



“Three Decades of Research:” A New Sex Ed Agenda Wrapped in the Veneer of Science

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***Summary.** The research review, “Three Decades of Research: The Case for Comprehensive Sex Education,” by Goldfarb and Lieberman (2021), purports to show “strong support” for the effectiveness of school-based comprehensive sex education (CSE) at producing many benefits beyond its original goals of preventing teen pregnancy and STDs. Yet 80% of the studies cited as supporting evidence for these CSE benefits are not studies of CSE programs. Moreover, roughly 90% of the few CSE studies actually cited do not meet recommended scientific standards for evidence of program effectiveness. Thus, the sweeping claims made in this study are not supported by scientific evidence. It is important to note that, contrary to its claims, this study does not show evidence that comprehensive sex education should be taught to young children in the early grades, or that it helps prevent child sex abuse, or reduces dating/intimate partner violence or homophobic bullying. Rather than making “the case for CSE,” this review merely gives the appearance of scientific support to a new controversial CSE agenda that includes early sex education, gender ideology, and social justice theory—an agenda that the authors appear to be invested in. Nonetheless, they have presented no scientifically credible confirmatory evidence for that agenda.*

Lack of CSE Impact on Original Goals and the Search for Other Outcomes

For more than 30 years, sex education research has struggled without success to produce compelling evidence that school-based comprehensive sex education (CSE) is an effective strategy for achieving its original purposes: reducing teen pregnancy, STDs, and sexual risk behavior. Yet, despite repeated claims that CSE programs have been “proven effective” at accomplishing such goals,¹ when a credible scientific lens is used to examine studies designed to test the causal impact of CSE programs, the evidence disappears.

For example, a recent published review of the research most often cited by CSE advocates found that only six out of 103 studies of school-based CSE worldwide showed a sustained protective effect (lasting one year post program) on either teen pregnancy, STDs, condom use, or abstinence, for the intended youth population, without also producing other negative effects on teen sexual health. Moreover, nearly three times as many studies (17) found such negative CSE effects (e.g., increases in teen sexual risk behavior).² In addition, two landmark meta-analyses—one of the same database, sponsored by the U.S. Centers for Disease Control and Prevention (CDC), and one of federally funded sex education programs (most were CSE)—found no evidence that school-based CSE programs significantly increased teen condom use or reduced teen pregnancy or STDs, the very outcomes for which CSE programs were originally designed.³

Perhaps being aware of CSE’s poor record at achieving these original goals, Goldfarb and Lieberman, the authors of a 2021 review of this body of research, looked for CSE success with other types of outcomes. The researchers conducted what they called a “review of [the past] three decades of research on school-based programs to find evidence for the effectiveness of comprehensive sex education ... [at producing outcomes] beyond pregnancy and sexually transmitted disease prevention,” including outcomes related to gender norms, gender identity, sexual orientation, and social justice. They detailed their findings in their published report, “Three Decades of Research: The Case for Comprehensive Sex Education.”⁴

Goldfarb and Lieberman claim that their study found “school-based CSE can lower homophobia and homophobic-related bullying, can increase understanding of gender and gender norms, can improve knowledge and skills that support healthy relationships, can build child sex abuse prevention skills, and can reduce dating and intimate partner violence.”⁵ They further assert that they have found “substantial evidence that sexuality education is most effective when begun early.”⁶ The authors give approximately 88 citations of purported evidence to support these claims for CSE effectiveness. Yet there are two major problems with their study that negate these claims and call into question the overall validity of their analysis. However,

before discussing these two problems, it is important to understand what is typically meant by the term “comprehensive sex education.”

What Is Comprehensive Sex Education?

