

Evaluation of a Sex Education Programme for Girls with a Mild Intellectual Disability:
A Mixed Methods Approach

Suzanne J. van den Toren (3695077)
Utrecht University - Faculty of Social Sciences

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Supervisor Utrecht University: dr. Monique van Londen - Barentsen

Second supervisor Utrecht University: dr. Paul Baar

Internship at Rutgers

Supervisor Rutgers: dr. Stans de Haas

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Abstract

For girls with a Mild Intellectual Disability, there is a great need for sex education programmes, to prevent unwanted pregnancies, Sexually Transmitted Infections and sexual victimization. The aim of the present study was to evaluate the process and effect of a newly developed sex education programme (Girls' Talk+) focussed on preventing and reducing unwanted pregnancies, Sexually Transmitted Infections and sexual victimization by addressing knowledge, attitude, self-efficacy, self-esteem and the social network. The sample consisted of 18 intervention groups with 103 girls with Mild Intellectual Disability and 12 control groups with 127 girls with Mild Intellectual Disability, selected from special education for vocational training. Evaluation occurred through 230 participant questionnaires, 17 logs from trainers and 10 interviews with trainers, hence a mixed methods approach with triangulation was used to answer the research questions. The results of this study revealed the satisfaction with the programme for trainers and participants. Effectiveness at programme termination for knowledge, attitude and self-efficacy in relation to sexuality was found. No significant effects for self-esteem and involving the social network were found and the delivery was not optimal. Overall, the results of this evaluation demonstrated the effectiveness and satisfaction of Girls' Talk+ across outcomes and for different informants. Future studies should evaluate the long-term effects of the programme.

Keywords: sex education, Girls' Talk+, knowledge, attitude, self-efficacy, girls with Mild Intellectual Disability

Samenvatting

Er is veel behoefte aan seksuele voorlichtingsprogramma's voor meiden met een licht verstandelijke beperking, om te zorgen voor preventie van ongewenste zwangerschappen, Seksueel Overdraagbare Aandoeningen en seksueel grensoverschrijdend gedrag. In deze studie werd het proces en de effectiviteit van een nieuw ontwikkeld seksueel groepscounselingprogramma (Girls' Talk+) voor meiden met een licht verstandelijke beperking geëvalueerd. Het programma is gericht op het voorkomen en verminderen van ongewenste zwangerschappen, Seksueel Overdraagbare Aandoeningen en seksuele grensoverschrijding door het aanpakken van kennis, attitude, eigen-effectiviteit, zelfvertrouwen en het sociale netwerk. De steekproef bestond uit 18 interventie groepen met 103 meiden met een licht verstandelijke beperking en 12 controle groepen, waarin 127 meiden met een licht verstandelijke beperking zaten. Evaluatie vond plaats aan de hand van 230 vragenlijsten van de participanten, 17 logboeken van trainers en 10 interviews met trainers. Door middel van een mixed methods aanpak met triangulatie werden de onderzoeksvragen beantwoord. De resultaten maakten duidelijk dat de trainers en participanten tevreden waren met Girls' Talk+. Daarnaast werd de effectiviteit aangetoond voor het verbeteren van kennis, attitude en eigen-effectiviteit in relatie tot seksualiteit. Er werden geen effectieve resultaten gevonden voor zelfvertrouwen en het betrekken van het sociale netwerk. De uitvoering was niet optimaal. Deze resultaten zijn veelbelovend, aangezien de tevredenheid is aangetoond, evenals de effectiviteit voor meerdere uitkomstmaten en door meerdere informanten. Toekomstige studies zouden de lange termijn effecten moeten evalueren.

Steekwoorden: seksuele voorlichting, Girls' Talk+, kennis, attitude, eigen-effectiviteit, meiden met een licht verstandelijke beperking

Evaluation of a Sex Education Programme for Girls with MID

'Sex-related behavior is among the most subtle and complex of all human behaviors (...) individuals with a Mild Intellectual Disability [MID] are likely to experience difficulty when dealing with such subtle and complex issues, as a result of the nature of their disability' (McCabe & Cummins, 1996, p.13).

The purpose of the present study is to evaluate the effectiveness of a sex education programme for girls with MID (Girls' Talk+). Girls' Talk + is a group counseling programme that aims to prevent sexual victimization, unwanted pregnancies and Sexually Transmitted Infections [STI's]. Prevention occurs by addressing knowledge regarding contraconception and safe and pleasant sex, attitudes concerning wishes and boundaries, self-efficacy with regard to contraconception use and wishes and boundaries, improving self-esteem and involving the social network. The target population is girls between the age of 14 and 21 with MID who are participating in vocational training; a special education for individuals with MID (Kuyper, Dalmijn, & Smit, 2014).

Girls' Talk+ is a sequel of the Girls' Talk programme, which is an intervention for low educated girls, aiming to promote sexual health, healthy sexual behavior and sexual interaction competence. Girls' Talk is acknowledged by the accreditation committee as theoretically well documented (Höing, 2008). During the implementation of the Girls' Talk programme, a need for adjustment for girls with MID became apparent, since they have significant other problems and needs compared to low educated girls, such as less knowledge regarding STI's and contraception (Galea, Butler, & Iacono, 2004).

The review of Schaafsma, Kok, Stoffelen, and Curfs (2014) stated that it is possible for sex education programmes to increase the knowledge and skills and to improve attitudes for individuals with mild and moderate intellectual disabilities. However, most studies in this review do not provide evidence for the quality of the sex education programmes, since they are practice-based. This is an issue, as it is proven that theory- and evidence-based programmes are more effective. As such, an evaluation of a sex education programme for girls with MID is unique and has great importance.

Defining MID

In the present study, the "broad" definition of MID is adopted, which is based on an IQ score between 50 and 85 with limitations in adaptive functioning and social skills (Bextens, Ruzzano, Collot d'Escury, Van der Molen, & Huizenga, 2013; De Beer, 2011; De Wit, Moonen, & Douma, 2012; Greeven, 2014). The broad definition is prevailing in the Netherlands, since the Dutch Center on Mild Intellectual Disabilities successfully argued for the expansion of the intelligence criterion (De Wit et al., 2012). The Dutch definition differs significantly from the DSM-IV-TR definition, as the Dutch definition includes borderline

intellectual functioning, in case of additional limited social adaptive functioning, learning disabilities and/or behavioral problems, whereas the DSM-IV-TR distinguishes between MID and Borderline intellectual functioning (American Psychiatric Association, 2000). The reason for extending the IQ score upper limit from 70 to 85, is because the IQ score is considered too limited to predict problems. Additional limited adaptive functioning can more accurately predict problems that are similar to the problems that individuals with an IQ between 50 and 70 encounter. Including borderline intellectual functioning in the MID diagnostic category could enhance the opportunity for individuals with borderline intellectual functioning to benefit from mental health care programmes for people with MID (De Wit et al., 2012). A global estimation of the prevalence of youth with MID is 15%, within the total population of youth (Stoll, Bruinsma, & Konijn, 2004).

Characteristics of the Population with MID

Although every individual has its unique talents, people with MID face several challenges in every day functioning. On the one hand, there can be a great variety within these challenges, since the group with MID is very heterogeneous and there are many discrepancies within the characteristics of the MID group (Koot, Jongmans, Pijnenburg, & Vlieger-Smid, 2007; Ponsioen, 2011). On the other hand, there are some characteristics that are often observed in the population with MID. First, people with MID have a disharmonic IQ profile, which means the performal IQ is higher compared to the verbal IQ, resulting in a better understanding of practical skills compared to language comprehension. Second, their comprehension of language is less well developed than their language use suggests. Finally, their emotional age and calendar age are incongruent, which means their social-emotional developmental level is lower as can be expected from the calendar age and IQ (De Lange, 2013; De Wit et al., 2012; Van Berlo et al., 2011). Concluding, there may be strong delays in certain developmental areas, while functioning is sufficient in other areas (De Lange, 2013). The result of these discrepancies is that people with MID are often overestimated by themselves and their surroundings (De Lange, 2013; Greeven, 2014; Van Berlo et al., 2011). Consequently, they may not receive the necessary support and they may be overwhelmed by the needs of society. This could lead to a negative self-perception and suffering from failure and stress (Greeven, 2014; Schakenraad & Janssens, 2008; Van Berlo et al., 2011).

In addition to this negative self-perception resulting from overestimating, individuals with MID are also likely to experience deficits in their social development. They have limitations in interpreting social interactions and face problems with social adjustment (De Lange, 2013; Jahoda & Pownall, 2014). The limitations in social adaptability cause communication deficits. Youth with MID often have difficulties to set boundaries, because they are less able to communicate their wishes and boundaries (Schakenraad & Janssens,

2008). The results of these deficits in social development are social rejection and feelings of embarrassment (Van Nieuwenhuijzen, Orobio de Castro, & Matthys, 2006). In addition, their social networks are usually much smaller compared to non-disabled peers, therefore they often lack the presence of an adequate support system (Van Berlo et al., 2011; Zoon, 2012). These social problems and the resulting feelings of fear and embarrassment can lead to a negative self-perception and can create barriers to the development of the self-esteem (Van Nieuwenhuijzen et al., 2006).

In addition, individuals with a MID also have disadvantages specifically linked to sex-related behavior. This disadvantage is for instance visible in a study which revealed that adolescents with a moderate and mild intellectual disability show low levels of correct information about sex related topics. More than half of the research population indicated sex as kissing and intimate touching and there was a lack of knowledge related to male and female body parts. Much was unknown about characteristics of the adolescent development, like menstruation (Isler, Tas, Beytut, & Conk, 2009).

Sexual Health of Individuals with MID

Individuals with MID have as much right to experience sexual health as compared to non-disabled peers. *'Sexual health is a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled'* (World Health Organization, 2006, p.4). People with MID face many challenges regarding their sexual health, which differ from challenges their non-disabled peers face.

