

This article was downloaded by: [DUT Library]

On: 09 October 2014, At: 23:52

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Health Care for Women International

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/uhcw20>

Effects of a Teenage Pregnancy Prevention Program in KwaZulu-Natal, South Africa

Myra Taylor^a, Champak Jinabhai^b, Siyabonga Dlamini^a, Reshma Sathiparsad^c, Matthijs S. Eggers^d & Hein De Vries^d

^a Department of Public Health Medicine, University of KwaZulu-Natal, Durban, South Africa

^b Faculty of Health Sciences, Durban University of Technology, Durban, South Africa

^c School of Social Work and Community Development, University of KwaZulu-Natal, Durban, South Africa

^d Department of Health Communication, Maastricht University, Maastricht, The Netherlands

Accepted author version posted online: 21 Apr 2014. Published online: 19 Jun 2014.

To cite this article: Myra Taylor, Champak Jinabhai, Siyabonga Dlamini, Reshma Sathiparsad, Matthijs S. Eggers & Hein De Vries (2014) Effects of a Teenage Pregnancy Prevention Program in KwaZulu-Natal, South Africa, *Health Care for Women International*, 35:7-9, 845-858, DOI: [10.1080/07399332.2014.910216](https://doi.org/10.1080/07399332.2014.910216)

To link to this article: <http://dx.doi.org/10.1080/07399332.2014.910216>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Effects of a Teenage Pregnancy Prevention Program in KwaZulu-Natal, South Africa

MYRA TAYLOR

Department of Public Health Medicine, University of KwaZulu-Natal, Durban, South Africa

CHAMPAK JINABHAI

Faculty of Health Sciences, Durban University of Technology, Durban, South Africa

SIYABONGA DLAMINI

Department of Public Health Medicine, University of KwaZulu-Natal, Durban, South Africa

RESHMA SATHIPARSAD

School of Social Work and Community Development, University of KwaZulu-Natal, Durban, South Africa

MATTHIJS S. EGGERS and HEIN DE VRIES

Department of Health Communication, Maastricht University, Maastricht, The Netherlands

Researchers aimed to determine the effects of a teenage pregnancy (TP) prevention program for 816 high school students attending 16 KwaZulu-Natal, South African schools through a randomized control trial. Data were collected at baseline and at the 8-month follow-up in 2009. Results were calculated using multivariate analyses of program effects employing Mplus 6, and indicated significantly healthier attitudes, including intentions to abstain from sex whilst at school, plans to communicate with partners about teenage pregnancy, and increased reports of condom use. Researchers thus provide some support for the effectiveness of a TP prevention program that should be further strengthened in a comprehensive approach that includes schools and families.

Received 1 November 2013; accepted 27 March 2014.

Address correspondence to Myra Taylor, Department of Public Health Medicine, University of KwaZulu-Natal, 2nd Floor, Room 219, George Campbell Building, Science Drive, Durban 4001, South Africa. E-mail: taylor@ukzn.ac.za

Color versions of one or more of the figures in this article can be found online at www.tandfonline.com/uhcw.

Teenage pregnancy (TP) is an international concern, and both developed and developing countries are seeking solutions so that we can provide our young women with a better future and their children with adequate care. In this article we describe the effects of an intervention program targeting high school students in KwaZulu-Natal, South Africa, that resulted in healthier attitudes about TP, increased intentions to delay sexual initiation and to communicate with partners, and increased use of condoms. The limitations and challenges are also described.

BACKGROUND

TP has several detrimental effects such as increased chances of dropping out of school and increased risk of sexually transmitted infections (STIs), preterm birth, mental health problems, and economic family burden (Kanku & Mash, 2010). A South African review reported a pregnancy rate of 71 per 1000 women (15–19 years; Panday, Makiwane, Ranchod, & Lestoala, 2009). The need for barrier methods to prevent transmission of HIV and other STIs emphasizes the need for male involvement (Harrison, Newell, Imrie, & Hoddinott, 2010), and the importance of targeting both sexes to promote abstinence or consistent condom use. Many scholars have also reported lack of gender equity and the urgent need to address gender norms in a society of male privilege, despite South Africa's Bill of Rights (Jewkes, Vundule, Maforah, & Jordaan, 2001; Sathiparsad & Taylor, 2011; Wood, Maforah, & Jewkes, 1998). School settings are ideal places to effectively reach teens to motivate them to engage in TP prevention behaviors (Bennett & Assefi, 2005; DiCenso, Guyatt, Willan, & Griffith, 2002; Kirby, 2011).