Goldfarb and Lieberman make wide-ranging claims about “comprehensive sex education” (a.k.a., comprehensive sexuality education), without being clear about what it is and what it is not. Of course, this is not a term that these authors coined nor that can be re-defined as they see fit. This term has been in use for over 30 years, and a common meaning has developed over that time, aided by definitional statements from organizations in this field. One of them is the (so-called) *National Sexuality Education Standards* (a set of *recommendations* that have not been endorsed by any federal agency but rather were self-labeled as “national standards” by their authors).⁷ These “Standards” are quoted by the study authors as stipulating that the “*essential, minimum, core content ... for sex education*” should include instruction on “Anatomy and Physiology, Puberty & Adolescent Sexual Development ... [and] Sexual Health” (italics added).⁸ In addition, the United Nations has defined CSE as “a curriculum-based process of teaching and learning about ... sexual and reproductive anatomy and physiology; puberty and menstruation; reproduction, modern contraception, pregnancy and childbirth; and STIs, including HIV and AIDS.”⁹

Combining these two definitions means a CSE intervention will have at least two features. It will: a) be an articulated curriculum that can be taught to students, and b) contain content on sexual and reproductive health issues, including instruction on contraception and STI/HIV/AIDS prevention. These characteristics are consistent with the common usage of the term “comprehensive sex education” over the 30-year time period covered in the present study. Programs manifesting these characteristics are typically referred to as CSE while those that do not, are not. However, this study appears to consider many other types of interventions that address issues of student well-being as fitting into the same category as CSE programs. This is not scientifically appropriate; it is inaccurate and misleading to equate child sex abuse prevention or anti-bullying programs with CSE or to ascribe any positive impacts from youth prevention programs to school-based CSE when the programs do not exhibit the core elements of school-based CSE (i.e., instruction on human sexuality, contraception, and STI/HIV/AIDS prevention in school settings).

Two Major Methodological Problems

We find two major methodological problems with this study that negate its claims about CSE’s benefits.

1. Most of the Evidence Attributed to CSE is Not from CSE Studies

The first methodological problem arises when the consensus definition of CSE described above is applied to this review. Of the roughly 88 documents cited by the authors as the sources of their “evidence” for CSE, 72 of them, or four out of five (i.e., 80%), *are not studies of CSE programs at all*. So, in a study subtitled “The Case for Comprehensive Sex Education,” only 16 of 88 evidentiary citations (fewer than one in five) are studies of CSE. Throughout the study report, strong assertions are made about the impact of CSE on many positive outcomes, but the “evidence” cited as proof of that impact is primarily *not* research about comprehensive sex education, or any type of sex education. (See Endnote 10 for more details on the 72 non-CSE sources.) The fact that this study attributes many positive findings from non-CSE sources to the impact of CSE programs is a serious misrepresentation of the research on CSE and impugns the paper’s credibility.

2. Most of the Evidence Cited Does Not Meet Scientific Standards for Evidence of Effectiveness

The second fundamental problem with this study is that of those same 88 sources cited as the evidence upon which its claims of CSE effectiveness are based, the large majority (roughly 9 out of 10) do not

meet recommended scientific standards for credible evidence of program effectiveness. That is, they do not produce reliable evidence of causal impact by a program on the purported outcomes.

The scientific field of program effectiveness has recommended standards for evidence of effectiveness—scientific criteria that should be met to legitimate the assertion that a program is effective at producing claimed outcomes.¹¹ First, the *study* of the program must be of adequate scientific quality: it must be designed to test cause and effect (i.e., an experimental or quasi-experimental study), have an adequate sample size, and measure long-term impacts (whether program effects endure well beyond the program’s end). Second, in order to provide evidence of effectiveness, the program should produce *outcomes* that have adequate effectual power: positive effects should occur for the target population (not just a subgroup), they should endure well beyond the end of the program (for school-based programs, effects lasting from one school year to the next, or 12 months post program), and there should not be any countervailing negative program effects. Of the 88 sources cited as evidence by Goldfarb and Lieberman, only nine, or roughly one in 10,¹² meet these scientific standards for evidence of effectiveness.¹³

The authors justify this lack of scientifically adequate studies by a claim that the “substantial number” of studies with inadequate research designs or inadequate sample sizes or qualitative (i.e., subjective) approaches “when taken together lead to strong evidence of outcomes” (see p. 4). This is a startling misrepresentation of scientific reality. The more error that is infused into a pool of evidence—by *adding together* studies of poor quality—the *more, not less* error will be found in the resulting evidence.