Young women with low cognitive abilities are at increased risk for early initiation of sexual activity (Shearer et al., 2002) and the attitude of people with MID towards sexual expression differs from a comparative student population, since they are more likely to think it is all right to have sex with everyone (McCabe & Cummins, 1996). Concurrently, people with MID demonstrate a lack of knowledge regarding healthy sexual behavior (Eastgate, 2008; Galea, et al., 2004; Isler et al., 2009; Servais, 2006). For example, several studies indicate that mentally disadvantaged adolescents have a lack of knowledge about the use of contraceptives and they are less likely to use contraceptives. They lack skills to buy condoms or to get help obtaining them and they lack communicative skills to negotiate condom use (Cheng & Udry, 2005; Eastgate, 2008; Shearer et al., 2002). Additionally, people with MID have a positive attitude towards sex without a condom (McCabe & Cummins, 1996). These knowledge, skills and attitude deficits regarding contraception use have consequences for

the sexual health of people with MID. It leads to a higher risk of obtaining STI's and a higher incidence of early pregnancy (Cheng & Udry, 2005; Shearer et al., 2002). Simultaneously, they have less knowledge of what causes pregnancy and lower levels of knowledge of preventing STI's compared to students with an average intelligence (McCabe & Cummins, 1996).

Furthermore, people with MID are at greater risk of experiencing sexual victimization. A review of the prevalence of maltreatment for individuals with intellectual disabilities indicates that 20.5% of the full sample had been subject to unwanted sexual touch, 11.6% was forced to have sex and 8.9% had been forced to touch someone sexually (Horner-Johnson & Drum, 2006). Furthermore, the review of Conod and Servais (2008) revealed that within the group of intellectual disabilities, women with MID are at increased risk of sexual abuse. Balogh et al. (2001) also reported a high risk for individuals with an MID (44%) to be victims of sexual abuse, compared to 33% for moderate disabilities and 7% for severe disabilities. Findings of the exploratory study of Reiter, Bryen, and Shachar (2007) showed that adolescent girls with disabilities have a greater tendency to experience harassment and being forced to touch someone sexually, compared to non-disabled peers. Their sample consisted of individuals who were attending a special education school for adolescents with mild intellectual disabilities and other disabilities.

The above mentioned characteristics of the population with MID and the challenges to their sexual health, makes them more vulnerable for sex-related problems in comparison to non-disabled peers. Consequently, they have a greater need for sex education. However, studies indicate that they receive less adequate sexual information (Isler et al., 2009; Jahoda & Pownall, 2014). People with MID have fewer sources of sexual information, partly as a result of their smaller social networks (Jahoda & Pownall, 2014). Furthermore, research indicated that more than half of the population with MID reported not having received any professional sex education, and 47.6% of the population received their information from sources as friends, media and internet. These sources entail much misinformation about sex related topics (Isler et al., 2009). As such, there is much need for the development and evaluation of sex education programmes for girls with MID.

Theoretical Basis of the Programme

It is demonstrated that sex education programmes for people with intellectual disabilities are unlikely to be effective, when they lack a theoretical basis and systematic evaluation. According to research, future programmes should be developed using a systematic, theory- and evidence based approach (Schaafsma, Stoffelen, Kok, & Curfs, 2013).

Girls' Talk+ is developed in accordance with the intervention mapping protocol, therefore the development occurred systematically and was based on empirical evidence and existing theories. The intervention mapping protocol provides a description for programme development in a six steps process. It starts with a needs assessment, followed by specifying programme outcomes, the third step is selecting theory- and evidence-based intervention methods and practical applications, followed by designing and organizing the programme. The fifth step is specifying adoption and implementation plans and finally, step six is generating an evaluation plan. In short, it describes the dynamics of behavior change and explains how to influence behavioral determinants with specific teaching methods that are derived from theory (Bartholomew, Parcel, Kok, Gottlieb, & Fernández, 2011). Preventing sexual victimization, unwanted pregnancies and STI's within the Girls' Talk+ programme is accomplished by addressing several behavioral determinants. These determinants are: 1) knowledge regarding contraconception and safe and pleasant sex, 2) attitudes concerning wishes and boundaries, 3) self-efficacy with regard to contraconception and indicating wishes and boundaries, 4) self-esteem, and 5) involving the social network of the participants. They are based on existing literature for two reasons. First, the behavioral determinants are protective factors, translated from the above mentioned characteristics and challenges for people with MID. Second, several studies recommended to improve these factors, to enhance the resilience and interaction competence of people with MID. Girls who have more competence in interacting with their partners are less likely to be forced into sexual activities (De Wit et al., 2012; Schakenraad & Janssens, 2008). Moreover, they are proven to be effective in sex education programmes (Kirby & Laris, 2009).

These behavioral determinants are addressed throughout the programme with several teaching methods, derived from the intervention mapping approach (Bartholomew et al., 2011).

Programme Delivery: Teaching Methods Used

Teaching methods used in the programme included active learning, modeling, discussion, consciousness raising, planning coping responses and repeated exposure. Practical applications resulting from these teaching methods are, for example, watching short fragments about a girl who is tricked by a boy to send an inappropriate photo via internet, perform a role-play on how to react when a boy does not want to use a condom and rehearse saying no when someone enters your private zone. Several underlying theories explain the effectiveness of these teaching methods and practical applications, and are described within the intervention mapping protocol (Bartholomew et al., 2011). The social cognitive theory states that knowledge can be acquired through observing others in performing certain behavior. Next, the health belief model explains health behavior by

focusing on beliefs and attitudes of individuals, like the perceived benefits or barriers and the self-efficacy. Finally, the relapse prevention theory describes how patterns of unhealthy high-risk behavior can be prevented from reoccurring by identifying the factors that are associated with the behavior. This theory is a cognitive behavioral approach that evolves around cognitive, behavioral, motivational and contextual factors of the risk behavior.

In addition to these underlying explaining theories, the selection of these methods is also linked to the needs of the specific target population. Girls with MID are in need of simple language use, use of visual support and learning by experience. Moreover, exercises for girls with MID should be simplified, structured and concretized. It is also recommended to map difficult events and practice several reactions to these difficult events. This can improve the awareness towards risky happenings (De Wit et al., 2012; Schakenraad & Janssens, 2008).

Since Girls' Talk+ is based on theories and includes characteristics that are suggested to be most promising, the expectation is that Girls' Talk+ will be effective in decreasing the problems and challenges girls with MID encounter regarding their sexual health, by improving knowledge regarding contraception and safe and pleasant sex, attitudes concerning wishes and boundaries, self-efficacy with regard to contraception and indicating wishes and boundaries, self-esteem, and involving the social network of the participants.

Research Questions

The current study is a process- and effect evaluation of Girls' Talk+. The process-evaluation is of interest, since this is a pilot, and the practical integrity and satisfaction of stakeholders is unknown. The long term goal of Girls' Talk+ is preventing STI's, unwanted pregnancies and sexual victimization. To reach this goal, the programme is focused on five themes: knowledge, attitude, self-efficacy, self-esteem, and involving the social network, all in relation to sexual behavior. For these themes the (perceived) effectiveness by the participant and the trainers is studied. This renders the following research questions:

- What is the programme integrity and what is the satisfaction regarding the programme by trainers and participants?
- What is the effectiveness of Girls' Talk+ in enhancing knowledge, attitude, self-efficacy, self-esteem and the social network of the participating girls?
- What is the perceived effectiveness of Girls' Talk+ by trainers?

Methods

Design

By means of a quasi-experimental design, the sample for this study was selected. Participants were either recruited via MEE-organizations¹, who then contacted special schools for vocational training, or directly via special schools for vocational training. The programme inclusion criteria were used for selection (e.g., A certain interest in relationships and sexuality, no experience with traumatizing sexual issues, and aged between 14 and 21 years). The sample consisted of girls with MID who were attending special schools for vocational training. The approached schools for vocational training were located in different regions, to assure that there was no contact between the intervention and control condition. Additionally, this study used a mixed methods approach with a concurrent procedure to collect and analyze the data, as it combined qualitative and quantitative methods to enable data triangulation. Data triangulation means data is gathered from different perspectives across multiple methods, so that the internal validity and reliability of this research were guaranteed (Baarda, De Goede, & Teunissen, 2005; Boeije, 't Hart, & Hox, 2009). This triangulation occurred within every research question in the current study, since both qualitative and quantitative methods were used to answer the research questions. A schematic display of the triangulation process can be found in appendix A.

Procedure and Participants

An extensive pilot phase preceded the official start of the intervention and this research. During this pilot phase, professionals experienced in working with individuals with MID were involved in developing the material for the programme and the research. Furthermore, girls with MID were also involved extensively, by testing the material and developing the questionnaire according to qualitative interviews with the participants.

The data for this research were gathered using three data collection methods, over a period of eight months, starting in October 2014 and ending in May 2015. Ethical approval had been granted by an independent medical ethics committee [METC].

Process evaluation. Programme delivery was studied with the logs and interviews. Satisfaction was examined with the participant questionnaire and logs. The trainers were primarily recruited via MEE-organisations and secondarily via the participating schools. A cooperation between Rutgers and MEE-organisations was contracted at the beginning stage of the Girls' Talk+ project. These 36 trainers trained in pairs, so that 18 groups of girls were trained by two trainers. The sample of the logs and interviews was selected from these 18 pairs. After the specific training to become a Girls' Talk+ trainer (the train-the-trainer day(s)),

¹ MEE-organisations aim to support individuals with disabilities in the Netherlands.

they indicated through a questionnaire that they felt adequately equipped to carry out the programme.

At the end of the train-the-trainer day(s) to become a Girls' Talk+ trainer, each trainer pair was sent a log via email ($n = 18$). After each session they completed the log and they returned it at programme termination ($n = 17$). Additionally, interviews were held after the ending of the programme, with trainers who indicated they were willing to participate and who were available ($n = 10$). Interviews were held over the phone and had a duration of approximately one hour. Interviews were recorded, with permission from the interviewee.

Effect evaluation. The effectiveness was studied by the participant questionnaire. Additional perceived effects were abstracted from the logs and interviews with trainers. The participant questionnaire was made up of validated and reliable questions, retrieved from validated questionnaires. The questions were adjusted for the target population, since the original questions were not suitable for the IQ level of girls with MID. Adjustments occurred on the basis of qualitative interviews with girls with MID. During the qualitative interview, multiple girls with MID completed the questionnaire. After that they were asked if the questions were understandable and if they were able to answer them without help. Furthermore, a language office reviewed the questionnaire, to make sure the language was in line with the level of the girls. This resulted in a questionnaire that could be completed in half an hour with comprehensive questions for girls with MID. However, due to adjustment and summarizing several questions, some scales retrieved low alpha's.