Researchers employed a Cochrane systematic review of educational interventions to prevent unintended pregnancies amongst youth, 27 of which were undertaken at schools, and found that multicomponent interventions combining educational and contraceptive interventions were successful (Oringanje, Meremikwu, Eko, Esu, & Meremikwu, 2009). The literature also includes a report of the benefits of improving knowledge, changing beliefs and attitudes, and increasing the intentions of teens to protect themselves, either through sexual abstinence or by using contraception (Kirby, 2011). South Africa has progressive social and health policies that permit young women from the age of 12 to independently decide on contraception and abortion, and these services should be free and available at local health facilities (Department of Health, 2012a). There are problems however, both with the awareness amongst teens of the availability and the accessibility of services such as contraception, the morning after pill, and abortion (Willan, 2013). School settings offer an opportunity to provide students attending high school with the information and skills that can assist them to improve their sexual and reproductive health. Over the past

two decades there have been wide-ranging efforts to promote the health of teens attending school. These include the “Lifeskills” module in South African schools, which, as part of the Life Orientation syllabus, is an examinable subject that includes sexual health (James et al., 2004). This has not, however, proved effective in reducing the number of teen pregnancies (Panday et al., 2009). An additional issue is that discussion of sex and sexuality in the home is taboo (Jewkes, Morrell, & Christofides, 2009; Swartz & Bhana, 2009). Focused sexual and reproductive health educational programs are therefore required to change adolescent attitudes about early sexual debut and sexual risk behavior in order to reduce TP. In this study researchers thus investigated whether a prevention intervention program could change attitudes and influence the intentions to practice safe sexual behavior amongst high school students in the province of KwaZulu-Natal, in order to reduce TP.

CONCEPTUAL FRAMEWORK

The researchers adapted the I-Change model (de Vries et al., 2003), and used this as the conceptual framework because this had proved helpful in our previous studies that investigated high school students’ sexual behavior (sexual abstinence and condom use; Dlamini et al., 2008; Taylor et al., 2007). The premise of the adapted model is that constructs such as students’ positive and negative attitudes about TP are contributory demotivating and motivating factors, respectively, that can influence their intentions to prevent TP. We were interested in investigating the high number of teen pregnancies (between a quarter and a third of female teens become pregnant; Panday et al., 2009), and if poverty (using a measure of socioeconomic status [SES]) was a factor amongst these teens that influenced their attitudes to teen pregnancy. Arising from the focus discussions, which explored gender norms, the role of students’ attitudes in motivating their intentions to prevent teen pregnancy was investigated. The researchers also used the I-Change model since this takes cognisance of the current behavior of the student, so that in this study the researchers designed an intervention that targeted both abstinent and sexually experienced teens (Figure 1).

METHODS

We undertook a randomized controlled trial of 16 high schools selected from the KwaZulu-Natal Department of Education’s list of 1,580 high schools. We selected schools in 2009 from two (urban and rural) of 11 districts in the province of KwaZulu-Natal. We used geographical stratification to randomly allocate schools to experimental or control groups. We then invited students in one randomly selected grade 8 class (their first year at high school) at each school to participate in the study. Of the selected schools, eight schools

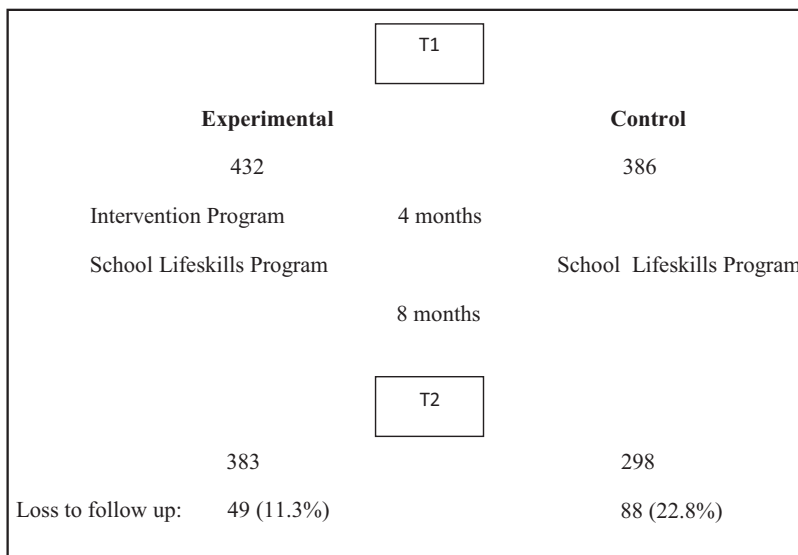


FIGURE 1 Grade 8 students in intervention and control groups at 16 KwaZulu-Natal, South African schools. T1, $n = 818$, T2, $n = 681$.

