increase male contraceptive use (four studies) * Studies also showed STI reduction (one no data on contraception/abstinence) |
| Maravilla et al., 2016 | 4 | The Role of Community Health Workers in Preventing Adolescent Repeat Pregnancies and Births | 1980-2015 | USA | RCT, QE, observational | In this meta-analytic review, we aim to investigate the impact of CHWs in preventing separately repeated teenage pregnancies and births | Meta-analysis:   * Community Health Worker visitation resulted in reduction in repeated births, but not repeated pregnancies |
| Wilson et al., 2015 | 4 | Motivational interviews to improve contraceptive use in populations at high risk of unintended pregnancy: A systematic review and meta-analysis | -2013 | USA | RCT | to examine the effects of motivational interviews on effective contraceptive use when compared with standard practice | * Two studies addressing teens * Nether showed significant results (not synthesised together) |
| Zapata et al., 2015 | 4 | Impact of Contraceptive Counseling in Clinical Settings: A Systematic Review | 1985-2011 | USA | RCT, QE | evaluated the evidence on the impact of contraceptive counselling provided in clinical settings on reproductive health outcomes | * Effects seen on pregnancy and contraceptive use across several studies |
| Cooper et al., 2014 | 3 | Brief sexuality communication - A behavioural intervention to advance sexually transmitted infection/HIV prevention: A systematic review | -2014? | USA | RCT, QE | to explore opportunistic sexual and reproductive health services for sexual health communication delivered at primary health care level | * One study discussed – successful in reducing pregnancy (two other relevant studies but no results reported in review) |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | (Overlap with Kirby 2002) |
| Kirby, 2002b | 3 | Effective approaches to reducing adolescent unprotected sex, pregnancy, and childbearing | 1980-2001 | USA, Canada | USA, Canada | Investigate programmes to reduce teenage pregnancy | * Four of six studies found positive effects from one-on-one clinic appointments (two not discussed) |
| Manlove et al., 2015 | 3 | Programs to improve adolescent sexual and reproductive health in the US: A review of the evidence | 1990-2014 | USA | RCT | to identify and implement effective programs that will help improve teen sexual and reproductive health | * Several one-on-one interventions, not synthesised clearly but successful programmes identified from the group (six of nine selected for successful outcomes, of 14 included in study) |
| O'Connor et al., 2014 | 4 | Behavioral Sexual Risk-Reduction Counseling in Primary Care to Prevent Sexually Transmitted Infections: A Systematic Review for the U.S. Preventive Services Task Force | 2007-2013 | USA | RCT | To update a previous systematic review about the benefits and harms of sexual risk-reduction counseling to prevent STIs | * Six trials, with most reporting beneficial effects on behavioural outcomes |

# School-based SH clinic

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2010 | 4 | Systematic Review and Narrative Synthesis of the Effectiveness of Contraceptive Service Interventions for Young People, Delivered in Educational Settings | 1995-2008 | USA | RCT, QE | This review focuses on interventions to provide contraceptive services (or to encourage young people to use contraceptive services) that are conducted on educational premises. | * Some evidence of school-clinic contraception-provision improving contraceptive use and decreasing sexual intercourse, but little clarity beyond only increased provision (rather than use) of contraceptives * Clinic itself may not be most potent, as non-contraception-promoting clinics had comparatively minimal effects |
| Fullerton et al., 1997 | 4 | Preventing unintended teenage pregnancies and reducing their adverse effects. | -1997? | USA, Canada | RCT | a systematic review of the research evidence on approaches to preventing teenage pregnancy and alleviating the direct negative health and social effects of teenage pregnancy. | No clear effects |
| Matthias, 2002 | 4 | Youth-specific primary health care – access, utilisation and health outcomes: a critical appraisal of the literature | 1990-2001 | USA, New Zealand | RCT, SR/MA, QE, observational | to provide an evidence-based review of the effectiveness of youth-specific primary health care. | * Four studies of SBHCs – only one showing association between clinic **use** and contraceptive use (cross-sectional) |
| Wakhisi et al., 2011 | 4 | The effectiveness of social marketing in reduction of teenage pregnancies: a review of studies in developed countries (Structured abstract) | 1990-2008 | USA, UK | RCT, QE | to determine the effectiveness of a social marketing approach in reduction of unintended teenage pregnancies. | * No clear evidence from included programmes |
| Kirby et al., 1994 | 3 | School-based programs to reduce sexual risk behaviors: A review of effectiveness | -1994? | USA | RCT, QE, observational | to review carefully the research on [school-based] programs and to assess their impact on behavior | * Inconsistent results * “it is clear that there is a substitution effect” |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | * Likely substitution effect * But two studies did suggest positive directions (clear messages and contraception provision) |
| Lazarus et al., 2010 | 3 | Systematic review of interventions to prevent the spread of sexually transmitted infections, including HIV, among young people in Europe | 1995-2005 | UK, Italy, Spain, Estonia | RCT, QE | To examine the effectiveness of interventions seeking to prevent the spread of sexually transmitted infections (STIs), including HIV, among young people in the European Union. | * Unclear breakdown of intervention type, but stated no effect on behaviour |
| Mason-Jones et al., 2012 | 3 | A systematic review of the role of school-based healthcare in adolescent sexual, reproductive, and mental health | 1990-2012 | USA, Canada, UK | QE, observational | We wanted to look at effectiveness of SBHC, to review factors influencing young people’s use of SBHC, and to describe pertinent contextual facilitating and impeding factors in the establishment of SBHC. | * No evidence of effectiveness (though suggestions that targeted care for school’s needs may increase effectiveness) |