Parents of the participating girls were sent a general information letter about the research and the programme, explaining that they could raise objections against the participation of their daughter. Six parents did raise objections, thus passive permission was not granted by them. The intervention group completed the participant questionnaire before the start of Girls' Talk+ (pretest, T0). After that, they participated in the eight weekly sessions with a 1,5 hour duration. They filled in the post-test questionnaire at programme termination (T1). The control group did not receive the programme. The time between the pretest and post-test was eight weeks, similar to the intervention group. The pretest included a general information letter and an informed consent form, where anonymity was guaranteed. The participants gave active permission to participate in the research, through the informed consent form. This means that permission with a signature from the participants was required. The girls filled in the questionnaire individually, with sufficient distance between them. As an incentive, they received an H&M gift card after completion of each questionnaire. Participants who completed both pretest and post-test were included in this study. This resulted in exclusion of $n = 41$ participants (15 %) of the original sample.

Reasons for not filling in this questionnaire were illness, required attendance at internships or other liabilities and finally, not completing the programme.

The Intervention

The Girls' Talk+ programme contained eight weekly sessions with a 1,5 hour duration for the girls and a parent session halfway through the programme. Each group should consist of 6-8 girls and two female trained trainers. These trainers were experienced in working with girls with MID and they had to be certified as a Girls' Talk+ trainer. Certification occurred through participating in a specific training facilitated by Rutgers.

Exercises were focused on 1) enhancing knowledge towards contraception and safe and pleasant sex (e.g. 'Instruction: how do you put on a condom'; girls learn how to use a condom), 2) attitudes concerning wishes and boundaries (e.g. 'bad boy's'; after this exercise girls should be able to recognize "bad boys" and have a negative attitude towards them'), 3) self-efficacy towards negotiating contraception use and indicating wishes and boundaries (in difficult situations) (e.g. 'reacting in risky situations'; after mapping risky situations, the girls learn how to react in those situations) 4) self-esteem (e.g. 'warm chair'; girls give each other compliments), and 5) involving the social network (e.g. 'sending a card'; the girls write a card to a person in their network who is important to them). A schematic display of the approach within de program can be found in appendix B.

After participation, the girls should be able to communicate their wishes and boundaries regarding relationships and sexuality. Furthermore, they should experience less STI's and unwanted pregnancies and they should be less sexually victimized. Girls' Talk+ is funded by ZonMw and developed by Rutgers (Kuyper et al., 2014).

Instruments and Measures

Participant questionnaire. The questionnaire started with demographic questions to determine the age and ethnicity. Ethnicity was constructed according to the definition of the Central Bureau of Statistics, by which a western or non-western ethnicity was calculated (Rijksinstituut voor Volksgezondheid en Milieu, 2012). The girls were also asked to make a unique code (first two letters of their name, first two letters of their mothers name and their date of birth), to make sure the questionnaires could be merged. After that, the questionnaire continued with items in relation to knowledge and attitude of the girls. Furthermore, the self-efficacy, self-esteem and involvement of the social network were asked. Finally, the sexual experiences and behavior were examined.

Knowledge. Knowledge was assessed with eleven items for knowledge of contraception, STI's, internet and body. The scale was developed and validated within the framework of the evaluation of the study 'Sex under 25' (De Graaf, Meijer, Poelman, & Vanwesenbeeck, 2005). Four items assessed the knowledge of contraception (e.g. 'A girl

has had unsafe sex. This means sperm came in her vagina and she did NOT use contraception. The girl does NOT want to get pregnant. She has to take the emergency pill (morning-after-pill) now'), three items examined knowledge of STI's (e.g. 'If you have an STI, it ALWAYS hurts'), one item measured the knowledge of internet (e.g. 'Sometimes people pretend they are someone else on the internet') and finally, three items assessed knowledge of body (e.g. 'It takes an equal amount of time for boys and girls to get sexually aroused'). The response could be either 'that is true', 'that is not true' or 'I don't know'. A sum score of the eleven dichotomized answers was computed to create the variable 'total knowledge', with higher scores meaning more total knowledge.

Attitude. The attitude scale was measured through five items. It was developed for previous use within the Girls' Talk programme (Höing, Vanwesenbeeck, & Bakker, 2006) and additionally with questions from the effect evaluation of the sex education programme 'Long live love' (Van Fulpen et al., 2002). Moreover, it was supplemented with several newly developed items for this research. Attitude was assessed by five items (e.g. 'A girl is allowed to clearly indicate during sex what she does NOT want'). Attitude was rated on a 5-point Likert scale (1= strongly agree to 5 = strongly disagree). The mean of the scores was calculated, with higher scores indicating a positive attitude towards enjoying sex and towards equal rights for boys and girls during sex. Cronbach's alpha for the attitude scale was $\alpha = .59$ and $\alpha = .61$ at baseline and post-test.

Self-efficacy. The self-efficacy scale consisted of 15 questions. The self-efficacy scale was based on work from four studies. First, the study 'Safe sex and condom use by youth and young adults' (Bakker, Vanwesenbeeck, & Zimbile, 2003). Second, within the study 'Sex under 25 in 2005' (De Graaf et al., 2005). Third, within the study 'Youth and sex 95' (Brugman, Goedhart, Vogels, & Van Zessen, 1995) and finally, within a study about condom use (Van Empelen & Kok, 2005). The self-efficacy scale consisted of the subscales self-efficacy towards (negotiating) contraception use (e.g. 'Can you tell a boy during sex that you want to use a condom?'; five items; $\alpha = .69$ and $\alpha = .72$ at baseline and post-test), the self-efficacy of indicating wishes and boundaries (e.g., 'Can you tell your boyfriend you do NOT feel like having sex, also when he DOES feel like having sex?'; five items; $\alpha = .67$ and $\alpha = .62$ at baseline and post-test). And finally, the self-efficacy of indicating wishes and boundaries in difficult situations (e.g. 'You just started a relationship. You already kissed each other. Your boyfriend indicates he wants to have sex with you. You actually don't want this yet. But you do NOT want to disappoint him. Can you tell your boyfriend you do NOT want to have sex with him yet?'; five items; $\alpha = .75$ and $\alpha = .79$ at baseline and post-test). The self-efficacy answers were all consisting of a 5-point Likert scale (1 = yes to 5 = no). The mean of the scores was calculated to retrieve the scale total self-efficacy, with higher scores

indicating more self-efficacy. Cronbach's alpha for the total self-efficacy scale was $\alpha = .82$ and $\alpha = .83$ at baseline and post-test.

Self-esteem. This scale assessed the self-esteem of the participants. The scale was constructed on the basis of a sub-scale of the Dutch version of the Self-Perception Profile for Children [SPPC] and was measured with six items (e.g., 'I am satisfied with myself'). Self-esteem was rated on a 5-point Likert scale (1= strongly agree to 5 = strongly disagree). The mean of the scores was computed, with higher scores indicating more self-esteem. Cronbach's alpha for the self-esteem scale was $\alpha = .83$ and $\alpha = .84$ at baseline and post-test.

Involving the social network. This scale assessed the ability of participants to ask for help when they encounter contraception issues. The scale was constructed on the basis of a study about condom use (Van Empelen & Kok, 2005) and was measured with two items (e.g. 'Are you able to ask someone for help if you forgot the pill?'). Reliability was not calculated, since this scale had two items. Involving the social network was rated on a 5-point Likert scale (1 = yes to 5 = no). The mean of the scores was calculated, with higher scores indicating that participants were more able to ask for help within their social network.

Sexual behavior was measured with five questions (e.g., 'Touching or fondling WITH clothes on. Did you ever do that with somebody?'), and was developed for the study 'Youth and sex 95' (Brugman et al., 1995) and additionally with questions from the effect evaluation of the sex education programme 'Long live love' (Van Fulpen et al., 2002). One item was new and developed for this research. The response scale was 'yes', 'no' or 'I will skip this question'. The scores were dichotomized for the purpose of this research, participants who answered 'yes' were counted, to retrieve a total n for that item.

Sexual behavior in the past three months contained five questions about the sexual behavior and experiences of the girl in the past three months (e.g., 'Did you ALWAYS use a condom in the past three months, when a boy went with his penis into you vagina?'). Four items were newly developed for this research and one item was validated by the 'Continuous Morbidity Registrations' (Bartelds, 2005). The response scale was 'yes', 'no', 'I don't know' or 'I will skip this question', with one exception, where the girls could indicate what kind of contraception they used in addition to the other response options. The scores were dichotomized. Participants who answered 'yes' were counted, to retrieve a total n for the participants who answered 'yes' for that item.

Experiences with sexual victimization was examined through six items (e.g. 'Did someone touch you in a sexual way in the past three months, while you didn't want that?'). This scale is based on the work of Krahe and Berger (2013) and adapted for the Dutch situation for the study 'Sex under 25 in 2012' (De Graaf, Kruijer, Van Acker, & Meijer, 2012). One newly developed item was added in this research. The response scale was also 'yes',

'no', 'I don't know' or 'I will skip this question'. The scale 'at least one form of sexual victimization' was computed by counting all participants who answered 'yes' on one or more of the six sexual victimization items.

The post-test included identical questions, where the questions about the sexual experiences and behavior were excluded. A section was added at the end, which included ten evaluation questions about the satisfaction and learning outcomes of the programme (e.g., 'Did you learn more about relationships, boys and sexuality because of the exercises?' and 'What grade do you give the Girls' Talk+ programme? Give a grade from 1 to 10, 1 = very bad and 10 = very good'). The first example question was answered on a 5-point Likert scale (1 = yes to 5 = no). The second example question was answered with one grade.

Log from trainer. The log started with demographic questions, to determine the age and work experience of the trainers. It continued with questions about each session; attendance, programme delivery for each exercise, satisfaction of the practicability and utility of the exercises, adjustments made by the trainers, and perceived learning outcomes for the participants. The programme delivery was answered with either 'implemented as intended', 'adjusted' or 'skipped'. The learning outcomes were measured by asking the situation before and after the session, in total 26 before and after situations were rated (e.g. 'Before this session, the girls knew what is important for pleasant sex' or 'Because of this session girls are more able to say "no" if a boy wants to have sex without a condom'). The items were rated on a 5-point Likert scale (1 = yes, everyone to 5 = no, no one).