(four experimental and four control) were in the predominantly rural district of Ugu (population 790,000), and eight were in the metropolitan area of eThekweni (population 3.2 million).

The student respondents were requested to complete a self-completed structured questionnaire, based on prior elicitation research from focus groups with teens attending six urban and rural high schools. These focus groups had explored reasons for TP and possible ways to address this issue. The researchers used these data to develop the questionnaire, translated it into isiZulu, and back-translated this for clarity. In the year prior to the study the researchers piloted the questionnaire in a school not included in this study. We coded the questionnaires to ensure confidentiality, and each student completed a questionnaire at baseline (T1) and 8 months later (T2). Research assistants explained the study purpose, the importance of valid responses, and the strict confidentiality. They were also present to clarify if learners were uncertain about answering any question. The students each placed completed questionnaires in an envelope that each student then sealed. The researchers obtained ethical clearance from the University of KwaZulu-Natal and permission from the KwaZulu-Natal Department of Education, in addition to the principals from each school. Parents and students provided written informed consent. There were no refusals from the selected schools or students.

Outcome Variables

Outcome variables are presented in Table 1. We used a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

TABLE 1 Outcome Variables

Item	Statement
Positive attitudes to TP (pros) 6 statements: Cronbach $\alpha = 0.72$.	If I fall pregnant/cause a pregnancy it proves I am fertile and can have a child. There is a chance that I'll keep my boyfriend/girlfriend. I will get the child support grant. I don't need to attend school. I will be regarded as an adult. I can have sex more often.
Negative attitudes to TP (cons) 8 statements: Cronbach $\alpha = 0.72$.	My parents will be angry with me. My teachers will be angry with me. My family will be ashamed of me. People will make rude/unkind comments. I won't be able to go back to school. I will lose my family's trust. I will lose my friends. There's a chance that I'll lose my boy/girlfriend.
TP intentions 4 statements: Cronbach $\alpha = 0.73$ (these statements were analyzed separately to better discriminate the students' responses).	I intend to abstain from sex whilst at school. I intend to communicate with my partner about TP. I intend to prevent myself from becoming pregnant/causing a pregnancy. I intend to use condoms consistently.

The researchers assessed sexual behavior by three questions (0 = *no*, 1 = *yes*): “Have you ever had sex? Do you use condoms? Have you ever been pregnant/caused a pregnancy?” In addition, condom use consistency was assessed by asking students, “How often do you use condoms with your regular partner?” The students provided answers on a 4-point scale, ranging from 1 (*never*) to 4 (*always*). Students were also asked, “At what age did you first have sex? What was the age of your partner? Have you ever been forced to have sex?”

Covariates

We assessed students using the sociodemographic variables of age, gender, and SES, and for the latter we used a family affluence scale based on whether the household had a television or cell phone (1), a television and a cell phone (2) or no television or cell phone (0). We also requested information about home language, religion, with whom they lived and the number of nights that students went to bed hungry the previous week.

Program

The researchers developed the program, which consisted of 12 weekly lessons using an interactive variety of activities including role plays, small

and large group discussions, debates, and viewing of videos made especially for the discussions with students, which were implemented by two pairs of young male and female trained facilitators (Taylor et al., 2012). The program objectives were to provide information, address students' attitudes, and encourage intentions to prevent TP. The researchers, who comprised an interdisciplinary team, developed the material for the program based on the formative research undertaken in the previous 2 years. The researchers then piloted this at two schools not included in the randomized controlled trial (RCT). The topics discussed were Knowing Yourself, The Choice is Yours, Relationships, Making Choices, Body Development, Contraception, Peer Pressure, Culture, Parenthood, Responsibility, and Human Rights, following principles outlined by Kirby (2011). Gender norms were a core component of all the modules.

Analysis

The researchers used descriptive statistics to describe the study sample and used *t*-tests and chi-square analysis to detect differences between groups. We calculated the intervention effects with multivariate linear and logistic regression analysis in Mplus 6, and we included as covariates age, gender, SES, sexual experience, and baseline scores. We corrected all intervention effects for the cluster effect of students within schools using Mplus 6. Effects were considered significant when $p < .05$. See Figure 2.

