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Changing the context is important and necessary, but not sufficient, for reducing adolescent risky sexual behavior: A reply to Steinberg (2015)

Angela D. Bryan, **Arielle S. Gillman**, and **Natasha Hansen**

University of Colorado Boulder

Abstract

Starting school later, keeping adolescents busy with structured programming and making free condoms available, as Steinberg (2015) suggests, are important and necessary steps, but they are simply not sufficient if the goal is reducing sexually transmitted infections and unplanned pregnancy. We agree that the current state of affairs, which in many schools involves sexuality education using programs that are not empirically supported, is unacceptable. However, abandoning sexuality education entirely would leave adolescents ill-equipped to protect themselves. Despite the fact that current intervention technology is neither perfect nor optimally effective, there are empirically supported school-based sexual risk reduction interventions that teach these skills and are readily available. Additionally, even though we agree that structured afternoon programs for school-aged adolescents would reduce the opportunity for sexual risk behavior during the school years, such programs would not address the demographic reality of sexual risk that continues for adolescents and emerging adults far past the end of traditional secondary education. We believe Steinberg's suggestions are an excellent start and ought to be implemented. But complementary to this approach should be the use of existing empirically supported sexual risk reduction interventions, and research into the development of even more effective interventions. Changing the context is important and necessary, but not sufficient, for reducing adolescent risky sexual behavior: A reply to Steinberg (2015)

In many ways we could not agree more with Steinberg's recent piece on the importance of the context for reducing adolescent risk. We have wholeheartedly embraced the idea--based on both neuroscientific data (e.g., Steinberg, 2008) and our experience with this dynamic and fascinating population--that it is not possible to change the nature of adolescence. As we note at the beginning of many of our papers and presentations, our perspective is that adolescence is inherently a time of exploration and risk, and that is exactly as it should be. To argue otherwise would, as noted by Steinberg (2015), be fighting "an uphill battle against evolution and endocrinology" (p., 714). Our goal in the work that we do is to help adolescents traverse this period of life safely, allowing them to mature and have relatively more adult experiences, like sexual behavior, in a way that minimizes their risk for harm. We also agree strongly with Steinberg (2015) that changing the environment by "diminish[ing] adolescents' time in unstructured, unsupervised activities" (p. 713) and making condoms

Address correspondence to: Angela Bryan, angela.bryan@colorado.edu.

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freely available are crucial components of a comprehensive strategy to reduce sexual risk. However, our position is that these steps are simply not sufficient if the goal is reducing sexually transmitted infections (STIs) and unplanned pregnancy.

Comprehensive sexuality education is relatively rare, and recent data show that such programs are even less common now than they were a decade ago (CDC/ National Center for Health Statistics, 2015). As noted by Steinberg, many of the sex education programs used in schools are either not empirically supported, or are abstinence-based programs that deny the nature of the adolescent stage of development and are either ineffective (e.g., Trenholm et al., 2007) or outright harmful via the provision of distorted information and promotion of gender stereotypes as scientific fact (Waxman, 2004). However, the fact that school systems do not currently use theory-based, empirically supported, comprehensive sexual risk reduction interventions does not mean that such interventions do not exist or are not effective. The federal Office of Adolescent Health maintains a database of empirically supported programs with demonstrated efficacy at increasing condom use, decreasing sexual risk behavior, or both (see http://www.hhs.gov/ash/oah/oah-initiatives/teen_pregnancy/db/tpp-searchable.html). The Centers for Disease Control has a similar compendium of effective HIV risk reduction behavioral interventions (see http://www.cdc.gov/hiv/prevention/research/compendium/rr/complete.html). As for the extent of their effects, a recent meta-analysis (Chin et al., 2012) of comprehensive sexual risk reduction programs showed that across studies, there was on average a 12% decrease in sexual activity, a 25% decrease in unprotected sexual activity, a 31% reduction in prevalent STIs, and an increase of 13% in the use of protection during intercourse. Notably, there were no significant overall effects of abstinence-only interventions (Chin et al., 2012). Though promising and important, the effects of these programs are admittedly small to medium at best. Additional research into the development of more effective interventions should be a priority for us as a research community and for the agencies that fund this work. The solution is not to abandon all sexuality education in favor of environmental changes, but rather to encourage rigorous research into the creation of innovative and more effective approaches to comprehensive sexual risk reduction, to require that schools use empirically supported programs, *and* to make changes to the environment.