Finally, the trainers also answered general questions at the end of the log. These questions were about what subjects or themes they missed in the programme or what changes they would recommend within the programme, what changes they observed in the girls and how they evaluated the programme. The questions about the observed changes entailed seven items (e.g. 'As a result of Girls' Talk+, the girls in my group are more able to address their boundaries in the area of sexuality' or 'As a result of Girls' Talk+, the girls in my group are more able to ask for help when they have had negative sexual experiences or when they encounter problems in the area of relationships and sexuality'). The answer scale was 1 = yes, everyone to 5 = no, no one. The evaluation questions consisted of six items (e.g. 'My general impression of Girls' Talk+ is positive'). The items were rated with a 5-point Likert scale (1 = strongly agree to 5 = strongly disagree).

Interview with trainer. Interview questions were generated from the logs and from the research questions. Interviews were divided into six sections, starting with an introduction of the interviewer and questions about the way in which selection of the group of girls occurred and if the trainer felt adequately equipped to carry out the programme (e.g. 'How was the group of girls selected?' and 'Did you feel confident to perform the exercises?'). The

second section was about the perceived learning outcomes of the girls (e.g. 'What do you think the girls learned from Girls' Talk+?' and 'What do you think is the most important thing that has changed?'). The third section examined the ideal circumstances for Girls' Talk+ and the circumstances that obstruct the effect of the programme. This contained mainly questions about the duration and location of the programme (e.g. 'What do you think of the amount of sessions?'). The fourth part was an elaboration to the logs and an exploration to the possible recommendation for future changes to the programme (e.g. 'What improvements or additions do you have to the programme instructions?'). The next part of the interview covered questions about the session with the parents (e.g. 'Do you know why parents did or did not come?'). Finally, the last part contained general questions about the satisfaction of the train-the-trainer, if they thought the participant questionnaires were completed reliable and if they have general recommendations for adjustment (e.g. 'Do you think the questionnaires were reliably completed by the participants?'). An example of a topic list was included in appendix C.

Data Analysis

Participant questionnaire. Trainers were asked to send the completed questionnaires from the participants to the Rutgers office, where they were analyzed using the statistical software SPSS. Participants who completed both pretest and post-test were included. First, the data were checked for wrong or unrealistic values. Second, variables were recoded if necessary, to assure that the higher scores meant higher outcomes. Third, variables were merged to retrieve scales. Explorative factor analyses were conducted in order to test whether subscales were appropriate for the sample of this research and to study if the assumption of normal distribution was violated. Bootstrapping was applied if necessary, to correct for the violation of normal distribution. Next, the differences between excluded girls and included girls were tested with chi-square tests and independent t-tests, to see if the girls who did not complete the second questionnaire were significantly different on the pretest from girls who did complete both questionnaires. Preliminary analyses were conducted, to test the possible differences at baseline between the intervention and control group. Moreover, the overall effects were measured with a repeated measures analysis of variance (ANOVA), consisting of a between subjects factor (condition), a within subject factor (time) and an interaction between time and condition (Field, 2009). Age was included as a covariate, since girls who were younger than the inclusion criteria of age 14 were included in this study and it was desired to control for this. Moreover, experience with French kissing was also included as a covariate, since this covers the significant difference between intervention and control condition on the pretest for sample characteristics.

Log from trainer. The quantitative part of the logs from trainers was analyzed using descriptive statistics in SPSS.

Interview with trainer. Recordings of the interviews with trainers were transcribed and coded in MAXQDA version 11, according to the analyzing method of Baarda et al. (2005). The first step of this analyzing method was open labeling and encrypting, on the basis of the research questions and answers from the logs. The next step was a trial coding phase, where codes could be refined by arranging, reducing and defining them. In order to contribute to the construct validity and reliability of the qualitative analyses, the first transcript was coded separately by two researchers. The interrater reliability was measured after separately coding the first transcript, $\alpha = 91,8\%$ (55 of the 61 codes were the same). This indicates that the reliability is sufficient. Finally, the codes were integrated and related to categories. An example of the used codes can be found in appendix D.

Results

Descriptive Analyses

Participants. In this study, 18 experimental groups were included, with a total of 103 girls between the age of 12 and 20, ($M = 14.78$, $SD = 1.39$). There were 12 control groups with a total of 127 girls between the age of 13 and 18, with a mean age of 14.63 ($SD = 1.02$). Age did not significantly differ between experimental and control groups ($t(227) = -.865$, $p > .05$). Furthermore, the difference between intervention and control condition was tested for ethnicity. There was no significant association between the type of group and whether or not the ethnicity was western at T0 $\chi^2(1) = .85$, $p = .36$. Experimental and control groups were also compared at T0 with regard to their sexual behavior and experiences (see table 1).

Table 1

Sample Characteristics by Condition (Chi-Square)

Sample characteristics	Intervention condition (N = 103)	Control condition (N = 127)	p
	% yes	% yes	
Sexual behavior			
Experience With Amorousness	91.3	91.3	.984
Experience With French Kissing	68.0	51.2	.010*
Experience With Touching or Fondling WITH Clothes On	40.8	29.9	.086
Experience With Touching or Fondling WITHOUT Clothes On	23.3	13.4	.051
Experience With Sexual intercourse	23.3	12.6	.033*
Sexual behavior in the past three months			
Experience With Sexual Intercourse	11.7	7.1	.232
(In)consistent Condom Use	-	-	-
Afraid of STI	-	-	-
Risk for Pregnancy	-	-	-
Contraception Used	31.1	26.0	.395
Sexual victimization			
(Naked) Movies or Pictures made Without Consent	1.9	3.9	.381
Sexual Touching Without Consent	13.6	4.7	.018*
Kissing Without Consent	2.9	3.1	.917
Attempted Vaginal Sex Without Consent	5.8	4.7	.709
Vaginal Sex Without Consent	1.9	0.8	.443
Something Else Sexually Without Consent	4.9	3.1	.507
At Least one form of Sexual Victimization	20.4	11.8	.075

Note. * $p < .05$. '(In)consistent condom use', 'Afraid of STI' and 'Risk for pregnancy', were counted within the participants that had experience with sexual intercourse. The number of participants within these categories were too low to give a realistic image.

Table 1 shows that three of the seventeen outcomes were significant. There was a significant association between the type of group and the experience with French kissing $\chi^2(1) = 6.61, p = .010$. Additionally, there was a significant association between the type of group and the experience with sexual intercourse $\chi^2(1) = 4.53, p = .033$. Finally, there was a significant association between the type of group and sexual touching against the will $\chi^2(1) = 5.63, p = 0.18$. Consequently, the intervention group had significantly more experience with French kissing, sexual intercourse and being touched sexually without consent. To avoid multicollinearity, one item will be included in the repeated measures ANOVA as a covariate, to control for the significant difference. French kissing will be included, since this is the item that covers the girls in the other two significant items as well.

When comparing the excluded girls with the included girls, significant differences were found for contraception used in the past three months $\chi^2 (2) = 6.68, p = .035$, which means the excluded group used significantly more contraception in the past three months. Moreover, a significant difference was found between the excluded and included girls for touching or fondling without clothes, $\chi^2 (1) = 4.43, p = .035$, which means the excluded group had significantly more experience with touching or fondling without clothes.

Professionals. The 36 trainers were working as either consultant, social worker or teacher. With one exception, every trainer was female. They were aged between 35 and 52 years, with a mean of 41.35 ($SD = 5.59$). They were on average 9.38 number of years in their position ($SD = 4.09$) as either consultant, teacher or social worker. Their experience with working with people with MID was between 1 and 25 years ($M = 13.03, SD = 6.56$) and 52.9% already had experience with the Girls' Talk programme.

The interview sample was selected from the log sample. All ten interviewees were female, with a mean age of 41.40 ($SD = 5.56$). They had identical work positions, for a mean of 9.80 number of years ($SD = 4.11$).

Process Evaluation

Programme Delivery. One of the inclusion criteria for the programme was that participating girls should be between the age of 14 and 21. It appeared that trainers also included girls who were 12 and 13 years old ($n = 18$).

Results for the completeness and fidelity of the programme delivery were detected from the logs and the interviews. 18 trainer pairs received a log, 16 completely filled in the log, one trainer pair completed the demographic questions and one trainer pair did not return a log. Consequently 16 trainers specified in the logs the delivery for each exercise. On average, 60.5 % of the 48 exercises was delivered as intended, with a range of 31% to 92%. More specifically, five trainers implemented more than 75% of the program as intended. Eleven staff members implemented half or more of the programme as intended. The qualitative data from the interviews gave explanations for the way of delivering. Overall, the staff members who implemented more than 80% of the programme as intended indicated that they had a motivated group of girls, who showed respect and were enthusiastic. Two groups implemented less than 40% as intended, the trainers of these groups mentioned that their groups were too small, which resulted in adjusting or skipping several exercises. Adjustments in general were made because of time pressure or because staff members thought the girls were not ready for the exercise.

All trainers indicated during the interviews that they delivered the programme as it was described in the programme manual. They specified that they did not often adjust the programme. Examples of quotes are: "but I said: we will perform the exercise as described".

“Yes, exactly like the programme manual. We really thought that was the intention”. A trainer explained that they followed the programme manual as a result of the research. “Yes, it has nothing to do with the programme, but because we were a research group and that is why we wanted to keep to the manual descriptions. And the descriptions were really explicit”. When the interviewer elaborated on this subject, it became clear that certain subjects were adjusted or skipped. For example, the introductions and endings of the sessions were often adjusted. “We often found out that the endings were not suitable or we did not have enough time, so then we adjusted it. So it has several reasons. See, if it are subjects that they are really interested in and want to know more and prefer to see another movie like ‘can you fix it’ or something like that, then we chose to say ‘well then we pay more attention to that and we will adjust the ending of the session”.

Some trainers declared that they had to adjust some exercises, because the group of participants was too small, or because they did not want to perform the exercise in the right way as a result of the language or the type of exercise. “At a certain point you see them walking back and forth, and they are only with three persons, then we say we were going to adjust it (...). That is what you get when the group is smaller, that makes it more difficult”. When the interviewer asked if a trainer felt comfortable to perform all the exercises, the trainer replied “yes, and if that was not the case, then we adjusted it. And we thought certain exercises were to extreme”. The interviewer asked if the trainer could tell a bit more about that. The answer was “well, the way you talk about sex or the language used for that in the programme is slang, and that was a choice (...) we adjusted all of that”. A trainer indicated that the session about contraception evoked many questions, so that they were forced to make adjustment to the exercises. “If you talk about contraception, you can fill one and a half hour with that, without doing anything else, so many questions come from that”. And a trainer declared that they skipped some exercises to elaborate more on certain topics and to bring peace to the full programme.