# Teenager SH clinic access and use\*

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2012 | 4 | Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings | 1995-2008 | USA, UK, Sweden, Canada | RCT, QE, observational | To determine the effectiveness of contraception service interventions for young people delivered in health care premises | * Two studies (Hughes 1995 and Wilson 1994) indicating that new clinics don’t affect local teenage pregnancy rates |
| DiCenso et al., 1999 | 4 | A systematic review of the effectiveness of adolescent pregnancy primary prevention programs | 1970-1998 | USA, Norway, Canada | RCT | To determine whether primary prevention programs are effective in preventing pregnancies in adolescents aged ten to 18 years. | * No difference from clinic-based intervention |
| DiCenso et al., 2002 | 4 | Interventions to reduce unintended pregnancies among adolescents: Systematic review of randomised controlled trials | 1970-2000 | USA | RCT | To review the effectiveness of primary prevention strategies aimed at delaying sexual intercourse, improving use of birth control, and reducing incidence of unintended pregnancy in adolescents | Meta-analysis:   * No effect on initial of sex (amongst men), contraceptive use (amongst women) or pregnancy (women) |
| Goesling et al., 2014 | 4 | Programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors: A systematic review | 1989-2011 | USA | RCT, QE | This systematic review provides a comprehensive, updated assessment of programs with evidence of effectiveness in reducing teen pregnancy, sexually transmitted infections (STIs), or associated sexual risk behaviors. | No breakdown by intervention type |
| Wakhisi et al., 2011 | 4 | The effectiveness of social marketing in reduction of teenage pregnancies: a review of studies in developed countries (Structured abstract) | 1990-2008 | USA, UK | RCT, QE | To determine the effectiveness of a social marketing approach in reduction of unintended teenage pregnancies | * One study – teenagers attending clinics. Weak evidence (20% follow up at 3 years), no change in sex, contraceptive use or pregnancy – not measured against control |
| Baxter et al., 2011b | 3 | Views of contraceptive service delivery to young people in the UK: A systematic review and thematic synthesis | 1995-2008 | UK | Quant+qual | an examination of the knowledge and perceptions of contraception among young people, together with provider and user views of services and service delivery. | * General increased accessibility is suggested as a prompt for greater uptake of services. Supports hypothesis that greater access leads to reduced risk (though not strong evidence) |
| Franklin et al., 1997 | 3 | Effectiveness of prevention programs for adolescent pregnancy: A meta-analysis | -1995 | USA, Canada | RCT, QE | to evaluate the effectiveness of primary prevention programs aimed at junior high and high school teens | * Clinic-based programmes more effective than non-clinical for contraceptive use and pregnancy |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | * Unclear effect of general clinic provision of services (aside from counselling elsewhere) |
| Lazarus et al., 2010 | 3 | Systematic review of interventions to prevent the spread of sexually transmitted infections, including HIV, among young people in Europe | 1995-2005 | UK, Italy, Spain, Estonia | RCT, QE | To examine the effectiveness of interventions seeking to prevent the spread of sexually transmitted infections (STIs), including HIV, among young people in the European Union. | * Two clinic-based, neither impacted behaviour |
| Manlove et al., 2015 | 3 | Programs to improve adolescent sexual and reproductive health in the US: A review of the evidence | 1990-2014 | USA | RCT | to identify and implement effective programs that will help improve teen sexual and reproductive health | * Several studies found consistent positive impacts, increasing condom use, one reducing pregnancies or births |

# Advance supply of EC\*\*

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2012 | 4 | Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings | 1995-2008 | USA, UK, Sweden, Canada | RCT, QE, observational | To determine the effectiveness of contraception service interventions for young people delivered in health care premises | * Effective in promoting use of EC and timing of use (not at expense of other methods) * But did not show a difference in pregnancy rates (1 study) |
| Meyer et al., 2011 | 4 | Advance Provision of Emergency Contraception among Adolescent and Young Adult Women: A Systematic Review of Literature | 1950-2009 | USA | RCT | to summarize the findings of randomized controlled trials assessing the advance provision of emergency contraception (EC) to women 24 years of age or younger | * Effective in promoting use of EC and timing of use (not at expense of other methods) * One study showed increase risk of sex at 12 months * But did not show a difference in pregnancy rates |
| Rodriguez et al., 2013 | 4 | Advance supply of emergency contraception: A systematic review | 1980-2012 | USA, Sweden | RCT | This review summarizes the evidence available concerning safety and efficacy of advance provision of ECPs | * 1 study RRP group – decreased pregnancy, not stat. sig. (small sample size) * 1 study adolescent mothers – no difference in contraceptive use or pregnancy, suggestion that ECP group may engage in unprotected sex more often * 1 study – ECP supply led to greater use, did not negatively affect other behaviours * 1 study – ECP provision increased ECP use and condom use at 6 months |

# Condom promotion/distribution

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2012 | 4 | Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings | 1995-2008 | USA, UK, Sweden, Canada | RCT, QE, observational | To determine the effectiveness of contraception service interventions for young people delivered in health care premises | * Increased usage when combined with advice and demonstration (medical staff one-on-one) |
| Charania et al., 2011 | 4 | Efficacy of Structural-Level Condom Distribution Interventions: A Meta-Analysis of U.S. and International Studies, 1998–2007 | 1988-2007 | USA | RCT, QE, observational | to summarize the available research literature evaluating structural-level condom distribution interventions to assess the overall efficacy of SLCDIs on HIV-risk sex behaviors and sexually transmitted infections | Meta-analysis:   * Four US-based studies “specifically targeting youth” saw insignificant effect (OR: 1.35; 0.94-1.96; I2 = 83%; Random effects?) |
| Dean et al., 2014 | 4 | Preconception care: Promoting reproductive planning | -2011 | USA + ? | RCT, observational | to ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes | * No clear evidence of effectiveness of condom promotion alone |
| Andrzejewski et al., 2018 | 3 | Condom Availability Programs in Schools: A Review of the Literature | -2018 | USA | QE mostly? | to provide a comprehensive summary and synthesis of the peer-reviewed evaluation literature on CAPs in secondary schools in the United States | * One study reporting pregnancy – no effect * High use of CAP condoms – though replacement? Not relevant * Five programmes on condom use at last sex – one decreased, two increased, two no change * Mixed results for other contraception use affected by CAP (replacement?) – one decreased, the other stable (compared to control decrease in use) |
| Cardoza et al., 2012 | 3 | Sexual Health Behavior Interventions for U.S. Latino Adolescents: A Systematic Review of the Literature | 1993-2011 | USA | RCT, QE, observational | To identify sexual health behavior interventions targeting U.S. Latino adolescents. | * HIV programme condom distribution – less sexually active (males), less likely to have multiple partners (females) |
| Kirby et al., 1994 | 3 | School-based programs to reduce sexual risk behaviors: A review of effectiveness | -1994? | USA | RCT, QE, observational | to review carefully the research on [school-based] programs and to assess their impact on behavior | No clear evidence of effectiveness |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | Conflicting results on school-wide use of condoms, though may be weaknesses in studies |