Combining these two fundamental problems—the inclusion of few actual CSE studies and the reliance on evidence of inadequate scientific quality—reveals the miniscule, shaky foundation upon which this paper and its sweeping claims stand: of the 16 citations that are studies of actual CSE programs, only three met scientific standards for *studies* of program effectiveness,¹⁴ and of these three, only one produced *outcomes* that met recommended standards for evidence of program effectiveness. This means that in a paper subtitled “The Case for Comprehensive Sex Education,” only one study provided reliable, credible evidence *about* CSE effectiveness (appropriate study design and sample size, with measurement of sustained effects) and produced outcomes that met recommended standards *for* evidence of effectiveness (positive effects for the target population, sustained at least 12 months, without other negative effects). Specifically, a program called *Sexuality Education Initiative* reported improvements in self-efficacy, improved attitudes about relationship rights and communicating with partners, and an increase in the number of students using sexual health services and carrying a condom, all at 12 months after the program. However, it did not reduce teen sexual activity or number of sex partners, or increase condom or contraceptive use, major goals of the program and of CSE generally.¹⁵ (See Endnotes 16 and 17 for details on the other two CSE studies.)

It should be noted that three of the 16 CSE studies cited in this paper are *cross-sectional* or *correlational* studies that produced conflicting findings on the association between LGBTQ-sensitive sex education and various outcomes (see Section 4, below).^{18,19,20} It is well known that correlational analyses cannot test causal impact nor thereby provide reliable evidence about program effectiveness. As authors of two of the studies put it, “The data we collected were ... not designed to demonstrate causal relationships between independent and dependent variables,”²¹ and, “...we should interpret these correlational findings with some caution—causal mechanisms cannot be inferred...”²² The findings of these studies may raise questions meriting further experimental research, but they cannot be considered conclusive evidence of CSE impact.

Thus, only one CSE study in this review produced reliable evidence of positive CSE impact, but it improved only minor outcomes and failed to achieve the major goal—to reduce teen sexual risk behavior. Such results clearly do not make “the case for comprehensive sex education.”

Even allowing for a broader category of interventions that includes storybook reading programs for 3rd graders, musical performances, personal testimonials, etc., this would add to the evidence base only eight studies meeting standards for evidence of effectiveness: five studies finding evidence of effectiveness for

child sex abuse prevention programs and three for dating violence prevention programs. It would still leave eight of the ten outcomes claimed as benefits of this so-called “CSE” without credible supporting evidence.

Below we describe the actual evidence, or lack thereof, for some of the major claims in this paper.

Unsupported CSE Claims and Misrepresentations of CSE Evidence

1. No Evidence that Sex Education Should Begin in Early Elementary School

The study claims, “This review offers substantial evidence that sexuality education is most effective when begun early” (p.10),²³ by which they mean, “beginning in the earliest grades” (see “University News” article at: <https://www.montclair.edu/newscenter/2020/12/14/experts-sex-education-should-begin-in-kindergarten/>). However, of the nine studies cited as evidence for this claim,²⁴ only one was a study of sex education in the early grades (kindergarten through 3rd grade).²⁵ But this study did not meet recommended standards of scientific quality for studies of effectiveness—it was a non-experimental design and did not measure effects beyond the program’s end. Two of the other nine studies were of child sex abuse prevention programs in the early grades that did meet scientific standards of evidence, and they did find positive program effects beyond the programs’ end.²⁶ However, child sex abuse prevention is not sexuality education, and evidence that these programs have been beneficial for young children is not evidence that CSE *or any sex education* programs will be. In other words, the authors produced no credible evidence supporting their claim that “substantial evidence” shows “sex education is most effective when begun early,” meaning “in the early grades.”