Satisfaction with the programme. Participants and trainers in the intervention condition were asked to fill in several questions at programme termination, to assess the level of satisfaction with the programme. Overall, the trainers and participants were satisfied with the programme at post-test.

On average, the participating girls with MID in the intervention condition graded their trainers with an 8.78, the programme was graded with a mean of 8.80 (1 = very bad to 10 = very good), 84.5 % of the participants thought it was nice to participate in the programme, 83.5 % of the girls thought it was fun to do Girls’ Talk+ in a group, 52.4 % found eight sessions the exact right amount of sessions, 27.2 % thought the amount of sessions was too small, 5.8 % found it too many sessions. The rest of the girls answered this question with ‘I

don't know', 63.1 % of the girls answered that the 1,5 hour duration of the sessions was exactly right, 15.5 % answered that they found it too short and 12.6 % answered that the duration was too long. 7.8 % replied with 'I don't know', 94.2 % understood the exercises or thought that they did. The remaining girls did not or did not know. 81.6 % answered that they know more about relationships, boys and sex because of the exercises, 8.7 % thought they did, the rest did not or did not know. Trainers were also positive about the programme.

Results for the satisfaction of the trainers were reported in table 2.

Table 2

Satisfaction of the Trainers With the Girls' Talk+ Programme

Statements	Disagree/ strongly disagree	Neither agree nor disagree	Agree/ strongly agree
The programme was as I expected it to be	17.8 %	23.5 %	58.9 %
My general impression of Girls' Talk+ is positive	0 %	0 %	100 %
Girls' Talk+ is a good way to discuss sexuality	0 %	0 %	100 %
The programme manual is clear	6.25 %	6.25 %	87.5 %
The goals of the sessions were clear	0 %	0 %	100 %
The visual material of the programme looked attractive	0 %	5.9 %	94.1 %

Intervention Effects

Preliminary analyses demonstrated there were no significant differences between intervention condition and control condition for secondary outcome measures on the pretest (knowledge, attitude, self-efficacy, self-esteem and involving the social network). At post-test, there were significant differences between the intervention condition and the control condition within several secondary outcome measures. These results can be found in appendix E.

Furthermore, repeated measures ANOVA was conducted, to retrieve interaction results for the interaction between time and condition. A significant overall intervention effect was found for the interaction between time and condition, Wilks' Lambda = .829, $F(5,219) = 9.01$, $p < .001$, $\text{partial-}\eta^2 = .171$.

The univariate test rendered the following results. For total knowledge, a significant effect of time was found, $F(1,228) = 72.89$, $p < .001$, $\text{partial-}\eta^2 = .246$, a significant of condition was found, $F(1,228) = 4.82$, $p = .029$, $\text{partial-}\eta^2 = .021$, and a significant interaction effect between time and condition was found, $F(1,228) = 30.15$, $p < .001$, $\text{partial-}\eta^2 = .119$. Consequently, intervention condition improved significantly more for total knowledge than the control condition.

Furthermore, a significant effect of time was found for attitude, $F(1,228) = 31.09$, $p < .001$, $\text{partial-}\eta^2 = .122$. Moreover, the interaction between time and condition was significant for attitude, $F(1,228) = 8.92$, $p = .003$, $\text{partial-}\eta^2 = .038$. Consequently, the attitude of the intervention condition improved significantly more than the control condition.

Additionally, for self-efficacy, a significant effect of time was found, $F(1,228) = 39.98$, $p < .001$, $\text{partial-}\eta^2 = .152$, and a significant interaction effect between time and condition was found, $F(1,228) = 9.94$, $p = .002$, $\text{partial-}\eta^2 = .043$.

No significant effects for self-esteem were found for time, condition or interaction between time and condition.

Finally, a significant effect of time was found for involving the social network, $F(1,223) = 26.54$, $p < .001$, $\text{partial-}\eta^2 = .106$, and a significant effect of condition was found for involving the social network, $F(1,223) = 4.41$, $p = .037$, $\text{partial-}\eta^2 = .019$. The results of the repeated measures ANOVA can be found in table 3.

Table 3

Results of the Mean, Standard Deviation, F-value, Probability and Partial Eta Squared for Outcome Measures (Repeated Measures ANOVA)

Outcomes	Intervention condition		Control condition		<i>F</i> (1,228)	<i>p</i>	η^2	
	pretest <i>M</i> (<i>SD</i>)	Post-test <i>M</i> (<i>SD</i>)	pretest <i>M</i> (<i>SD</i>)	post-test <i>M</i> (<i>SD</i>)				
Total knowledge	5.40 (2.28)	7.09 (2.43)	5.52 (2.31)	5.89 (2,17)				
					Time	72.89	.000***	.246
					Condition	4.82	.029*	.021
					Time*Condition	30.15	.000***	.119
Total attitude	3.86 (.63)	4.16 (0.60)	3.93 (.57)	4.02 (.59)				
					Time	31.09	.000***	.122
					Condition	.27	.607	.001
					Time*Condition	8.92	.003**	.038
Total self-efficacy	4.12 (.60)	4.42 (.47)	4.14 (.59)	4.23 (.52)				
					Time	39.98	.000***	.152
					Condition	2.70	.102	.012
					Time*Condition	9.94	.002**	.043
Self-esteem	3.92 (.78)	4.02 (.68)	3.97 (.72)	3.95 (.78)				
					Time	1.69	.195	.008
					Condition	.03	.866	.000
					Time*Condition	3.13	.078	.014
Involving social network	4.27 (.84)	4.54 (.61)	4.04 (1.02)	4.36 (.77)				
					Time	26.54	.000***	.106
					Condition	4.41	.037*	.019
					Time*Condition	.24	.627	.019

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. *F*-value, probability and partial eta squared are presented for the repeated measures ANOVA where age and experience with French kissing were added as covariates.

The Perceived Effectiveness of the Programme by Trainers

Perceived effects were studied for knowledge, attitude, self-efficacy, self-esteem and involving the social network, to see if professionals saw changes in the participants. Furthermore, the trainers were asked if they thought the girls would generalize the learning outcomes to situations outside the programme. After each session, trainers indicated whether they observed changes on situations described in the logs, In total, 26 situations were rated in the logs, to determine the observed changes by the trainers. A positive change was observed by the trainers in 25 situations. For example, the question ‘the girls know what is important for pleasant sex’ was rated with an average of ‘most of them do not’ before the session and after the session, the average answer was ‘most of them do. And the question ‘girls can appoint a personal goal for the future in the area of relationships and sexuality’ went from an average of ‘most of them do not’ to ‘most of them do’.

Additionally, after the last session trainers answered seven statements in the final questions in the log. The results from these statements indicate that staff members observed changes within half, most or all girls from their group (see table 4).

Table 4

Perceived Changes by Trainers as Reported in the Final Questions in the Logs

As a result of Girls’ Talk+, the girls in my group...	M (SD)
have more knowledge about relationships and sexuality.	4.35 (.61)
know better how a condom works and how to use it.	4.18 (.73)
know better what contraception is, what products there are and how to use them.	3.82 (.73)
are more able to address their wishes in the area of sexuality.	3.59 (.80)
are more able to address their boundaries in the area of sexuality.	3.53 (.62)
have an enhanced self-esteem.	3.81 (.75)
are more able to ask for help when they have had negative sexual experiences or when they encounter problems in the area of relationships and sexuality.	3.82 (.64)

Knowledge regarding contraception, and safe and pleasant sex. The quantitative data from seven statements in the final questions in the logs rendered the following answers. On average, the trainers noted that all or most of the girls gained knowledge about relationships and sexuality because of the programme ($M = 4.35, SD = .61$). Staff indicated that all or most of the girls have improved knowledge about the function of a condom ($M = 4.18, SD = .73$), and finally staff thought that half, most or all of the girls have enhanced

knowledge of what contraception is, what products there are and how to use them ($M = 3.82$, $SD = .73$). See table 4

One staff member noted in the interview that the girls had a great need for information and advice about contraception. The session that was entirely dedicated to contraception, session six, was well received as a result of this need for information. After this particular session, the girls possessed more knowledge in the area of contraception, safe and pleasant sex, according to the trainers. They know what kind of contraception there is, they know how the pill and the intrauterine device work and they gained knowledge of STI's; "they now certainly know STI's exist". Staff members also said girls have gained knowledge about safe sex and where to go to for help. One staff member told that the girls were not familiar with certain terms before the start of the programme, like STI's and safe sex, but during the programme, discussions arose about these topics, resulting in improved knowledge in this area. Trainers mentioned concrete assignments that were effective, like the contraception suitcase, where girls could see several kinds of contraception and could get familiar with them. Several staff members believed that practicing with the use of a condom was educational and helpful. Another staff member said that talking about the subject resulted in the girls thinking about it. For example, the girls thought about pain during sex, as a result of a participant telling her boyfriend that he hurts her. A number of trainers also indicated that girls are vulnerable on social media and that the girls became less vulnerable as a result of Girls' Talk+. "Like internet, the next week they told us 'oh, I changed things, or 'ma'am look, I changed this and I deleted those persons'". However, one staff member was not certain the girls were able to maintain themselves on the internet. "Girls are still very vulnerable on social media". One staff member noticed that the girls had more knowledge regarding their own body after following the programme. They learned about menstruation and the way of thinking for boys and girls. And finally, a staff member thought the girls knew more about their wishes and boundaries and gained knowledge about how to defend themselves.

Attitude towards wishes and boundaries. According to the results of the interviews, the girls started thinking about what they did and did not want as a consequence of participating in Girls' Talk+. They are clear about that and they had discussions about saying no and not being obligated to have sex with a boy if he wants that. The girls are more aware that they do not have to do everything their boyfriend wants. "For example, one girl ended her relationship with her boyfriend, she said 'no, he is indeed not reliable, this is not my dream boy and I don't settle for less', things like that. Of asking us 'is it okay that someone is touching me?'. 'No, that is not okay'. 'Okay, then I will do something about it'. And the next time, they told us how they solved it".

Self-efficacy in the area of addressing wishes and boundaries. Staff members answered on average that half, most or all the girls in their groups were more able to address their wishes and boundaries in the area of sexuality because of the programme, respectively $M = 3.59$ ($SD = .80$) and $M = 3.53$ ($SD = .62$), see table 4. A number of staff members indicated in the interviews that the girls are more conscious about their boundaries and that they learned how to determine and recognize them. One staff member told they addressed the yes/no/doubt feeling. Most staff members believed the girls actually learned how to address and indicate their boundaries. They gave concrete examples; “and ending a relationship, well you just do it over WhatsApp, because it is scary in real life. We talked about that and the following session a girls said ‘Well, I just told him’. So these situations happen, which means it absolutely has an effect”.