RESULTS

Baseline (T1)

The 816 students comprised similar proportions of males (mean age: 14.6 years; $SD = 1.4$) and females (mean age: 13.9 years; $SD = 1.1$) with similar demographic characteristics. Sixty percent of students were Christian. A third of students lived with both parents, but slightly more (36%) lived in single-parent households with their mothers (36.0%), and fewer lived with their fathers. Many children lived with grandparents and other relatives and friends. The researchers noted that at baseline there were differences between the experimental and control group for hunger (see Table 2). The schools in the study were situated in areas of low SES—a quarter of the students had gone to bed hungry the previous week, and 21.2% of households lacked a television (not in table).

Most students were not sexually experienced (12.7% had ever had sex). Of these 104 sexually experienced students, 91 were males (87.5%) who had initiated sex at a mean age of 12.6 years ($SD = 2.9$), whereas females had been slightly older (mean age 13.0 years, $SD = 3.6$). The students had initiated sex with partners who were usually about 15 years of age, which

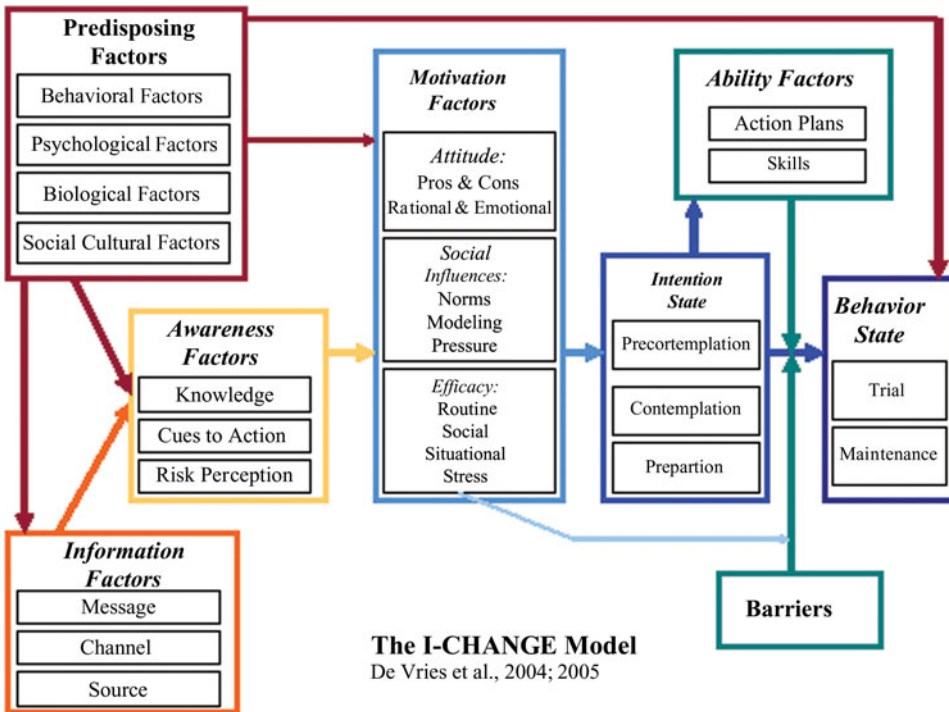


FIGURE 2 The I-Change model.

suggests that their sexual partners were fellow schoolgoers. Thirty percent of these sexually experienced students had ever been forced to have sex, but no statistically significant gender or urban/rural differences were found.

The students' mean scores for attitudes toward the perceived advantages of TP (the pros) were the lowest of all the scores (2.32 and 2.40 for the experimental and control groups, respectively). Students in both groups thus considered pregnancy among teens a disadvantage, but students in the control group had the more negative attitude (3.69 vs. 3.51, $p < .01$), and were also more intent on preventing TP (3.59 vs. 3.17, $p < .01$) and on using condoms consistently (3.90 vs. 3.71, $p < .05$). We adjusted for these baseline differences in the follow-up analysis. Over 60% of sexually experienced students used male condoms, but both groups failed to use condoms consistently (see Table 2).

We found that drop-out (16.6%) by students participating in the RCT was associated with being in the control group, female, and of an older age (Figure 1). Although school attendance in South Africa is compulsory, there is no monitoring of nonattenders or follow-up of missing children at many schools, but another driver, is that due to the high rate of unemployment many parents move in search of work (Statistics South Africa, 2013).