# Contraception access (other)

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2012 | 4 | Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings | 1995-2008 | USA, UK, Sweden, Canada | RCT, QE, observational | To determine the effectiveness of contraception service interventions for young people delivered in health care premises | * Combined with advice (medical staff one-on-one) positive effects on contraception use * Immediate contraceptive injection intervention – no difference in pregnancy rates |
| Denno et al., 2012 | 3 | Reaching Youth With Out-of-Facility HIV and Reproductive Health Services: A Systematic Review | -2010 | USA, Australia, UK, | RCT, QE, observational | To identify policies promoting or programs delivering HIV or reproductive health services in the community | * Improved OTC EC provision led to increased uptake across three populations * In the UK, generally replacement of prescription ECs, but was taken sooner * Not strong evidence of population-wide effect, but consistent with hypothesis * Youth outreach for contraceptive use in high-risk neighbourhoods (e.g. drug injection) – condom use increase |
| Kirby et al., 1994 | 3 | School-based programs to reduce sexual risk behaviors: A review of effectiveness | -1994? | USA | RCT, QE, observational | to review carefully the research on [school-based] programs and to assess their impact on behavior |  |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | * Some success when combined with counselling |

# Contraception initiation follow-up

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Steenland et al., 2013 | 4 | The effect of follow-up visits or contacts after contraceptive initiation on method continuation and correct use | -2012 | USA, Netherlands | RCT, QE, observational | to assess whether follow-up visits or contacts after a woman begins using contraception improve method continuation and correct use | One relevant study – no difference from control |

# Changing contraceptive technologies

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2012 | 4 | Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings | 1995-2008 | USA, UK, Sweden, Canada | RCT, QE, observational | To determine the effectiveness of contraception service interventions for young people delivered in health care premises | * Three interventions to promote hormonal contraceptives * Higher adherence in intervention group (1 study) * Intervention to promote may result in lower pregnancy risk (2 studies, not signif) * Injections may result in fewer pregnancies than pills (1 study, p=0.08) |
| Dean et al., 2014 | 4 | Preconception care: Promoting reproductive planning | -2011 | USA + ? | RCT, observational | To ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes | * Success of hormonal implants in one study (no comparisons with other studies) * Improved contraception methods provision at schools had no additional effect in two studies |
| Tang et al., 2012 | 4 | Hormonal and intrauterine methods for contraception for women aged 25 years and younger | 2004-2010 | Sweden, Finland, USA | RCT | This review examined randomized controlled trials of hormonal or intrauterine methods used for contraception in women aged 25 years and younger. | * Comparing methods of non-condom contraception – low numbers prevented conclusions regarding efficacy |
| Denno et al., 2012 | 3 | Reaching Youth With Out-of-Facility HIV and Reproductive Health Services: A Systematic Review | -2010 | USA, Australia, UK, | RCT, QE, observational | To identify policies promoting or programs delivering HIV or reproductive health services in the community | * Improved OTC EC provision led to increased uptake across three populations * In the UK, generally replacement of prescription ECs, but was taken sooner * Not strong evidence of population-wide effect, but consistent with hypothesis |
| Usinger et al., 2016 | 3 | Intrauterine Contraception Continuation in Adolescents and Young Women: A Systematic Review | -2015 | USA, Sweden | RCT, QE | The purpose of this SR was to examine 12-month continuation rates for IUDs compared with other forms of contraception in young women aged 25 years and younger. | * Inserted devices had higher continuation rates than oc, injection and patches, though similar to implants * Improved technology can improve adherence |

# Community-based pregnancy education

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Chin et al., 2012 | 4 | The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: Two systematic reviews for the guide to community preventive services | 1988-2007 | USA? | RCT, QE | to assess (1) the effectiveness of comprehensive risk-reduction and abstinence education interventions for reducing adolescent pregnancy, HIV, and other STIs and (2) the influence of moderator variables | * Significant effects on sexual activity, contraceptive use and pregnancy for “comprehensive risk reduction” approaches, incorporating school/community adult/peer targeted/untargeted * But no breakdown by type |
| DiCenso et al., 1999 | 4 | A systematic review of the effectiveness of adolescent pregnancy primary prevention programs | 1970-1998 | USA, Norway, Canada | RCT | To determine whether primary prevention programs are effective in preventing pregnancies in adolescents aged ten to 18 years. | * One community study (Allen et al. Teen Outreach Program) showed reduction in pregnancy, but earlier trial of same programme did not |
| Wakhisi et al., 2011 | 4 | The effectiveness of social marketing in reduction of teenage pregnancies: a review of studies in developed countries (Structured abstract) | 1990-2008 | USA, UK | RCT, QE | To determine the effectiveness of a social marketing approach in reduction of unintended teenage pregnancies | * One study examined exclusively community focussed and showed improved contraceptive use, delayed sexual initiation and lower pregnancy rates * Studies combining community engagement with school components showed mixed effects |
| Cardoza et al., 2012 | 3 | Sexual Health Behavior Interventions for U.S. Latino Adolescents: A Systematic Review of the Literature | 1993-2011 | USA | RCT, QE, observational | To identify sexual health behavior interventions targeting U.S. Latino adolescents. | * ASPPP reduced pregnancy |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | * Limited/mixed evidence of effectiveness of community-based interventions * Intense/continued focus may contribute to success |