2. No Evidence that CSE Can Help Prevent Child Sex Abuse

The authors claim their review found that “school-based CSE...can build child sex abuse prevention skills.” However, none of the 12 studies cited as evidence for this claim were studies of CSE.²⁷ All 12 were studies of child sex abuse prevention programs for young children, not sex education. At least five of these met scientific standards for studies of effectiveness (three of them were systematic reviews of multiple studies) and these found some positive effects on child knowledge or skills.²⁸ However, child sex abuse prevention programs do not contain the sex education content that defines CSE, and attributing their positive results to CSE program impact is a misrepresentation of the research on CSE and on child sex abuse. Preventing child sex abuse is a worthy goal for classroom-based interventions, but giving CSE credit for building child sex abuse prevention skills, when there is no evidence for it, is factually erroneous and misleading.

3. Inadequate Evidence that CSE Reduces Dating/Intimate Partner Violence

The authors claim their review found that “school-based CSE...can reduce dating and intimate partner violence.” Yet out of the 32 studies²⁹ cited to support this claim, only four were studies of CSE or any type of sexuality education program.³⁰ Of the four CSE studies, only two met scientific standards for *studies* of effectiveness, but these programs’ *outcomes* did not show evidence of effectiveness. One was a study of *It’s Your Game* (IYG) by the program’s authors, which found it reduced dating violence after one year. However, multiple other studies have found IYG has also *increased* teen sexual risk behavior.³¹ These negative effects rule out IYG’s designation as an effective violence prevention program. The other CSE study found a reduction in violence for males but not females, whereas an effective program would have impact across the full target population, not just a subgroup of it.³² (A third study found short-term impact but did not measure effects beyond six months, as recommended for studies testing effectiveness.³³) These results do not provide scientific evidence that school-based CSE is an effective strategy for reducing dating violence.

Six of the non-CSE studies were dating violence prevention programs that met scientific standards for studies of effectiveness,³⁴ and two found reductions in dating violence for the target population after one year—evidence of program effectiveness.³⁵ However, to attribute the positive impact of these dating violence programs, whose goals and content are very different from that of CSE, to CSE is erroneous and misleading.

4. Inadequate Evidence that CSE Reduces Homophobic Bullying

Three of the five studies cited as evidence for this claim were CSE studies, but none met scientific standards for *studies* of effectiveness, that is, all three were correlational designs, rather than an experimental design that could test CSE's causal impact. Moreover, the findings across the three studies were inconsistent. A study by Baams, et al., conducted in high schools in the Netherlands, found that neither teaching about "STI prevention" or "sexual orientation and gender" (common topics in current CSE programs) was associated with a reduction in LGBTQ name-calling in schools. Goldfarb and Lieberman actually misrepresent this study's "lack of findings for the topic of sexual orientation and gender" (as stated in Baams, et al., 2017, pp. 937, 938; for males, $p < .539$, for females, $p < .332$),³⁶ and assert that its inclusion in curriculum reduced homophobic name-calling (see Goldfarb and Lieberman, p. 4), a claim that contradicts the data and conclusions reported in the study. Unfortunately, Baams, et al., actually misrepresent their own reported findings in the study Abstract. To be clear, the only factor they found to be associated with homophobic name-calling was the *amount* of sexuality education received (without respect to the specific content of the program), *but this was a subgroup effect, that is, observed by females only*.

Blake, et al., 2001, did not find that LGBTQ youth in schools with LGBTQ-sensitive sex ed curriculum (identified by teachers' subjective ratings) were less likely to be suicidal or feel unsafe at school than those in schools without it.³⁷ And Proulx, et al., 2019, reported that LGBTQ sex ed content (again, not objectively measured but reported by school personnel) was associated with lower levels of bullying, depression, and suicidality.³⁸ The non-experimental study design and conflicting pattern of results across these three CSE studies does not provide evidence that substantiates the claim that CSE reduces homophobic bullying.