TABLE 2 Sample Characteristics and Program Effects

Characteristic	Baseline (T1)		Follow-up (T2)		Intervention effect B
	Control (N = 385)	Experimental (N = 431)	Control (N = 296)	Experimental (N = 383)	
Gender (% male, N)	50.1% (193)	50.6% (218)	51.4% (152)	51.4% (197)	—
Mean age (SD)	14.22 (1.41)	14.25 (1.26)	14.36 (1.29)	14.43 (1.19)	—
Mean SES (SD)	1.71 (0.55)	1.72 (0.52)	2.21 (0.42)	2.25 (0.49)	—
Home language (% IsiZulu, N)	99.2% (382)	98.8% (427)	97.3% (290)	99.2% (380)	—
Religion:					
Christian	61.2% (233)	57.1% (242)	73.1% (215)	59.1% (221)*	—
African traditional	20.2% (77)	19.8% (84)	10.5% (31)	19.3% (72)*	—
Other	19.6% (75)	23.1% (98)	16.4% (48)	21.6% (81)	—
With whom do you live:					
Both parents	34.9% (130)	33.4% (141)	34.1% (101)	33.8% (129)	—
Either parent	41.7% (155)	42.6% (180)	37.5% (111)	40.8% (156)	—
How many times did you go to bed hungry in the last week (Mean [M], SD)	0.57 (1.14)	0.40 (0.99)*	0.32 (0.93)	0.41 (1.12)	—
Attitudes to TP (M, SD) ^a :					
Pros ($\alpha = .72$)	2.40 (0.88)	2.32 (0.85)	2.45 (0.85)	2.26 (0.82)**	-0.13 (0.13)
Cons ($\alpha = .94$)	3.69 (0.96)	3.51 (1.00)**	3.83 (0.93)	3.81 (0.87)	0.01 (0.09)
Intent to abstain whilst at school (M, SD) ^a	3.92 (1.27)	3.99 (1.29)	3.97 (1.20)	4.18 (1.12)*	0.17 (0.07)*
Intent to communicate partner TP (M, SD) ^a	3.92 (1.17)	3.88 (1.16)	3.95 (1.01)	4.11 (0.96)*	0.17 (0.07)*
Intent to prevent pregnancy (M, SD) ^a	3.59 (1.35)	3.17 (1.42)***	4.00 (1.10)	3.89 (1.13)	-0.06 (0.10)
Intent to use condoms consistently (M, SD) ^a	3.90 (1.16)	3.71 (1.24)*	3.96 (1.04)	3.80 (1.15)	-0.11 (0.09)
Ever had sex (% , N)	11.3% (43)	14.4% (61)	15.9% (47)	21.4% (82)	0.21 (0.11)
Condom use (% , N) ^c	63.9% (23)	62% (31)	36.7% (11)	54.2% (39)	0.98 (0.37)**
Condom use consistency (M, SD) ^{b,c}	2.48 (1.37)	2.69 (1.39)	2.66 (1.28)	2.34 (1.29)	-0.25 (0.21)
Been pregnant or caused a pregnancy (% , N) ^c	7.3% (3)	3.4% (2)	4.4% (2)	6.3% (5)	0.27 (2.99)

* $p < .05$; ** $p < .01$; *** $p < .001$.

^aRanging from 1 (*strongly disagree*) to 5 (*strongly agree*).

^bRanging from 1 (*never*) to 4 (*always*).

^cSubsample consisting of only those who reported to have had sex.

Effects of Intervention Program (T2)

Positive changes from intervention. At T2 significantly fewer students in the experimental group had positive attitudes toward TP (2.26 vs. 2.45, $p < .01$), and their intentions to abstain from sex whilst at school had also strengthened when compared with the control group (4.18 vs. 3.97, $p < .05$). The intervention effects resulted in more students expressing intentions to communicate with their partner about TP (4.11 vs. 3.97, $p < .05$) and to use condoms (54.2% vs. 36.7%, $p < .01$), but the sample of students in the control group reporting condom use had halved (Table 2).

Lack of significant change. We found that although the mean scores regarding intentions to prevent pregnancy and to use condoms consistently increased amongst students in the experimental group, this increase was matched in the control group. Thus, although the program appeared to significantly increase condom use, it did not impact on condom use consistency (Table 2).

DISCUSSION

The researchers found program effects for improved attitudes to prevent TP, intentions to abstain from sex, and intentions to communicate about TP with the partner and for actual condom use.