# Community-based STI education

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Chin et al., 2012 | 4 | The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: Two systematic reviews for the guide to community preventive services | 1988-2007 | USA? | RCT, QE | to assess (1) the effectiveness of comprehensive risk-reduction and abstinence education interventions for reducing adolescent pregnancy, HIV, and other STIs and (2) the influence of moderator variables | * Significant effects on sexual activity, contraceptive use and pregnancy for “comprehensive risk reduction” approaches, incorporating school/community adult/peer targeted/untargeted * But no breakdown by type |
| Lopez et al., 2009 | 4 | Theory-based strategies for improving contraceptive use: a systematic review | -2008 | USA, UK | RCT | This project systematically reviewed randomized controlled trials (RCTs) that examined the effect of theory-based interventions on contraceptive use. | * Theory-driven models appear successful * Cluster RCT (Stanton et al) showed less pregnancy * Other models showed greater contraceptive use |
| Cardoza et al., 2012 | 3 | Sexual Health Behavior Interventions for U.S. Latino Adolescents: A Systematic Review of the Literature | 1993-2011 | USA | RCT, QE, observational | To identify sexual health behavior interventions targeting U.S. Latino adolescents. | * ‘The GIG’ improved knowledge * Shero – better condom ownership and abstinence |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | * Limited/mixed evidence of effectiveness of community-based interventions * Intense/continued focus may contribute to success |

# Early-years intervention

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Harden et al., 2006 | 4 | Young people, pregnancy and social exclusion: a systematic synthesis of research evidence to identify effective, appropriate and promising approaches for prevention and support | 1950-2004 | USA, UK, Canada | RCT, QE, observational | What research has been undertaken that is relevant to informing policy and practice in the area of young people, pregnancy, parenting and social exclusion?  What is known about effective, appropriate and promising interventions that target the social exclusion associated with teenage pregnancy and parenting, which might therefore have a role to play in lowering rates of unintended teenage pregnancy and supporting teenage parents? | Three studies:   * Perry (reported in 1984 so not outside of date; Berrueta-Clements et al 1984) * Abercadian (Cambell et al 2002 – reporting long-term effects – similar to Kirby?) * Seattle Social Development Program (Hawkins et al. 1999)   Meta-analysis:   * Stat sig effect on pregnancies for young women (inc. all studies) * Similar direction (missing sig) for men * Similar results in Cambell, not ma-ed |
| Zoritch et al., 1998 | 4 | The health and welfare effects of day-care: A systematic review of randomised controlled trials | 1977-1996 | USA | RCT | to assess the effects of day-care on children and families | * One study reported. Lower rates (64 pregnancies per 100 in intervention, 117 per 100 in control, n=128), but no test of significance (Perry Pre-School Program; ref Schweinhart et al., 1993) |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | * Abercadian Project – kids in programme delayed pregnancy by a year (no sig testing) |

# Personal development (inc. volunteer work)

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2010 | 4 | Systematic Review and Narrative Synthesis of the Effectiveness of Contraceptive Service Interventions for Young People, Delivered in Educational Settings | 1995-2008 | USA | RCT, QE | This review focuses on interventions to provide contraceptive services (or to encourage young people to use contraceptive services) that are conducted on educational premises. | * Good evidence across all three studies (Allen 1997, 2001 and O’Donnell 2002) for lower rates of pregnancy and sexual activity |
| DiCenso et al., 1999 | 4 | A systematic review of the effectiveness of adolescent pregnancy primary prevention programs | 1970-1998 | USA, Norway, Canada | RCT | To determine whether primary prevention programs are effective in preventing pregnancies in adolescents aged ten to 18 years. | * Smith – no difference in outcomes * Allen Teen Outreach – pregnancy reduction 59% * Grossman – No diff * Philliber Teen Outreach – no diff in outcomes |
| DiCenso et al., 2002 | 4 | Interventions to reduce unintended pregnancies among adolescents: Systematic review of randomised controlled trials | 1970-2000 | USA | RCT | To review the effectiveness of primary prevention strategies aimed at delaying sexual intercourse, improving use of birth control, and reducing incidence of unintended pregnancy in adolescents | Meta-analysis:   * No effect on initiation of sex (2 studies women, 1 study men) * No effect on contraception se (1 study women) * Lowered risk of pregnancy (1 study, Teen Outreach, women – Allen 1997; baseline differences favoured intervention) |
| Fullerton et al., 1997 | 4 | Preventing unintended teenage pregnancies and reducing their adverse effects. | -1997? | USA, Canada | RCT | a systematic review of the research evidence on approaches to preventing teenage pregnancy and alleviating the direct negative health and social effects of teenage pregnancy. | One study (Philliber) no clear difference |
| Gavin et al., 2010 | 4 | A Review of Positive Youth Development Programs That Promote Adolescent Sexual and Reproductive Health | 1985-2007 | USA, Australia | RCT, QE | to identify and describe PYD  programs that improve adolescent sexual and reproductive health. | Successful programmes:   * Aban Aya – less sex and more condoms for boys * Adult Identity mentoring – less sex for boys * Carrera – less sex and pregnancy for girls, more hormonal contraceptives * Reach for Health with community Youth Service * Seattle Social Development Project * Teen Incentives * Teen Outreach Programme   No diff:   * Learn and Serve America * Project Taking Charge * Quantum Opportunities Program * Recapturing the Vision * STEP |
| Goesling et al., 2014 | 4 | Programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors: A systematic review | 1989-2011 | USA | RCT, QE | This systematic review provides a comprehensive, updated assessment of programs with evidence of effectiveness in reducing teen pregnancy, sexually transmitted infections (STIs), or associated sexual risk behaviors. | No breakdown by intervention type |
| Harden et al., 2006 | 4 | Young people, pregnancy and social exclusion: a systematic synthesis of research evidence to identify effective, appropriate and promising approaches for prevention and support | 1950-2004 | USA, UK, Canada | RCT, QE, observational | What research has been undertaken that is relevant to informing policy and practice in the area of young people, pregnancy, parenting and social exclusion?  What is known about effective, appropriate and promising interventions that target the social exclusion associated with teenage pregnancy and parenting, which might therefore have a role to play in lowering rates of unintended teenage pregnancy and supporting teenage parents? |  |
| Jackson et al., 2012 | 4 | Interventions to prevent substance use and risky sexual behaviour in young people: a systematic review | 1806-2010 | USA, Canada, Australia, UK | RCT, QE | To determine how far intervention programmes have been evaluated for their impact upon these risk behaviours, and to summarize the effectiveness of programmes, to identify promising approaches to reducing multiple risk behaviour. | - |
| Marseille et al., 2018 | 4 | Effectiveness of School-Based Teen Pregnancy Prevention Programs in the USA: a Systematic Review and Meta-Analysis | 1985-2017 | USA, Canada | RCT, observational | To assess the effectiveness of school-based youth pregnancy prevention efforts in the USA | * Two evaluations of teen outreach but not synthesised together |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | TOP and CAS Carerra |
| Kirby, 2002b | 3 | Effective approaches to reducing adolescent unprotected sex, pregnancy, and childbearing | 1980-2001 | USA, Canada | USA, Canada | Investigate programmes to reduce teenage pregnancy | TOP and CAS Carerra |