5. A Pervasive Lack of Scientific Evidence for Any Claimed CSE Benefits

A similar lack of scientific evidence can be seen for all of the positive outcomes that this paper claims are a product of school-based CSE. To cite another example, for the claim that CSE produces "expanded understanding of gender/gender norms," none of the nine supporting citations were studies of CSE.³⁹

A New Sex Education Agenda

It is dismaying to find these misrepresentations of research evidence published in a scholarly paper in a mainline academic journal. Having examined it thoroughly, we can only conclude that the Goldfarb and Lieberman review was not intended to provide scientific evidence about a set of potential CSE benefits. Instead, it seems the real purpose was to provide the appearance or veneer of scientific support to a new sex education agenda, an agenda the study authors articulate and endorse.

This agenda comes into focus around the fallacious claim that research shows sex education should be delivered to children as young as kindergarten age. The authors acknowledge the lack of research data on this topic: "there are only limited examples of sexuality-related content in the K-5 curriculum" (p.10). Then they claim that this (nonexistent) data "strongly indicate that such topics are developmentally appropriate and produce positive outcomes, ... that not only are younger children able to discuss sexuality-related issues but that the early grades may, in fact, be the best time to introduce topics related to sexual orientation, gender identity and expression, gender equality, and social justice related to the LGBTQ community before hetero- and cis-normative values and assumptions become more deeply ingrained and less mutable" (p.10).

The authors provide no research studies that show scientific evidence for these claims, despite their efforts to give the appearance that they have done so. A couple of classrooms in which LGBTQ+ storybooks are read to 4-year-old preschoolers or 3rd graders, with positive reports by their teachers, do not constitute scientific evidence. What the authors *have* done, however, is to articulate an ideological rationale for this new agenda, as follows: "Children learn gender role attitudes at an early age from observing the people in their families ... it is important to introduce concepts that would disrupt stereotypical and harmful biases related to gender

and sexual orientation, during this formative time” (pp. 10 & 11). Revealing Goldfarb and Lieberman’s lack of evidence for this agenda is timely because today, many proponents of this new approach want it to begin with children in kindergarten or younger, and are looking to studies like this one for evidence that supports such early inculcation of a subjective ideology. *We want to be clear. The Goldfarb and Lieberman paper does not contain any scientifically credible evidence for teaching sex education to young children, or for teaching gender ideology or social justice theory in school classrooms.*

Conflicting Interests

Finally, one thing that has not been made clear is the extent to which Goldfarb and Lieberman may have a vested interest in their own findings. Their final conclusion is that these “findings strengthen justification for the widespread adoption of the National Sex Education Standards.” Not disclosed is that both Goldfarb and Lieberman are “contributors and reviewers” on these same National Sex Education Standards.⁴⁰ Further, they conclude that their study “provides strong support for comprehensive sex education.” Not disclosed is that Goldfarb is the author of one CSE curriculum, *Our Whole Lives*,⁴¹ and co-author of another, *The 3Rs*.⁴² Thus, there is potential financial benefit in finding “strong support” for CSE programs. Perhaps more important, *The 3Rs* curriculum appears to reflect the sex education agenda that Goldfarb and Lieberman endorse in their research report. Included in the content of *The 3Rs*: in kindergarten a graphic lesson on identifying the genitals that “most boys have” or “most girls have;” for 6-year-olds, a lesson on gender identity—“The Princess Boy;” for 7-year-olds a graphic lesson identifying male and female genitals and their functions; a lesson for 10-year-olds on homosexuality; lessons for 11-year-olds on gender roles and identity, on “gender-neutral” language (e.g., to say “someone with a vulva” instead of “girl” or “female”), a lesson that includes gay and transgender romantic relationships in which sexual activity is discussed, as well as a lesson directing 11-year-olds to a website called “sexetc.org” with headline articles on the homepage about masturbation and transgender men getting pregnant; for 12-year-olds, a lesson that describes bathing together and mutual masturbation with a boyfriend/girlfriend as “important because they can help ... build connection between people without any risk of STDs (or pregnancy),” four lessons about transgenderism and homosexuality, and a lesson on how to decide “whether [you] want to be in a sexual relationship.”⁴³ Thus, it seems legitimate to ask whether Goldfarb and Lieberman may have overlooked the weakness of their evidence in order to support an agenda in which they appear to have multiple vested interests.