Demographic Factors

Our sample of students were in grade 8, had just started high school, and comprised both sexes because most schools in KwaZulu-Natal are coeducational, and both sexes are affected by TP. In initiating a program to reduce TP, we thus aimed to address the needs of young teens starting to become sexually active, but such programs also need to be reinforced as more teens become sexually active and require easily accessible contraception. A recent policy initiative of the Department of Health envisages sending teams of school health nurses to high schools, and provision of contraceptives could be linked with the “Lifeskills program that is part of the school curriculum (Departments of Health and Basic Education, 2012).

Improved Attitudes of Teens Concerning Prevention of TP

In a social context where TP is common, we were interested in reducing the perceptions of teens about the advantages of TP. The school intervention program through its varied activities provided the young teens with an opportunity to consider TP more realistically and reconsider their attitudes. Harrison (2010) has noted that younger teens are less likely to engage in protected sex due to limited knowledge, fear, uncertainty, or lack of negotiating ability, emphasizing the importance of delaying sexual initiation until teens are better prepared. Buthelezi and colleagues (2007) describe the physical and emotional changes that occur in adolescence and the stress and social pressures that result from moving from primary to high school. Furthermore, adolescence is a time of exploration and experimentation, with sexuality being a major area of development and change (Harrison, 2010). This phase provides an opportunity to discuss with teens issues relating to intimate relationships and sexually responsible behavior. The intervention program was thus successful in changing the attitudes of the grade 8 students in the

experimental group, in reducing students' beliefs that teen pregnancy has advantages, and in explaining the consequences of TP for students.

Sexual initiation may not be voluntary, however, and sexual abuse in South Africa has been shown to be prevalent and significantly associated with HIV infection. The lack of condom use results from the inequitable gender norms where females are unable to insist on the use of condoms (Dunkle et al., 2004). In our study almost a third of teens had been forced to have sex, and there are few counsellors available to assist such students, indicating an unmet need in schools for social workers (Sathiparsad & Taylor, 2005).

Change in Students Intentions Toward Preventing TP

Amongst the abstinent students, the TP program appeared to reinforce sexual abstinence whilst at school and to promote condom use amongst the sexually active. The use of condoms consistently was not achieved by this program and requires more attention. Studies have indicated that although condoms are used initially, such use is more common with occasional than regular sexual partners. Inconsistent condom use among these teens is congruent with the findings of Makiwane and Mokomane (2010) in their study of sex between South African youth. Peer pressure is a concern, but, in addition to the risk of TP, the high rate of HIV in South African communities emphasizes the importance of consistent condom use. Amongst women attending antenatal clinics in South Africa, the HIV prevalence amongst 15–19 year olds was 18.8% (Department of Health, 2012b). There are many social pressures on students, however, including lack of parental guidance and supervision and living in poverty, that may negatively influence students' sexual behavior (Brook, Morojele, Zhang, & Brook, 2006).

The program was successful in increasing students' intentions to communicate with partners about TP. This is an important finding because due to existing gender norms females often lack agency in sexual decision making. The program effects suggest that teens participating in the program learned skills that would enable them to discuss with their partner the need to prevent pregnancy. This is a step in the right direction, because, in a previous study, James and colleagues (2005) reported that students were unable to communicate with their partners about the use of condoms.

The absence of effects on intentions to prevent pregnancy is unexpected because both groups increased significantly, and media exposure or other sexual education efforts might have had confounding effects. Further, no effects were found for reported TP, but, because of low pregnancy prevalence rates in our sample, this lack of effect can perhaps be attributed to low power.

The results of this study indicated that similar numbers of students in both groups initiated sex during the course of the study, confirming that programs providing sex education that are implemented at school do not increase sexual activity (Kirby, 2011).

Targeting Students' Sexual Behavior

The literature highlights the need for a comprehensive approach rather than a focus only on abstinence, and in this intervention program there was emphasis on responsible sexual behavior and condom use (Bennett & Assefi, 2005; Kirby, 2011). The intervention program included both primary and secondary abstinence, but it also included the benefits of dual protection and the consistent use of condoms by sexually active teens. Overall, the program was well received and used recommended strategies (Kirby, 2011).

Program Implementation

Our program was developed to address concerns expressed by teens in the prior focus group discussions and to empower them to understand the biological, psychosocial, and economic pressures related to TP. The program aimed to assist them to clarify aspects such as their attitudes toward TP and intentions to avoid becoming pregnant or causing a TP, and to offer them the implementation skills to achieve these goals. The program was implemented carefully by two teams of male/female facilitators of similar culture to the students, and they visited the schools once each week to implement the 12 sessions as planned.