# Vocational/academic training

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Fullerton et al., 1997 | 4 | Preventing unintended teenage pregnancies and reducing their adverse effects. | -1997? | USA, Canada | RCT | a systematic review of the research evidence on approaches to preventing teenage pregnancy and alleviating the direct negative health and social effects of teenage pregnancy. | * Tentative positive conclusions on effects on contraceptive use and reduced pregnancy rates (overlap with Teen Outreach) |
| Harden et al., 2006 | 4 | Young people, pregnancy and social exclusion: a systematic synthesis of research evidence to identify effective, appropriate and promising approaches for prevention and support | 1950-2004 | USA, UK, Canada | RCT, QE, observational | What research has been undertaken that is relevant to informing policy and practice in the area of young people, pregnancy, parenting and social exclusion?  What is known about effective, appropriate and promising interventions that target the social exclusion associated with teenage pregnancy and parenting, which might therefore have a role to play in lowering rates of unintended teenage pregnancy and supporting teenage parents? | (overlap with Teen Outreach)  Hahn Quantum opportunities – possible positive results (not sig) |

# Digital media-based SH intervention

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Hieftje et al., 2013 | 4 | Electronic Media–Based Health Interventions Promoting Behavior Change in Youth: A Systematic Review | 1950-2010 | USA | RCT, QE, observational | To assess the type and quality of the studies evaluating the effects of electronic media–based interventions on health and safety behavior change | * 2 studies reporting sexual risk behaviours, both showing significant effects on risk behaviours * One overlap (Tortello) with Guse |
| Widman et al., 2018 | 4 | Technology-Based Interventions to Reduce Sexually Transmitted Infections and Unintended Pregnancy Among Youth | -2017 | USA, Netherlands, Australia | RCT, QE | the goal of this meta-analysis is to synthesize the growing literature on technology-based sexual health interventions among youth ages 13–24 and to determine their overall efficacy on two key behavioral outcomes: condom use and abstinence | * Meta-analyses * Increased condom use * Increased abstinence * Not meta-analysed by included countries only – so caution * One overlap (Downs) with Hieftje * Two with Guse (Bull and Lou) |
| Guse et al., 2012 | 3 | Interventions using new digital media to improve adolescent sexual health: A systematic review | 2000-2011 | USA | RCT, QE | The purpose of this review is to summarize the currently published evidence base on the effectiveness of new digital media-based sexual health interventions for adolescents aged 13–24 years. | * Consistent evidence of decreased sex and increased contraceptive use in two of six studies reporting sexual risk behaviours * One overlap (Tortello) with Hieftje |
| Jones et al., 2014 | 3 | The Impact of Health Education Transmitted Via Social Media or Text Messaging on Adolescent and Young Adult Risky Sexual Behavior: A Systematic Review of the Literature | -2014? | USA, Australia | RCT, QE | to examine the effectiveness of social media and text messaging interventions designed to increase sexual health knowledge, increase screening/testing, decrease sexual risk behaviors, and decrease STD acquisition among young adults aged 15 through 24 years | * Overall appears higher use of condoms, but some contradictory and inconsistent findings * Similarly inconsistent findings with sexual activity |
| McLellan et al., 2013 | 3 | Can technology be effective in interventions targeting sexual health and substance use in young people; a systematic review | 1806-2011 | USA | RCT, QE, observational | to focus on the use of all types of technology interventions for young people (aged 12– 25 years) in the prevention and reduction of risky behaviours around substance use and sexual health. | * Two studies aimed at preventing pregnancy both improved outcomes though one measured sexual activity and the other only knowledge outcomes (not relevant to this review) * Other STI-focussed ones report positive behavioural outcomes |

# Digital-media based intervention (targeted)

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| DeSmet et al., 2015 | 3 | A Systematic Review and Meta-analysis of Interventions for Sexual Health Promotion Involving Serious Digital Games | 1887-2013 | UK, USA | RCT, QE | First, we summarized published evidence on serious games for sexual health behaviors and examined whether immersive and health-promoting game features were incorporated. Second, we investigated the overall effectiveness of serious digital games to promote sexual health behavior using meta-analysis. | * No significant effects on behaviour |
| L'Engle et al., 2016 | 3 | Mobile phone interventions for adolescent sexual and reproductive health: A systematic review | 2000-2014 | USA, Australia | RCT, QE, observational | To assess strategies, findings, and quality of evidence on using mobile phones to improve adolescent sexual and reproductive health (ASRH) | * Not consistent strong findings on behavioural outcomes |