One might argue that sexuality education isn't necessary at school and should be abandoned because this is information that should be learned at home. Unfortunately, parents are generally uncomfortable discussing sexuality at home with their children, and evidence suggests parents' information about contraceptives and other sexual health-related topics may be incomplete or inaccurate (Eisenberg et al., 2004). The situation is even more dire in the case of sexual minority adolescents. Although the social climate for such adolescents is improving, certainly some are still not comfortable talking to their parents about their sexual orientation, much less sexual risk reduction. This discomfort could be related to another hallmark of adolescence-- the exploration of one's sexual identity and uncertainty around it--but it could also be because adolescents (often legitimately) fear the response of potentially disapproving parents. Indeed, a far-too-regular occurrence among sexual minority adolescents is being expelled from the home upon disclosing their sexual orientation, leading to a disproportionately high number of homeless sexual minority adolescents in America today (Keuroghlian, Shtasel, & Bassuk, 2014). Without school-based sexuality

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education, young people may not get *any* sexuality education, let alone comprehensive sexuality education. This may be particularly the case for sexual minority adolescents who —even in the case of well-meaning parents—may not receive sexual health information relevant to their sexual practices. Unfortunately, one area in which even current empirically supported intervention curricula are deficient is in the almost exclusive focus on heterosexual sexual relationships and encounters, and some of the programs currently in use by schools are openly discouraging of homosexuality (Fuller, McLaughlin, & Asato, 2000). So, another recommendation is that in the course of developing new and more effective school-based intervention methodologies, we do a better job of designing programs that are inclusive with respect to sexual and gender identity.

Focusing in particular on the nature of condom use during penile-vaginal or penile-anal penetrative intercourse, there is a skill set that is necessary to engage in this behavior that may not have a close analogue to other risk behaviors. First, condom use can require communication with a sexual partner. Certainly it is possible that a man (using a male condom) or a woman (using a female condom) could simply apply the condom to their own body with no discussion with a partner, however our sense is that this is typically not the way condom use decisions in the context of a sexual encounter are made (Noar, Carlyle, & Cole, 2006; Sheeran, Abraham, & Orbell, 1999). There is at least some, even if only minimal, introduction and negotiation of condom use that typically occurs. Interestingly, probably because of the “disease-focused” public health programs utilized in many campaigns, condoms have come to be implicitly and/or explicitly associated with “disease,” and thus the introduction of condoms, particularly in the context of what may be a serious, committed relationship, carries with it the connotation that an individual either believes their partner may have a STI or that they are implying that they have a STI themselves. This fact alone may keep adolescents from broaching the topic of condom use with a partner. Even if disease-association is not at issue, many adolescents are simply uncomfortable discussing sexual issues directly with anyone, let alone a potential sexual partner. Given that many school systems and parents share the same discomfort, it is easy to see how such anxieties might arise. Nevertheless, as conversation about condoms is frequently an important preparatory behavior to actual use (c.g., Bryan, Fisher, & Fisher, 2002), such communication is a skill that may need to be actively practiced, for example, as a part of adolescent sexuality education program.