Limitations

It is difficult to measure TP over the short term, and the outcome measures selected for this study were therefore change in attitude, intentions, and sexual behavior. Although in this study the administrators of the questionnaire emphasized the confidentiality of the students' responses and the importance of valid answers, these are self-reports.

Implementation was not always optimal due to the many participants in one class (sometimes >60 learners), hindering active participation. Future effects may also be improved by using a slightly shorter and more targeted approach addressing salient beliefs (Dlamini et al., 2008; Taylor et al., 2007). A limitation was the high drop-out rate over the 8-month period. Although attendance is compulsory, school nonattendance is a variable with no sanctions. South Africa's child support grant—besides supporting new families—also contributes to positive attitudes toward pregnancies (Kanku & Mash, 2010). Furthermore, South African's context is characterized by high

levels of sexual activity and also sexual violence (Department of Health, 2012b; Dunkle et al, 2004).

Students in schools not receiving our TP prevention program (the control group) received the compulsory classroom-based Lifeskills program and media messages regarding TP, both of which were also available to the experimental group. At the end of the RCT, the control schools were provided with the “Prevention of Teenage Pregnancy Programme.”

These findings necessitate a comprehensive approach toward the prevention of TP that needs to target not only the micro but also the macro level (Kanku & Mash, 2010; Kirby, 2011; Vundule, Maforah, Jewkes & Jordaan, 2001). The HIV/AIDS epidemic in South Africa has caused the death of many parents, and their children often lack the care and support that adolescents require due to the social disintegration of families. Further, the lack of youth-friendly clinics in South Africa reduces access to contraceptive services (Dickson-Tettiah, Pettifor, & Moleko, 2001), requiring new community initiatives facilitating access (Pillay, 2012).

Implications—Summary Statement

The program results indicate effects on condom use and intentions to abstain and communicate about TPs. TPs also result in financial benefits, however, from the child support grant for poor families. Consequently, South African TP prevention requires an ecological approach also improving economic conditions.

ACKNOWLEDGMENTS

We thank the KwaZulu-Natal Department of Education Community (principals, parents, and students) and the research team.

FUNDING

We thank our funders, SANPAD, for their support.

REFERENCES

- Bennett, S. E., & Assefi, N. P. (2005). School-based teenage pregnancy prevention programs: A systematic review of randomized controlled trials. *Journal of Adolescent Health, 36*, 72–81.
- Brook, D. W., Morojele, N. K., Zhang, C., & Brook, J. S. (2006). South African adolescents: Pathways to risky sexual behaviour. *AIDS Education and Prevention, 18*, 259–272.

- Buthelezi, T., Mitchell, C., Moletsane, R., De Lange, N., Taylor, M., & Stuart, J. (2007). Youth voices about sex and AIDS: Implications for life skills education through the "Learning Together" project in KwaZulu-Natal, South Africa. *International Journal for Inclusive Education*, *11*, 445–459.
- Department of Health. (2012a). *National Contraception and Fertility Planning Policy and Service Delivery Guidelines*. Pretoria, South Africa: Author.
- Department of Health. (2012b). *National antenatal HIV and syphilis prevalence survey 2011*. Pretoria, South Africa: Author.
- Departments of Health and Basic Education. (2012). *Integrated school health policy*. Pretoria, South Africa: Author.
- de Vries, H., Mudde, A., Leijts, I., Charlton, A., Vartiainen, E., Buijs, G., ... Kremers, S. (2003). The European Smoking Prevention Framework Approach (EFSA): An example of integral prevention. *Health Education Research*, *18*, 611–626.
- DiCenso, A., Guyatt, G., Willan, A., & Griffith, L. (2002). Interventions to reduce unintended pregnancies among adolescents: Systematic review of randomised controlled trials. *British Medical Journal*, *324*, 1426–1435.
- Dickson-Tettiah, K., Pettifor, A., & Moleko, W. (2001). Working with public sector clinics to provide adolescent-friendly services in South Africa. *Reproductive Health Matters*, *17*, 160–169.
- Dlamini, S. B., Taylor, M., Nyawo, N. N., Huver, R., de Vries, H., & Sathiparsad, R. (2008). Gender factors associated with sexual abstinent behaviour of rural South African high school going youth in KwaZulu-Natal. *Health Education Research*, *24*, 450–460.
- Dunkle, K. L., Jewkes R. K., Brown, H. C., Gray, G. E., McIntyre, J. A., & Harlow, S. D. (2004). Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet*, *363*(9419), 1415–1421.
- Harrison, A. (2010). Young people and HIV/AIDS in South Africa: Prevalence of infection, risk factors and social context. In S. S. Abdool Karim & Q. Abdool Karim (Eds.), *HIV/AIDS in South Africa* (2nd ed., pp. 305–328). Cape Town, South Africa: Cambridge University Press.
- Harrison, A., Newell, M. L., Imrie, J., & Hoddinott, I. J. (2010). HIV prevention for South African youth. Which interventions work? Systematic review of current evidence. *BioMed Central Public Health*, *10*(102), 1–12.
- James, S., Reddy, P., Ruiter, R., Taylor, M., Jinabhai, C. C., & Van den Borne, B. (2005). The effects of a systematically developed photo-novella on knowledge, attitudes, communication and behavioural intentions with respect to sexually transmitted infections among secondary school learners in South Africa. *Health Promotion International*, *20*, 147–155.
- Jewkes, R., Morrell, R., & Christofides, N. (2009). Empowering teenagers to prevent pregnancy: Lessons from South Africa. *Culture, Health & Sexuality*, *11*, 675–688.
- Jewkes, R., Vundule, C., Maforah, F., & Jordaan, E. (2001). Relationship dynamics and teenage pregnancy in South Africa. *Social Science and Medicine*, *52*, 733–744.
- Kanku, T., & Mash, R. (2010). Attitudes, perceptions and understanding amongst teenagers regarding teenage pregnancy, sexuality and contraception in Taung. *South African Family Practice*, *52*, 563–572.