Conclusion

The Goldfarb and Lieberman research review does not provide “strong support” that CSE is an effective strategy for producing the benefits it claims. It provides virtually no support at all. Less than one in five of the studies cited as evidence are actually studies of CSE, and only one of those provides scientifically credible evidence for CSE’s causal impact on any positive outcomes. Even there, the evidence for CSE is weak: there was no reduction in teen sexual risk behavior. A handful of the few cited studies of CSE show short-term impact or effects on a demographic subgroup of the target population. But these scattered minor indicators of program potential are not evidence of CSE effectiveness.

The title of Goldfarb and Lieberman’s paper declares that three decades of research have made “the case” for CSE. Yet, when the lack of evidence in their review is combined with the poor results of school-based CSE at achieving its original purposes (reducing teen pregnancy and STDs),⁴⁴ *the case for CSE falls apart*. If three decades of research have made any “case,” it is that it’s time to re-think CSE as the “go-to” strategy for sex education in school classrooms worldwide. A strategy with such a consistently poor track record for 30 years does not merit the expenditure of public funds nor the trust of parents and school districts who look to it to protect young people from harm. Rather than being expanded to encompass new and controversial purposes, CSE should be retired and the search for more effective strategies should be intensified. Recent evidence showing effectiveness by several sexual risk avoidance programs should be a part of that search.⁴⁵

The Institute for Research and Evaluation (IRE) is a nonprofit research agency that has been evaluating sex education in schools for more than 30 years, involving more than 100 evaluation studies and 900,000 teens, including studies in 30 U.S. states (many federally funded) and three international countries. IRE research papers have been published in peer-reviewed journals, including, *The American Journal of Preventive Medicine*, *The American Journal of Health Behavior*, and *Issues in Law and Medicine*. Stan E. Weed, Ph.D., Founder and Director, has been a national consultant for federal Title XX and CBAE projects; a charter member of the National Campaign to Prevent Teen and Unplanned Pregnancy (now called Power to Decide); has been invited to provide expert testimony on sex education to state legislative bodies, the U.S. Senate, the U.S. House of Representatives, and the White House (2009); and has been a consultant to the U.S. Department of Health & Human Services (2018). Irene H. Ericksen, M.S., Senior Research Associate, has spent 15 years in the field of sex education research; was one of six national consultants to a landmark CDC sponsored meta-analysis on sex education effectiveness (2012); has been an invited presenter at the National Academies of Sciences (2019), United Nations Civil Society Conference (2019), and U.S. Department of Health & Human Services (2020); and is an Honorary Fellow of the American College of Pediatricians (2020).