Self-esteem. According to the quantitative data from the final questions in the logs, staff members answered that the self-esteem for half, most or all of the girls is enhanced because of the programme ($M = 3.18$, $SD = .75$). The results can be found in table 4. The interviews provided information on this topic as well. Staff members literally said that girls had more self-esteem. One staff member noted that “they are more secure”.

Involving and enhancing the social network. Trainers answered on average that half, most or all girls are more able to ask for help when they have had negative sexual experiences or when they encounter problems in the area of relationships and sexuality ($M = 3.82$, $SD = .64$). See table 4.

The interviews showed that trainers paid attention to involving and enhancing the social network of the girls. For example, they organized a parent session, the girls sent cards to a support person or by discussing and talking about it. Some staff members found the involvement of the social network insufficient, because parents did not come to the parent session and Girls’ Talk+ did not give enough opportunities for this involvement. A number of staff members gave concrete examples for successful attempts to enhance the network. Because of the programme, girls can appoint someone they can talk to and they know they can ask for support. “At the beginning they said; we have no one we can talk to when something like that happens. But eventually they could appoint someone”. Additionally, the programme made certain subjects negotiable. They also learned they could talk to each other, resulting in a supporting group of girls. “I get a lot out of the fact they could be friends, how they can support each other, how they understand what happens to their body when they have sex.”

Generalizing the learning outcomes to situations outside the programme. It appeared from the answers during the interviews that trainers found it difficult to determine if the girls could generalize and remember what was learned. They wondered if the girls will

put the learned skills into practice and if they will remember the skills after the ending of the programme. One trainer thought that the generalizing to different situations would be really hard and that the girls needed someone else to get advice. Another trainer suggested there needs to be a follow-up, since it is necessary that someone keeps an eye on them and because the girls need to be reminded and they need rehearsal of the skills. A trainer indicated that the girls did not complete every session and for that reason certain themes were not learned well enough. "What I noticed already is that things are forgotten very fast. Sometimes I thought, well, we just talked about that last week or the week before that and they can't recall it. (...) You notice during the session that they are really interested and they want to know everything, but the knowledge is gone very quickly." Some girls are not done yet when the programme is over. They should get a follow-up. "Well, look, they know what they've been talking about. They know it. They have gained understanding of what is appropriate to do. And then? If I don't see them anymore after eight sessions, there is no one who tells them." Several trainers did think the girls will put the skills into practice, because they know more, they recognize information and they thought about what they do or do not want. Another trainer indicated that it is difficult for the MID population to maintain themselves in this society and to indicate their boundaries; daily life is really different from the programme and it is difficult to prepare the girls for society. "The things that are already difficult for normal girls, are even more difficult for girls with MID." When the interviewer asked a trainer if she thought the girls would apply their knowledge outside the programme, she answered "I think they will. The part about standing up for yourself, for sure. They know a little bit more, they recognize the information. Yes, I think they will."

Discussion

In the current study, the process and effect of a sex education programme (Girls' Talk+) for girls with MID was evaluated. The process was studied through examination of the programme delivery by trainers and the satisfaction of the programme by trainers and participants. Effect was studied for knowledge regarding contraconception and safe and pleasant sex, attitudes concerning wishes and boundaries, self-efficacy with regard to contraconception use, self-esteem and the involvement of the social network. Previous research showed that girls with MID have difficulties in these areas, which could result in unwanted pregnancies, STI's and sexual victimization.

As hypothesized, the results of the effect evaluation demonstrate that the effects directly after intervention termination are promising. Overall, Girls' Talk+ significantly improved the total knowledge, total self-efficacy and total attitude of the participants in the intervention condition, as measured by the perception of the trainers and the results from the

participant questionnaires. No significant improvement of the intervention condition was found for self-esteem and involving the social network.

Process evaluation. It appears that trainers changed or skipped 39.5 % of the 48 exercises. This means the implementation of the programme was not optimal. Trainers who skipped the most exercises mentioned reasons such as a small group of girls which made certain exercises not realizable and a lack of motivated participants. Adjustments in general were made because of time pressure or because trainers thought the girls were not ready for the exercise. Consequently, this study measured the effects of the intervention as it was applied in real life circumstances.

Results regarding the satisfaction of the programme by trainers and participants show that the majority of the trainers were overall positive about the programme, the programme manual, the amount and duration of sessions and the clarity of the goals for each session. They found the programme a good way to discuss sexuality and the visual material looked attractive. The participating girls in the intervention group ascribed high grades to their trainers and the intervention. The majority of the participants was satisfied with the amount and duration of the sessions and the majority declared that they understood the exercises and thought it was nice to participate in the programme and that they learned more about relationships, boys and sex.

Effect evaluation. Girls' Talk+ was successful in improving total knowledge, total attitude and total self-efficacy for the intervention condition, when the interaction between time and condition was considered. These results were similar to the perceived effects from interviews and logs. These significant results can be explained by studies where knowledge, attitude and self-efficacy are categorized within the proximal sexual factors, which are most amenable to change by teenage pregnancy and STI prevention programmes (Kirby & Laris, 2009; Kirby & Lepore, 2007). Kirby, Laris, and Rollery (2007) reviewed 83 studies that measure the relation between curriculum-based sex education and HIV education programmes and sexual behavior. Improved knowledge, attitudes and self-efficacy were the most found changes within the programmes. Despite the fact that these studies did not include populations with intellectual disabilities, the findings of enhanced knowledge, attitude and self-efficacy were in general connected to sexual behaviors.

No significant results were found for self-esteem, when considering the interaction between time and condition within a repeated measures ANOVA. This finding is not congruent with the significant improvements for knowledge, attitude and self-efficacy. An explanation can be found in the systematic review of Goodson, Buhi, and Dunsmore (2006), they concluded there is no association between self-esteem and sexual behaviors, attitudes and intentions, after reviewing thirty-eight publications about the specific association between

self-esteem and sexual behaviors, attitude and self-efficacy. Moreover, they questioned if the emphasis placed on self-esteem by policymakers is legitimate. However, this review does not distinguish between intellectual disabled populations and non-disabled populations. It appears there is a discrepancy within the literature about the importance of self-esteem in sex education programmes (Kirby & Lepore, 2007). Finally, involving the social network was not significant. The non-significant results for the participant questionnaire could be explained by the difficulty for girls with MID to generalize the learning outcomes to other situations, as suggested by the trainers.

Comparisons with Similar Sex Education Programmes

When comparing the results of the present study to similar interventions, certain findings were noteworthy. The Family Planning Programme is a 1-year individualized programme for family planning and health education in the United States. The focus is on several protective factors, such as self-esteem, relationships, understanding and proper use of birth control, and prevention of STI's. The target population is women with mental retardation. The evaluation proved that the programme could improve hygiene and increase knowledge related to sexuality (McDermott, Martin, Weinrich, & Kelly, 1999). The programme was similar to Girls' Talk+ in the focus on certain similar protective factors, assessing knowledge and targeting a population with MID. However, several differences should be mentioned. No control condition was included in the evaluation of the Family Planning Programme, and it was a one year programme with individualized visits. Girls' Talk+ proved to be effective in improving three outcome measures, including knowledge, with comparisons to a control condition, within eight weeks of group counseling.

Since Girls' Talk+ is a sequel of Girls' Talk, the results of both evaluation studies could be compared. Girls' Talk had a positive influence on several outcome measures. However, the control group had similar or more improvements, possibly due to response shift or natural maturation (Höing, 2008). Two reasons were found for the different results between the evaluations of the programmes. First, participants in Girls' Talk had high outcomes at the pretest, thus improvements were difficult to indicate. Second, it is likely that Girls' Talk+ was successfully adjusted for girls with MID, as a consequence of the extensive consultation and involvement of professionals and the target population in a pilot study. Resulting in a programme that is sensitive for girls with MID, including suitable material and proper research questionnaires.

Strengths and Limitations of This Research

Several strengths within this research contributed to the credibility of the findings. First, this research used a mixed methods design, which was very complete and thorough. Converging and integrating both qualitative and quantitative approaches provided a

comprehensive analysis of the research problem. This way, the strengths of both qualitative and quantitative research were contained and the weaknesses were minimized (Creswell, 2003; Johnson & Onwuegbuzie, 2004; Johnson, Onwuegbuzie, & Turner, 2007).

Furthermore, triangulation was applied, which guaranteed the internal validity and reliability of the results (Baarda et al., 2005; Boeije et al., 2009). Second, extensive involvement of professionals experienced with MID, the programme implementers and the target population was applied in a pilot study. Consequently, the programme and evaluation of the programme were likely to be sensitive for the target population, which enhanced the effectiveness.

Involving the target population and implementers of the programme in the different stages of development is highly recommended, to add to the effectiveness of the programme (Schaafsma et al., 2013). Third, since the research used a relatively large sample, and a pre-post-test construction with a control group, it was possible to assess the generalizability of the programme. The changes in the intervention group were not attributable to passing of time (when no control condition is included) or individual characteristics (when a small sample is used).

However, there were several limitations to this research that should be considered. First, no follow-up questionnaire was included in this research. This means no long-term effects were measured. Second, perceived effects were based on logs from and interviews with trainers. Trainers conducted the intervention and were aware of their condition, therefore the credibility of their perceived effects could be questionable. However, effects were also measured with the objective questionnaires, where the logs and interviews complemented and explained the results of the participant questionnaire. This data triangulation and mixed methods approach added credibility to the overall findings (Baarda et al., 2005; Boeije et al., 2009). Third, the participants were not randomly assigned to the intervention or control condition, this could have affected the quality of the randomization process. Finally, involving the social network within the programme was not examined thoroughly.

Implications for Future Research

Future studies should focus on the long term effects of the intervention, to assure that the effects remain over time. Moreover, future research should apply the golden standard of a Randomized Controlled Trial, to guarantee the quality of the randomization process. In addition, future research should study the discrepancy of self-esteem in relation to sexual behavior and provide answers to the current mixed results in the literature about the role of self-esteem in relation to sexual behaviors. In a next study, the effect of involving the social network should get more attention. Finally, the effects of delivering the programme more accurately and the mechanisms by which the programme had an effect should be examined.