# Education policies (promoting)

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Dean et al., 2014 | 4 | Preconception care: Promoting reproductive planning | -2011 | USA + ? | RCT, observational | to ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes | * Education continuation for teen mothers appear effective in decreasing risk |
| Harden et al., 2006 | 4 | Young people, pregnancy and social exclusion: a systematic synthesis of research evidence to identify effective, appropriate and promising approaches for prevention and support | 1950-2004 | USA, UK, Canada | RCT, QE, observational | What research has been undertaken that is relevant to informing policy and practice in the area of young people, pregnancy, parenting and social exclusion?  What is known about effective, appropriate and promising interventions that target the social exclusion associated with teenage pregnancy and parenting, which might therefore have a role to play in lowering rates of unintended teenage pregnancy and supporting teenage parents? | * Several studies (early years) on promoting educational attainment are effective * Teenagers’ views support the conclusion that improved education policy would contribute to lower tp rates |

# Family/Community engagement

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Dean et al., 2014 | 4 | Preconception care: Promoting reproductive planning | -2011 | USA + ? | RCT, observational | to ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes | * CAS Carrera highlighted, giving positive results |
| DiCenso et al., 2002 | 4 | Interventions to reduce unintended pregnancies among adolescents: Systematic review of randomised controlled trials | 1970-2000 | USA | RCT | To review the effectiveness of primary prevention strategies aimed at delaying sexual intercourse, improving use of birth control, and reducing incidence of unintended pregnancy in adolescents | * One study (McBride) – no effect on sexual initiation or contraceptive use |
| Fullerton et al., 1997 | 4 | Preventing unintended teenage pregnancies and reducing their adverse effects. | -1997? | USA, Canada | RCT | a systematic review of the research evidence on approaches to preventing teenage pregnancy and alleviating the direct negative health and social effects of teenage pregnancy. | No clear difference |
| Jackson et al., 2012 | 4 | Interventions to prevent substance use and risky sexual behaviour in young people: a systematic review | 1806-2010 | USA, Canada, Australia, UK | RCT, QE | To identify and assess the effectiveness of experimental studies of interventions that report on multiple risk behaviour outcomes in young people | * Familias Unidas – no effects on sex * Focus on Kids – reduced pregnancy, increased condom use |
| Sutton et al., 2014 | 4 | Impact of Parent-Child Communication Interventions on Sex Behaviors and Cognitive Outcomes for Black/African-American and Hispanic/Latino Youth: A Systematic Review, 1988–2012 | 1988-2012 | USA | RCT, QE | reviewed HIV/STI-focused behavioral interventions implemented with youth of color and designed to improve parent-child communications about sex and assessed their effectiveness in improving sexual health outcomes | Parent-targeted (seven out of seven interventions) and combined parent/youth (two out of three) had consistent positive effects on behaviours   * Targeting black youth/families |
| Wakhisi et al., 2011 | 4 | The effectiveness of social marketing in reduction of teenage pregnancies: a review of studies in developed countries (Structured abstract) | 1990-2008 | USA, UK | RCT, QE | To determine the effectiveness of a social marketing approach in reduction of unintended teenage pregnancies | Two studies (Coyle 2001; Paine-Andrews 1999) contained ‘for parents’ element, were effective in reducing pregnancy and increasing condom use |
| Wight et al., 2013 | 4 | A Review of Interventions With Parents to Promote the Sexual Health of Their Children | 1990-2009 | USA | RCT, QE | To assess the effectiveness of interventions involving parents or carers intended to improve the sexual health of their children | Sexual outcomes improved in approx. half of studies |
| Cardoza et al., 2012 | 3 | Sexual Health Behavior Interventions for U.S. Latino Adolescents: A Systematic Review of the Literature | 1993-2011 | USA | RCT, QE, observational | To identify sexual health behavior interventions targeting U.S. Latino adolescents. | * the Gig [comm] – no relevant data * ASPPP [comm] – lowered odds of sexual activity and pregnancy amongst females * Familias Unidas – lower sexual activity in intervention group * Families Talking together – lower sexual activity in intervention |
| Downing et al., 2011 | 3 | A systematic review of parent and family-based intervention effectiveness on sexual outcomes in young people | 1990-2009 | USA | RCT, QE | to (i) assess effectiveness of parent/family-based programmes at preventing or reducing poor sexual health outcomes, (ii) assess the effectiveness of these programmes at increasing communication about sex and relationships, (iii) compare parent versus family-based interventions, (iv) examine interventions solely aimed at affecting sexual behaviour versus those addressing multiple health behaviours (e.g. general health promotion, alcohol behaviours) and (v) provide quality assessment and methodological critique of included studies. | Improved communication, but mixed results. Parent-focussed better than family engagement? |
| Franklin et al., 1997 | 3 | Effectiveness of prevention programs for adolescent pregnancy: A meta-analysis | -1995 | USA, Canada | RCT, QE | to evaluate the effectiveness of primary prevention programs aimed at junior high and high school teens | [community-based] |
| Gavin et al., 2015 | 3 | Programs to Strengthen Parent-Adolescent Communication about Reproductive Health: A Systematic Review | 1985-2011 | USA | RCT, QE? observational? | to inform national recommendations on quality family planning services | Four of seven found an impact on sexual risk behaviour. Worked through increasing communication.  Two long-term studies, no clear effects |
| Kirby 2001 | 3 | Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Summary) | 1980-2001 | USA, Canada | RCT, QE | Investigate programmes to reduce teenage pregnancy | Neither of the two studies showed improvement |
| Manlove et al., 2015 | 3 | Programs to improve adolescent sexual and reproductive health in the US: A review of the evidence | 1990-2014 | USA | RCT | to identify and implement effective programs that will help improve teen sexual and reproductive health | Most were effective |