Available at: https://institute-research.com/pdf/Rebuttal_to_Goldfarb_and_Lieberman_2021_%28IRE%209-26-22%29.pdf

Endnotes

1. See, for example: Advocates for Youth. (2009). Comprehensive Sex Education: Research and Results. *The Facts, September 2009*. Retrieved from <https://www.advocatesforyouth.org/wp-content/uploads/storage//advfy/documents/fscse.pdf>
2. Ericksen IH and Weed SE. (2019). Re-Examining the Evidence for School-based Comprehensive Sex Education: A Global Research Review. *Issues in Law and Medicine*, 34(2):161-182. See: <https://www.institute-research.com/published-cse.php>
3. Weed SE. (2012). Sex Education Programs for Schools Still in Question: A Commentary on Meta-Analysis. *Am J Prev Med*, 42(3):313-315, doi: 10.1016/j.amepre.2011.11.004; Juras R, Tanner-Smith E, Kelsey M, Lipsey M, Layzer J. (2019). Adolescent Pregnancy Prevention: Meta-Analysis of Federally Funded Program Evaluations, *American Journal of Public Health*, 109(4), e1-e8.
4. Goldfarb E and Lieberman L. (2021). Three Decades of Research: The Case for Comprehensive Sex Education. *J Adolesc Health*, 68(1):13-27. doi: 10.1016/j.jadohealth.2020.07.036
5. Ibid.
6. Ibid.
7. Future of Sex Education Initiative. National sex education standards: Core content and skills, K-12. 2nd ed. Washington, DC: American School Health Association; 2020.
8. Goldfarb E and Lieberman L, 2021.
9. United Nations Educational, Scientific and Cultural Organization. (2018). International Technical Guidance on Sexuality Education: An Evidence-Informed Approach, Revised Edition; 2018 (p.16, Section 2.1). Available at: http://www.unaids.org/sites/default/files/media_asset/ITGSE_en.pdf
10. Although the paper states there are 80 studies cited as supporting evidence, we counted 88 sources that were actually cited to support the claims made in the text. The 72 citations that are not CSE studies include reports on literature-based reading programs, films, musical performances, and personal narratives; subjective teacher observations and opinions; and studies of healthy relationship/communication programs, body image/acceptance programs, child sex abuse prevention programs, and dating violence prevention programs. These interventions do not include content on sexuality or reproductive health and many are not even an articulated curriculum, so they should not be called “sex education.” At least five of the citations – presented as being evidence from the research literature – are actually ideological opinion pieces.
11. See, for example: Flay BR, Biglan A, Boruch RF, Castro FG, Gottfredson D. (2005). Standards of Evidence: Criteria for Efficacy, Effectiveness and Dissemination. *Prev Sci*, 6(3):151–175; Gottfredson DC, Cook TD, Gardner FEM, Gorman-Smith D, Howe GW, Sandler IN, Zafft KM. (2015). Standards of Evidence for Efficacy, Effectiveness, and Scale-up Research in Prevention Science: Next Generation. *Prev Sci*, 16(7):893-926. doi: 10.1007/s11121-015-0555-x; Blueprints for Healthy Youth Development: Blueprints Standards. Available at: <https://www.blueprintsprograms.org/blueprints-standards/>
12. See References 42, 47, 48, 75, 80, 81, 83, 84, and 87 in Goldfarb and Lieberman (above).
13. Only one-half (44) of the 88 studies employed experimental or quasi-experimental design (able to measure cause and effect) and most of these only measured immediate or short-term effects. Only 16 measured whether effects were sustained for more than 6 months and only 9 of those (see Note 10 above) found a positive impact after 12 months, for the targeted youth population, without other negative effects, thus providing reliable evidence of program effectiveness (see Note 9 above). We should mention that for some of the systematic reviews, the follow-up times were unclear and where this was the case, we gave the benefit of the doubt and assumed they included studies with long-term follow-up measures.
14. Peskin MF, Markham CM, Shegog R, et al. Effects of the It’s Your Game...Keep It real program on dating violence in ethnic-minority middle school youths: A group randomized trial. *Am J Public Health* 2014;104:1471e7; Rohrbach LA, Berglas NF, Jerman P, et al. (2015). A rights-based sexuality education curriculum for adolescents: 1-year outcomes from a cluster randomized trial. *J Adolesc Health*;57:399e406; Wolfe DA, Crooks C, Jaffe P, et al. (2009). A school-based program to prevent adolescent dating violence: A cluster randomized trial. *Arch Pediatr Adolesc Med*;163:692e9