This also entails more attention should be given to girls who dropped out and were therefore excluded in this research.

Recommendations for Girls' Talk+

Numerous recommendations can be abstracted from this evaluation study. First, the delivery of Girls' Talk+ was not optimal. Delivery should get more attention during the train-the-trainer-day(s), to increase the amount of exercises delivered as intended. After that, a second evaluation should determine whether the improved delivery had further effects on the effectiveness. Second, research about self-esteem and the relation with sexual behavior is mixed. It is questionable whether self-esteem should be one of the main goals of the programme. However, attention to self-esteem should remain, since girls with MID are especially vulnerable when considering their self-esteem. Third, according to the trainers and the results from the participant questionnaire, involving the social network of the girls could improve more, when more attention is given to this topic. Finally, inclusion criteria should get more attention, since trainers also included girls who were younger than 14 years. This could result in adjusting the age to 12 years or emphasizing the age limit of 14 years.

Concluding

Despite the limitations of this evaluation, the results of the Girls' Talk+ evaluation were promising for improvements in 1) knowledge of contraception, and safe and pleasant sex, 2) attitude towards contraception, wishes and boundaries and gender norms, and 3) self-efficacy for contraception and indicating wishes and boundaries. Furthermore, the current study filled a gap in the literature because it evaluated a sex education programme for girls with MID. This was a unique matter, considering evaluation of sex education programmes for people with intellectual disabilities or evaluation of sexual assault prevention for women with intellectual disabilities seldom occurred on a systematic and evidence-based manner. Most of the programmes were not evaluated at all, as stated by two systematic reviews (Barger, Wacker, Macy, & Parish, 2009; Schaafsma et al., 2014).

The results of the current study have implications for policy and practice, since the results provided answers for policymakers and employees at special education schools, concerning options on how to prevent sexuality issues for girls with MID and on how to improve the sexual health of girls with MID. In short, effectiveness of and satisfaction with the Girls' Talk+ programme is demonstrated directly after the ending of the programme, for several outcomes, across informants and under real-world settings.

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Appendix A. Schematic display of the triangulation process

Table 5

Triangulation for Each Topic

	Participant questionnaire	Log from trainer	Interview with trainer
Process evaluation			
Programme delivery		x	x
Satisfaction with the programme	x	x	
Effect evaluation			
Knowledge	x	x	x
Attitude	x		x
Self-efficacy	x	x	x
Self-esteem	x	x	x
Social network	x	x	x

Appendix B. The addressed determinants, aims and approach within Girls' Talk+

Onderbouwing van Girls' Talk+

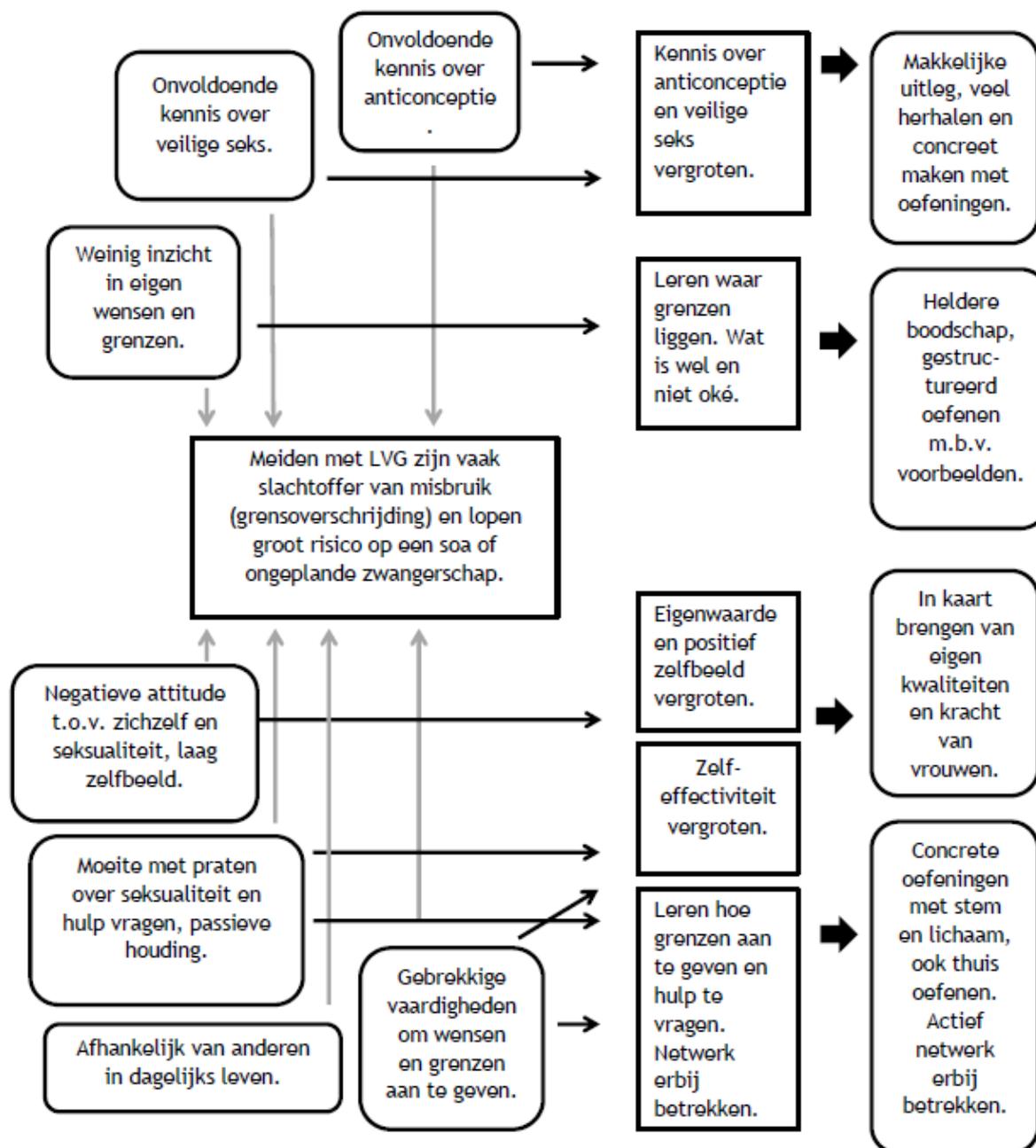
(ALLE) MOGELIJKE OORZAKEN VAN HET PROBLEEM UIT DE LITERATUUR



DETERMINANTEN VAN PROBLEEM

DOEL

AANPAK*



* Aanpak uit: Zoon, M. (2012). Wat werkt bij LVG? Utrecht: NJi.

Note. This figure is retrieved from the program manual (Kuyper et al., 2014).

Figure 1. The addressed determinants, aims and approach within Girls' Talk+

Appendix C. Topic list for the interviews with trainers

Goedemorgen (naam trainer). Met (naam onderzoeker) van Rutgers. Ik bel u voor het interview over Girls' Talk+. Zoals u weet doen we een evaluatieonderzoek naar Girls' Talk+. Daarom heb ik u gevraagd voor dit interview, zodat we kunnen kijken of Girls' Talk+ werkt en hoe het nog verbeterd kan worden. Ik zal eerst iets over mezelf vertellen. (Ik vertel iets over werkzaamheden en wat ik doe voor Girls' Talk+). Dit gesprek wordt opgenomen, tenzij u hier bezwaar tegen heeft? Alles zal vertrouwelijk behandeld worden, dus u kunt alles vertellen. In het rapport vermelden we niet uw naam. De opname zal ik nog 1 keer zelf afluisteren, waarna deze verwijderd zal worden. We gaan uw input gebruiken om de training te verbeteren.

Hoe vond u het om de training te geven?

- a. Hoe is jullie groep tot stand gekomen? (doorvragen: waarom deze meiden, konden ze deelnemen aan een groepsinterventie, hadden ze iets vergelijkbaars al eerder gedaan, waarom meiden afgefallen, waarom meiden later ingestroomd)
- b. In uw logboek las ik dat u niet [de yell heeft gedaan], omdat dit niet bij u of de groep paste, Hoe was dat voor de rest van de training? Voel u zich op uw gemak om de oefeningen uit te voeren? Zou u collega's aanraden om met de training te werken? (Voelen trainers zich betrokken bij het programma? Hebben zij GT+ geadopteerd? Voelde u zich voldoende toegerust om Girls' Talk+ uit te voeren?)

Wat denkt u dat de meiden van Girls' Talk+ hebben geleerd? Zo ja, op wat voor manier? Aan welke werkvormen schrijft u deze veranderingen toe? Hoe komt het dat het werkt? Wat vindt u het belangrijkste dat geleerd is? Denkt u dat ze het geleerde ook buiten de training zullen toepassen? Wat denkt u dat ze niet geleerd hebben, terwijl het programma zich daar wel op richt?

Wat zijn omstandigheden, waaronder Girls' Talk+ goed werkt? En wat zijn belemmerende omstandigheden of factoren? Denk aan:

- a. Wat vindt u van de groepsgrootte (uitgaande van 8 meiden)
- b. En hoe belangrijk is de locatie?
- c. Wat vindt u van de duur van een bijeenkomst (1,5 uur)?
- d. Wat vindt u van het aantal bijeenkomsten?
- e. Hoe was de concentratie van de meiden? Waardoor kwam dit?
- f. Was er in jullie groep veel variatie van de meiden? (bijvoorbeeld leeftijd, verschil in seksuele ervaringen) wat was het effect daarvan?
- g. Waren er meiden die te weinig seksuele ervaring hadden? Was het toch goed dat zij mee hebben gedaan of waren ze er nog niet aan toe? à leren ervaren en niet-ervaren meiden van elkaar? Of zijn de ervaren meiden overheersend?
- h. Was er sprake van groepsdruk?
- i. Zijn er heftige verhalen naar boven gekomen van de deelnemers en hoe zijn jullie hiermee omgegaan? Werden deze verhalen overheersend?
- j. Kregen de meiden teveel nieuwe informatie? Sloot het programma wel goed aan bij hun niveau? Opdrachten te moeilijk of te makkelijk? En sloot het aan bij hun leefwereld?

Nu wil ik graag een paar vragen stellen over het ingevulde logboek (afstemmen per trainer).