- Kirby, D. (2011). *The impact of sex education on the sexual behavior of young people*. Expert Paper No. 2011/12. New York, NY: United Nations Department of Economic and Social Affairs.
- Makiwane, M., & Mokomane, Z. (2010). South Africa youths' higher-risk sexual behavior: An eco-developmental analysis. *African Journal of AIDS Research*, 9(1), 17–24.
- Origanje, C., Meremikwu, M. M., Eko, E., Meremikwu, A., & Ehiri, J. E. (2009). Interventions for preventing unintended pregnancies among adolescents. *Cochrane Database Systematic Reviews*, 4, CD005215. doi:10.1002/14651858.CD005215.pub2.
- Panday, S., Makiwane, M., Ranchod, C., & Lestoala, T. (2009). *Teenage pregnancy in South Africa with a specific focus on school-going learners*. Child, Youth, Family and Social Development, Human Sciences Research Council. Pretoria, South Africa: Department of Basic Education.
- Pillay, Y. (2012, February). *PHC re-engineering in South Africa: Are we making progress?* Paper presented at the Public Health Association of South Africa (PHASA) Conference, Bloemfontein, South Africa.
- Sathiparsad, R., & Taylor, M. (2005). Towards social work interventions in schools: Perceptions of educators. *Journal of Social Work*, 41, 265–275.
- Sathiparsad, R., & Taylor, M. (2011). Making meaning of teenage pregnancy among school-going youth: The case of selected eThekweni Municipality secondary schools. *Agenda*, 25(3), 72–84. doi:10.1080/10130950.2011.621638
- Statistics South Africa. (2013). *Quarterly Labour Force Survey*. Statistics South Africa. Retrieved from www.statssa.gov.za/publications/P0211/P02111stQuarter2013.pdf
- Swartz, S., & Bhana, A. (2009). *Teenage tata: Voices of young fathers in South Africa*. Cape Town, South Africa: HSRC.
- Taylor, M., Dlamini, N., Khanyile, Z., Mpanza, L., & Sathiparsad, R. (2012). Exploring the use of role play in a school-based programme to reduce teenage pregnancy. *South African Journal of Education*, 32, 441–448.
- Taylor, M., Dlamini, S. B., Nyawo, N., Jinabhai, C. C., Huver, R., & de Vries, H. (2007). Reasons for inconsistent condom use by rural South African high school students. *Acta Paediatrica*, 86, 287–91.
- Vundule, C., Maforah, F., Jewkes, R., & Jordaan, E. (2001). Risk factors for teenage pregnancy among sexually active Black adolescents in Cape Town. *South African Medical Journal*, 91, 73–80.
- Willan, S. (2013). *A review of teenage pregnancy in South Africa—Experiences of schooling and knowledge and access to sexual and reproductive health services*. Durban, South Africa: Health Systems Trust.