Another skill that needs to be actively learned is how to effectively apply, use, and dispose of a condom. Data consistently show that even when adolescents attempt to use condoms they often do so ineffectively, with condoms slipping off, breaking, spilling after ejaculation, etc. (Coyle, Franks, Glassman, & Stanoff, 2012; Crosby & Yarber, 2001). Failure experiences with condoms are likely to result in decreases in condom-use self-efficacy, which is a critical precursor to consistent condom use (Bandura, 1977; Bryan, Aiken, & West, 1996). Proper condom use is not a particularly difficult skill to learn, but it is also not intuitively obvious. Condom demonstrations involving penile-models (Bryan, Schmiege, & Broaddus, 2009) or even appropriately shaped produce (e.g., zucchini, Bryan et al., 1996) have been shown to increase condom use self-efficacy, and these increases translate into higher rates of use. Demonstrating the effective use of water-based lubricant along with condom use is also important (Herbenick et al., 2013; Sanders, Graham, Yarber, & Crosby, 2002). These

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findings demonstrate why current school-based sexuality education (accurate demonstrations of condom use and lubricant are rare) or structured after school programs in the absence of comprehensive sexual risk reduction (which are unlikely to provide these skills) are insufficient to produce reduced rates of unprotected penile-vaginal or penile-anal intercourse.

In almost 20 years of work in the domain of adolescent risky sexual behavior, we are reminded by the adolescents with whom we work that one of the most common reasons they give for not using a condom is that “I didn’t have one when I needed it.” No doubt having freely available and easily accessible condoms would make a significant dent in this problem. Here, we agree with Steinberg (2015) again. However, stocking up on condoms and then, for example, leaving them at home in one’s dresser when on the way to hang out with friends or go to a party is a common event. In our interventions we are very careful not to judge adolescents who choose to be sexually active or want to be. Rather, we talk to them about sexuality as a normal part of growing up, and encourage them to take every opportunity to keep themselves safe. That means understanding that life can be surprising, and that sexual opportunities can present themselves when they are perhaps unexpected (e.g., while hanging out on a Friday evening at a friend’s house). Making a habit of simply carrying a condom with you so you’ll have it if you need it, can eliminate the problem of condom availability. Indeed, the Rothman et al. (2015) article in the same issue as the Steinberg paper noted that the formation of healthy habits is critical to the maintenance of health behavior, and this is an excellent example of a fairly easy habit to adopt. But again, this is a problem not easily solved by structured after-school programs or making sure school starts at a later time.

Even if we are wrong, and it is the case that structured after-school programs are sufficient to curb sexual risk behavior during the school-aged years, the risk for negative consequences of sexual risk continues long after high school. The average age of first intercourse in the United States continues to be around age 17 (Finer & Philbin, 2013). Most do not settle with an exclusive partner or begin planning for a family until their mid- to late-20’s (U.S. Census, 2009). Thus the decade of emerging adulthood, both biologically and demographically, is a time characterized by serial monogamy and sexual exploration with a number of partners. Inadequate sexuality education leaves late adolescents and emerging adults ill-equipped to protect themselves during critical years of social, cognitive, financial, and professional development. And once they have entered college, trade schools, or the work force, emerging adults can be difficult to reach with prevention programs.

To summarize, let us reiterate that we are in complete agreement that starting school later (thereby reducing the amount of “free time” after school), engaging adolescents in structured after school programs—particularly those that attempt to target self-regulation, and making free condoms accessible are excellent ideas for policies that will have a meaningful effect on reducing risky sexual behavior. Our point is simply that making normal sexual development and exploration healthier and safer may require more than those policy changes. Policies that encourage or require schools to use empirically supported comprehensive sexuality education programs that include frank discussions of the body, of sexuality, of sexual identity, and of the correct use of condoms and other risk reduction methods are necessary.

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Policies and advertisements that reframe condoms as being associated with caring about one's partner and being a natural part of sexual behavior would help to reduce the stigma that our public health efforts inadvertently created. Facilitating the idea that carrying condoms is an expected part of adolescent development, much like wearing a seatbelt when learning to drive, would make carrying condoms normative and habitual. Adolescents are going to have sex. No educational programs or structured after school activities will prevent this from happening. As noted at the outset, sexual initiation is a completely normal part of the developmental process. Our job, as health psychologists, is to do everything in our power to help assure that adolescents have the tools they need to reduce their risk of STI and unplanned pregnancy, and come through this period of exploration as healthy adults.

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