- a. Welke verbeteringen/aanvullingen heeft u op de handleiding?
- b. Een aantal keer is huiswerk meegegeven. Werkte dat? Zijn jullie vaak afgeweken van het programma? Zijn er veel werkvormen toegevoegd of niet gedaan? Werkte dat? (afstemmen per trainer)

- c. Wat vindt u van de hoeveelheid gesprekken en uitleg in de training?
- d. Een aantal trainers geeft aan dat de training niet is zoals ze hem verwacht hadden of niet helemaal. Hoe is dat bij u? Hoe komt dat? (afstemmen per trainer)
- e. Hoe kan Rutgers ervoor zorgen dat het proces gaat zoals het moet gaan? Dat bijvoorbeeld de training wordt uitgevoerd zoals het in de handleiding staat?

Checken laatste pagina van logboek voor extra vragen (afstemmen per trainer)

Het interview loopt op zijn einde. Ik heb nog een vraag over wat u van de train-de-trainer dag vond? En denkt u dat de vragenlijsten voor het onderzoek betrouwbaar ingevuld zijn? Waarom wel/niet? Hoe komt dit?

In het logboek gaf u als tip (afstemmen per trainer), kunt u daar nog tips aan toevoegen? Wat was goed en wat was minder goed aan het programma?

Hartelijk dan voor uw tijd en de waardevolle antwoorden. Een prettige dag verder.

Appendix D. Codes of the interviews according to the research questions

Table 6

Codes of the Interviews According to the Research Questions

Onderzoeksvraag	Relevante codes
Wat is het waargenomen effect volgens deelnemers, trainers en ouders?	Waargenomen effect volgens trainers: Belangrijkste geleerd Doelen behaald <ul style="list-style-type: none"> • Kennis anticonceptie, veilige en prettige seks vergroten • Leren waar grenzen liggen • Zelf-effectiviteit vergroten • Eigenwaarde en zelfbeeld vergroten • Leren grenzen aan te geven en netwerk betrekken Bijvangst Positief effect Negatief effect Doelen niet bereikt
Wat zijn de werkzame onderdelen van het programma?	Werkzame onderdelen Werkzame werkvormen Minder werkzame werkvormen Huiswerk Social media en internet Visuele ondersteuning Herhaling Eenvoudig taalgebruik Concreet maken van de leerstof Voorgestructureerd Veilige en positieve leeromgeving
Wat zijn bevorderende en belemmerende factoren? Hoe beïnvloeden randvoorwaarden en implementatiefactoren de werkzaamheid van het programma?	Omstandigheden Bevorderende factoren Belemmerende factoren Aansluiten bij doelgroep Meiden afgevallen Pauze overslaan Tijdstip van de training Aantal bijeenkomsten Ervaring met seks Motivatie Concentratie meiden Tijdsdruk Locatie Rol van trainers Groepsgrootte Duur bijeenkomst Werken in groep Groepsdruk Communicatie met school Heftige verhalen Soort groep
Hoe is het implementatieproces verlopen?	Implementatieproces Betrokkenheid trainers

	Voldoende toegerust
	Tevredenheid van train-de-trainer dag
	Werving/screening/intake
	Uitvoering programma
	- Uitgevoerd zoals beschreven
	- Werkvorm in aangepaste vorm uitgevoerd
	- Werkvormen toegevoegd
Hoe tevreden zijn professionals met het programma?	Tevredenheid t.a.v. programma
Extra aandachtspunten	Contact met Rutgers
	Betrouwbaarheid invullen vragenlijsten
	Tips of verbeterpunten volgens trainers

Appendix E. Preliminary analyses

Table 7

Means, Standard Deviations and Probability for Outcome Measures (Independent T-test)

Outcomes	Intervention condition		Control condition		p pre	p post
	Pretest M (SD)	Post-test M (SD)	Pretest M (SD)	Post-test M (SD)		
Knowledge						
Knowledge Contraception	2.19 (.94)	2.71 (.94)	2.32 (1.05)	2.43 (1.01)	.297	.033*
Knowledge STI's	1.28 (.95)	1.63 (.91)	1.22 (.93)	1.34 (.94)	.624	.018*
Knowledge Internet	.90 (.30)	.95 (.22)	.95 (.21)	.98 (.15)	.155	.324
Knowledge Body	1.03 (.91)	1.80 (1.09)	1.02 (1.00)	1.15 (.91)	.966	.001**
Total Knowledge	5.40 (2.28)	7.09 (2.43)	5.52 (2.31)	5.89 (2.17)	.699	.001**
Attitude	3.86 (.63)	4.16 (0.60)	3.93 (.57)	4.02 (.59)	.420	.051
Self-efficacy						
Self-Efficacy Contraception	3.83 (.74)	4.27 (.69)	3.81 (.79)	3.97 (.68)	.670	.001**
Self-Efficacy Indicating Wishes and Boundaries	4.39 (.61)	4.59 (.46)	4.35 (.61)	4.44 (.54)	.777	.019*
Self-Efficacy Indicating Wishes and Boundaries in Difficult Situations	4.15 (.76)	4.39 (.69)	4.25 (.83)	4.29 (.77)	.583	.290
Total Self-Efficacy	4.12 (.60)	4.42 (.47)	4.14 (.59)	4.23 (.52)	.947	.004**
Self-esteem	3.92 (.78)	4.02 (.68)	3.97 (.72)	3.95 (.78)	.613	.452
Involving social network	4.27 (.84)	4.54 (.61)	4.04 (1.02)	4.36 (.77)	.054	.049*

Note. * $p < .05$, ** $p < .01$

Results of the secondary outcome measures for the independent t-test demonstrated that there are no significant differences between the intervention and control condition on the pretest.

For eight out of the twelve secondary outcome measures, there was a significant difference between the intervention group and the control group on the post-test. The results for total knowledge indicated that on average, the intervention group had significantly more knowledge in total on the post-test ($M = 7.09$, $SD = .243$) than the control group ($M = 5.40$, $SD = 2.28$), $t(228) = -3.95$, $p = .001$. These differences in knowledge were significant for knowledge of contraception, $p < .05$, knowledge of STI's, $p < .05$, and knowledge of the body, $p = .001$. The results for total self-efficacy indicate that on average, the experimental group had significantly more faith in their own abilities (self-efficacy) in total on the post-test ($M = 4.42$, $SD = .47$) than the control group ($M = 4.23$, $SD = .52$), $t(228) = -2.79$, $p < .05$. These differences were significant for self-efficacy towards contraception, $p = .001$, and self-efficacy towards indicating wishes and boundaries, $p < .05$.

Table 8

Means, Standard Deviations and Probabilities for the Differences Between Pretest and Post-test (Dependent T-test)

Outcomes	Intervention		Control	
	Pre-Post M (SD)	<i>p</i>	Pre-Post M (SD)	<i>p</i>
Knowledge				
Knowledge Contraception	-.52 (.93)	.001**	-.10 (.98)	.239
Knowledge STI's	-.35 (.90)	.001**	-.12 (.94)	.168
Knowledge Internet	-.05 (.35)	.153	-.02 (.23)	.267
Knowledge Body	-.77 (1.02)	.001**	-.13 (.83)	.090
Total Knowledge	-1.69 (1.98)	.001**	-.37 (1.67)	.015*
Attitude	-.30 (.59)	.001**	-.09 (.43)	.013*
Self-efficacy				
Self-Efficacy Contraception	-.44 (.73)	.001**	-.15 (.62)	.007**
Self-Efficacy Indicating Wishes and Boundaries	-.20 (.63)	.002**	-.09 (.52)	.050
Self-Efficacy Indicating Wishes and Boundaries in Difficult Situations	-.24 (.78)	.005**	-.05 (.75)	.500
Total Self-Efficacy	-.30 (.53)	.001**	-.09 (.40)	.009**
Self esteem	-.10 (.52)	.055	.02 (.49)	.722
Involving social network	-.27 (.80)	.003**	-.33 (.91)	.001**

Note. * $p < .05$, ** $p < .01$

For ten of the twelve secondary outcome measures, the differences between pretest and post-test were significant for the intervention group. On average, the intervention group had significantly more knowledge in total on the post-test ($M = 7.09$, $SD = 2.43$) than on the pretest ($M = 5.40$, $SD = 2.28$), $t(102) = -8.66$, $p < .05$. This significance in total knowledge was constituted by a significant difference in knowledge of contraception, knowledge of STI's and knowledge of body, $p < .05$. The result for total attitude demonstrate that on average, there was a significant difference in total attitude on post-test for the intervention group ($M = 4.16$, $SD = .60$) compared to the pretest ($M = 3.86$, $SD = .61$), $t(102) = -5.04$, $p = .001$. The results for total self-efficacy indicated that on average, the intervention group had significantly more total self-efficacy on the post-test ($M = 4.42$, $SD = .47$) than on the pretest ($M = 4.12$, $SD = .60$), $t(102) = -5.78$, $p < .05$. The significant result for total self-efficacy was established by significant results for self-efficacy in contraception use, for indicating wishes and boundaries, and for indicating wishes and boundaries in difficult situations, $p < .05$. Finally, on average, the intervention group was significantly better in asking for help (involving the social network) on the post-test ($M = 4.54$, $SD = .61$) compared to the pretest ($M = 4.27$, $SD = .84$), $t(97) = -3.36$, $p < .05$.

For five of the twelve secondary outcome measures, the differences between pretest and post-test were significant for the control group. The control group had significantly more total knowledge on the post-test ($M = 5.89$, $SD = 2.17$) compared to the pretest ($M = 5.52$, $SD = 2.31$), $t(126) = -2.50$, $p < .05$. The results also indicated a significant difference in attitude for the control group on the post-test ($M = 4.02$, $SD = .59$) compared to the pretest ($M = 3.93$, $SD = .57$), $t(126) = -2.33$, $p < .05$. The control group had more total self-efficacy on average at the post-test ($M = 4.23$, $SD = .52$) than on the pretest ($M = 4.14$, $SD = .59$), $t(126) = -2.71$, $p < .05$. Within the self-efficacy measures, there was a significant growth on average in self-efficacy of contraception use on the post-test ($M = 3.97$, $SD = .68$) compared to the pretest ($M = 3.81$, $SD = .79$), $p < .05$. Finally, the control group was better able to ask for help (involving the social network) at the post-test ($M = 4.36$, $SD = .77$) than the pretest ($M = 4.04$, $SD = 1.02$), $t(126) = -4.05$, $p < .001$.