# Public information/media campaign

No high-quality studies found

# Peer-contact sexual health intervention

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2010 | 4 | Systematic Review and Narrative Synthesis of the Effectiveness of Contraceptive Service Interventions for Young People, Delivered in Educational Settings | 1995-2008 | USA | RCT, QE | This review focuses on interventions to provide contraceptive services (or to encourage young people to use contraceptive services) that are conducted on educational premises. | * Peers part of larger intervention – no clear evidence |
| Chin et al., 2012 | 4 | The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: Two systematic reviews for the guide to community preventive services | 1988-2007 | USA? | RCT, QE | to assess (1) the effectiveness of comprehensive risk-reduction and abstinence education interventions for reducing adolescent pregnancy, HIV, and other STIs and (2) the influence of moderator variables | * Significant effects on sexual activity, contraceptive use and pregnancy for “comprehensive risk reduction” approaches, incorporating school/community adult/peer targeted/untargeted * But no breakdown by type |
| Dean et al., 2014 | 4 | Preconception care: Promoting reproductive planning | -2011 | USA + ? | RCT, observational | to ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes | * One study – including peer counselling no effect |
| DiCenso et al., 1999 | 4 | A systematic review of the effectiveness of adolescent pregnancy primary prevention programs | 1970-1998 | USA, Norway, Canada | RCT | To determine whether primary prevention programs are effective in preventing pregnancies in adolescents aged ten to 18 years. | * Ferguson – no difference * Handler – no difference * Jay – no difference |
| DiCenso et al., 2002 | 4 | Interventions to reduce unintended pregnancies among adolescents: Systematic review of randomised controlled trials | 1970-2000 | USA | RCT | To review the effectiveness of primary prevention strategies aimed at delaying sexual intercourse, improving use of birth control, and reducing incidence of unintended pregnancy in adolescents | * Ferguson – no difference * Handler – no difference |
| Kim and Free 2008 | 4 | Recent evaluations of the peer-led approach in adolescent sexual health education: a systematic review. | 1998-2005 | USA, Italy, Canada, UK | RCT, QE | We conducted a systematic review and methodological appraisal of randomized and quasi-randomized controlled trials of peer-led sex education interventions. We also evaluated the extent to which Harden’s recommendations for the development and evaluation of peer-led interventions have been addressed in studies published since 1998. | Meta-analysis included non-eligible countries   * But no clear evidence of effect across Euro+HIC countries on condom use (in any of four relevant studies reporting this outcome) |
| Lopez et al., 2016a | 4 | Theory-based interventions for contraception | -2016 | USA, UK | RCT | We included randomized controlled trials (RCTs) that tested an intervention with a theoretical basis for improving contraceptive use for contraception | One study – improved condom use, oral contraceptive use and dual methods (sustained at 12 and 24 months) and dual use or condoms at 30 months |
| Lopez et al., 2016 | 4 | School-based interventions for improving contraceptive use in adolescents | -2016 | USA, UK | RCT | This review examined school-based interventions to improve the use of effective contraceptive methods among sexually active adolescents. | Two studies – one showed overall reduction in pregnancy (compared to teacher-led) |
| Marseille et al., 2018 | 4 | Effectiveness of School-Based Teen Pregnancy Prevention Programs in the USA: a Systematic Review and Meta-Analysis | 1985-2017 | USA, Canada | RCT, observational | To assess the effectiveness of school-based youth pregnancy prevention efforts in the USA | Meta-analysis:   * No reduction attributable to peer-led versions (possibly less effective than adult led) |
| Tolli, 2012 | 4 | Effectiveness of peer education interventions for HIV prevention, adolescent pregnancy prevention and sexual health promotion for young people: A systematic review of European studies | 1999-2010 | Italy, Germany, UK, Greece | RCT, QE | to determine the effectiveness of peer education programs for human immunodeficiency virus (HIV) prevention, adolescent pregnancy prevention and promotion of sexual health among young people | “overall, when compared to standard practice or no intervention, there is no clear evidence of the effectiveness of peer education concerning HIV prevention, adolescent pregnancy prevention and sexual health promotion for young people in the member countries of the European Union” |
| Wakhisi et al., 2011 | 4 | The effectiveness of social marketing in reduction of teenage pregnancies: a review of studies in developed countries (Structured abstract) | 1990-2008 | USA, UK | RCT, QE | To determine the effectiveness of a social marketing approach in reduction of unintended teenage pregnancies | Two studies compared peer-led to non-peer-led and found effects. Others assessed interventions with one peer component   * Aarons 2000 – group with peer-led: delayed sexual initiation and increased contraception * Lederman 2008 – no behavioural info * Coyle 2001 – [one component of peers - not comparable] – more contraceptives – no change in sex * Stephenson – fewer girls reported intercourse in peer-led arm (girls) – small reduction in pregnancy * Paine-Andrews 1999 – [one component of peers - not comparable] – one county: decreased ‘ever had sex’, one county increased; Decreased pregnancy compared to control * Hughes 1995– [one component of peers - not comparable] – increase of contraceptive use (not sig.) and pregnancy (not sig) – no diff from comparison |
| Brittain et al., 2015b | 3 | Youth-Friendly Family Planning Services for Young People: A Systematic Review | 1985-2011 | Not stated | QE, observational | To summarize the evidence of the effect of youth-friendly family planning services on reproductive health outcomes and to describe key characteristics of youth-friendly family planning interventions | Three studies (28, 33, 34) Chambers (no outcomes), Herz (out of date) and Brindis – amongst other components   * Brindis – less pregnancy, greater contraceptive use |
| Kirby et al., 1994 | 3 | School-based programs to reduce sexual risk behaviors: A review of effectiveness | -1994? | USA | RCT, QE, observational | to review carefully the research on [school-based] programs and to assess their impact on behavior | * Peer contributions appear to strengthen delivery |
| Lazarus et al., 2010 | 3 | Systematic review of interventions to prevent the spread of sexually transmitted infections, including HIV, among young people in Europe | 1995-2005 | UK, Italy, Spain, Estonia | RCT, QE | To examine the effectiveness of interventions seeking to prevent the spread of sexually transmitted infections (STIs), including HIV, among young people in the European Union. | * Borgia 2005, Kaldmae 2000, Kocken 2001, Stephenson 1998, 2004, Tyden * Stephenson 2004 – only one reporting positive effects, and only reduced sex amongst girls (no effect on contraceptive use) |