15. Rohrbach LA, Berglas NF, Jerman P, et al. (2015). A rights-based sexuality education curriculum for adolescents: 1-year outcomes from a cluster randomized trial. *J Adolesc Health*;57:399e406.
16. One of the two remaining studies, an evaluation of *It's Your Game* (IYG) by the program's authors (Peskin MF, Markham CM, Shegog R, et al. Effects of the It's Your Game...Keep It real program on dating violence in ethnic-minority middle school youths: A group randomized trial. *Am J Public Health* 2014;104:1471e7) found that it did reduce dating violence. But two other studies of IYG have found that it produced multiple increases in sexual risk behavior for the teenage participants. These harmful impacts negate IYG's designation as an effective prevention program for any purposes. (See Markham CM, Peskin MF, Shegog R, Baumler ER, Addy RC, Thiel M, Escobar-Chaves SL, Robin L, & Tortolero SR. (2014). Behavioral and psychosocial effects of two middle school sexual health education programs at tenth-grade follow-up. *Journal of Adolescent Health*, 54(2), 151–159; Potter S, Coyle K, Glassman J, Kershner S, & Prince M (2016). It's Your Game ... Keep It Real in South Carolina: A Group Randomized Trial Evaluating the Replication of an Evidence-Based Adolescent Pregnancy and Sexually Transmitted Infection Prevention Program. *American Journal of Public Health*, 106(S1), S60–S69).
17. The third of the three strong CSE studies (Wolfe DA, Crooks C, Jaffe P, et al. (2009). A school-based program to prevent adolescent dating violence: A cluster randomized trial. *Arch Pediatr Adolesc Med*;163:692e9) found significantly differing results for males and females (i.e., subgroup effects). The program reduced physical dating violence for boys but not girls (OR=2.63, vs. 1.03, respectively), increased condom use for boys (OR=1.70), and appeared to lower condom use for girls (OR=.76, although this effect was not statistically significant). These inconsistent results across the target population do not provide evidence of program effectiveness.
18. Baams L, Dubas J, van Aken M. (2017). Comprehensive sexuality education as a longitudinal predictor of LGBTQ name-calling and perceived willingness to intervene in school. *J Youth Adolesc*, 46:931e42.
19. Blake SM, Ledsky R, Lehman T, et al. (2001). Preventing sexual risk behaviors among gay, lesbian, and bisexual adolescents: The benefits of gay sensitive HIV instruction in schools. *Am J Public Health*;91:940e6 (p.944).
20. Proulx CN, Coulter RW, Egan JE, et al. (2019). Associations of lesbian, gay, bisexual, transgender, and questioning-inclusive sex education with mental health outcomes and school-based victimization in U.S. high school students. *J Adolesc Health*;64:608e14.
21. Blake, et al., 2001.
22. Baams, et al., 2017.
23. Goldfarb E and Lieberman L, 2021.
24. See References 76,80,82,83,92,93,108-110 in Goldfarb and Lieberman (above).
25. Gaskins SW, Beard SR, Wang MQ. (2002). An HIV/AIDS education program for children in grades K-5. *J HIV/AIDS Prev Educ Adolesc Child*;5:31e43.
26. See References 80 and 83 in Goldfarb and Lieberman.
27. See References 80 - 91 in Goldfarb and Lieberman.
28. See References 80, 81, 83, 84, and 87 in Goldfarb and Lieberman.
29. See References 44 – 75 in Goldfarb and Lieberman.
30. See References 53, 54, 71, and 72 in Goldfarb and Lieberman.
31. See Endnote 16, above.
32. Wolfe DA, Crooks C, Jaffe P, et al. (2009). A school-based program to prevent adolescent dating violence: A cluster randomized trial. *Arch Pediatr Adolesc Med*;163:692e9.
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