# Targeting rapid-repeat pregnancies

| Reference | score | Title | years | Countries | Study types | objectives | Findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Aslam et al., 2017 | 4 | Intervention Now to Eliminate Repeat Unintended Pregnancy in Teenagers (INTERUPT): A systematic review of intervention effectiveness and cost-effectiveness, and qualitative and realist synthesis of implementation factors and user engagement | 1990-2015 | USA, UK | RCT, QE, observational, qual | to identify which young women are at the greatest risk of repeat unintended pregnancies; which interventions are effective and cost-effective; and what are the barriers to and facilitators for the uptake of these interventions. | Meta-analysis:   * No significant effect across any intervention type (not universal direction either) |
| Blank et al., 2010 | 4 | Systematic Review and Narrative Synthesis of the Effectiveness of Contraceptive Service Interventions for Young People, Delivered in Educational Settings | 1995-2008 | USA | RCT, QE | This review focuses on interventions to provide contraceptive services (or to encourage young people to use contraceptive services) that are conducted on educational premises. | Programmes were effective in preventing pregnancy and increasing contraceptive use |
| Blank et al., 2012 | 4 | Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings | 1995-2008 | USA, UK, Sweden, Canada | RCT, QE, observational | To determine the effectiveness of contraception service interventions for young people delivered in health care premises | * Four studies – inconclusive evidence * Suggestion that LARC may be more effective than multi-component programme in young mothers (two studies) |
| Dean et al., 2014 | 4 | Preconception care: Promoting reproductive planning | -2011 | USA + ? | RCT, observational | to ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes | Meta-analysis:   * Across all studies to prevent repeat pregnancies significant effect |
| Lopez et al., 2016a | 4 | Theory-based interventions for contraception | -2016 | USA, UK | RCT | We included randomized controlled trials (RCTs) that tested an intervention with a theoretical basis for improving contraceptive use for contraception | One study – groups outcomes did not differ |
| Maravilla et al., 2016 | 4 | The Role of Community Health Workers in Preventing Adolescent Repeat Pregnancies and Births | 1980-2015 | USA | RCT, QE, observational | In this meta-analytic review, we aim to investigate the impact of CHWs in preventing separately repeated teenage pregnancies and births | Meta-analysis:  Community Health Worker visitation resulted in reduction in repeated births, but not repeated pregnancies |
| Rodriguez et al., 2013 | 4 | Advance supply of emergency contraception: A systematic review | 1980-2012 | USA, Sweden | RCT | This review summarizes the evidence available concerning safety and efficacy of advance provision of ECPs | One RCT – not-significant reduction in pregnancy  One RCT – higher EC use, but also higher unprotected intercourse, no change in pregnancy or other contraceptives |
| SmithBattle et al., 2017 | 4 | An umbrella review of meta-analyses of interventions to improve maternal outcomes for teen mothers | -2017 | Not stated | Not stated | to perform an umbrella review of meta-analyses of intervention studies designed to improve outcomes of pregnant or parenting teenagers. | Some evidence of effective programmes |

# Social support

No high-quality studies found

# Targeting vulnerable youth

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Johnson et al., 2011 | 4 | Interventions to Reduce Sexual Risk for Human Immunodeficiency Virus in Adolescents: A Meta-analysis of Trials, 1985-2008 | -2008 | USA (unstated) | RCT, QE | To provide an updated review of the efficacy of behavioral interventions to reduce sexual risk of human immunodeficiency virus (HIV) among adolescents | * Greater effectiveness with institutionalised teenagers |
| Kirby, 2002b | 3 | Effective approaches to reducing adolescent unprotected sex, pregnancy, and childbearing | 1980-2001 | USA, Canada | USA, Canada | Investigate programmes to reduce teenage pregnancy | * Kirby summarises that data suggest greater effectiveness with higher-risk youth |

# Virtual infant simulator

| Reference | score | Title | years | Countries | Study types | objectives | findings |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Blank et al., 2010 | 4 | Systematic Review and Narrative Synthesis of the Effectiveness of Contraceptive Service Interventions for Young People, Delivered in Educational Settings | 1995-2008 | USA | RCT, QE | To determine the effectiveness of contraception service interventions for young people that were delivered in educational settings. | * Inconclusive – suggesting no significant difference in outcomes of interest (two studies of ‘Baby think it over’ |
| Cardoza et al., 2012 | 3 | Sexual Health Behavior Interventions for U.S. Latino Adolescents: A Systematic Review of the Literature | 1993-2011 | USA | RCT, QE, observational | To identify sexual health behavior interventions targeting U.S. Latino adolescents. | * Reported use of contraception increased overall, but no control and no test for significance |

# Alcohol use - changing patterns?

No high-quality studies found

# More years in school across pop\*\*\*

No high-quality studies found

# Educational/career aspiration/planning

No high-quality studies found

# Employment outside school hours

No high-quality studies found

# Less social acceptance of teen parenting

No high-quality studies found

# Digital media - access to information

No high-quality studies found

# Digital media - culture change

No high-quality studies found

# Global economic change

No high-quality studies found