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Nelan Tagra
Old Dominion University

Maia Jimenez
Old Dominion University

Christina Benedicto
Old Dominion University

Christopher Tucker
Old Dominion University

Gerrard Norman
Old Dominion University

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Effectiveness of Interactive, Collaborative vs. Traditional, Lecture-Based Educational Interventions for Adolescents in Low-Income Areas to Increase Knowledge Regarding Sexually Transmitted Infections

Authors

Nelan Tagra, Maia Jimenez, Christina Benedicto, Christopher Tucker, Gerrard Norman, Charmein Harris, and Stephanie Green

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Nelan Tagra, Maia Jimenez, Christina Benedicto, Christopher Tucker, Gerrard Norman, Charmein Harris, Stephanie Green
 Old Dominion University, College of Health Sciences, School of Nursing

Abstract

Aim: To assess whether teens who live in low-income areas who participate in interactive, collaborative sexually transmitted infections (STI) prevention education will have a significant increase in learning outcomes in comparison to students who participate in a traditional, lecture-based approach.

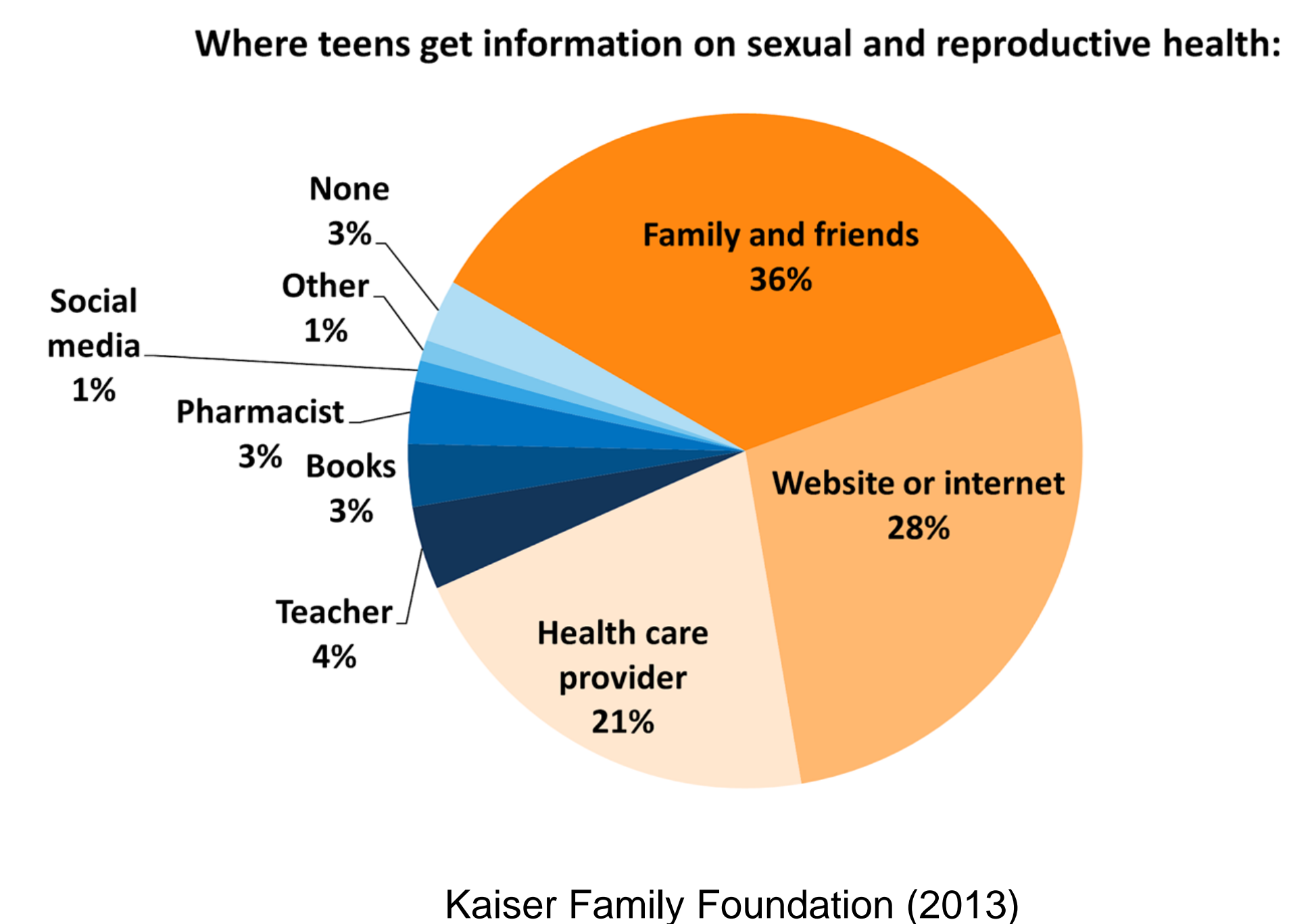
Background: More STIs are reported each year. Among those infected, young people are of the highest incidence at 50% of new STIs in the US annually. High STI incidence is an unintended health outcome as a result of engaging in risky sexual behaviors. This highlights the need to improve STI education among adolescents.

Methods: A quasi-experimental method will be used to evaluate the effect of student participation in the two educational teaching interventions about STI knowledge and prevention. Students in both experimental groups will complete *A Survey of Current Knowledge on Sexually Transmitted Diseases and Sexual Behaviour in Adolescents* (Drago, 2016) questionnaire before and after each teaching intervention is presented.

Analysis: Paired sample t-tests will be used to evaluate individual difference on STI knowledge pre- and post-intervention. A total of 60 adolescents (ages 13-19) from low-income areas in Hampton Roads will be recruited for this study, with a goal of 30 in each experimental group.

Expected Findings: It is expected that the group who participates in the interactive, collaborative educational intervention will have a more significant difference in scores between the pretest and posttest.

Teens Primarily Get Information on Sexual and Reproductive Health from Family and Friends, Websites, or Health Care Providers



Background & Significance

- Interactive, collaborative education has been proven to be a more effective method of teaching
- Traditional, lecture-based education has been proven one of the most ineffective methods of teaching
- Low-income adolescents are at high risk of acquiring STIs
 - Schools where over 75% or more of the student population is impoverished show a significant, statistical deficit in sexual health knowledge as compared to their peers in schools with no poverty
 - Especially vulnerable to media advertisements because they lack experience and knowledge
- Increased knowledge about STIs will decrease incidence and prevalence of STIs in the community
 - Research showed that men and women who learned about sexual matters were less likely to report unsafe sex or to have been diagnosed with a sexually transmitted infection
 - Students who received sex education showed more healthy behaviors and reported more caution in sexual behavior

Research Question: Will teens in low-income areas who participate in interactive, collaborative STI prevention education have a significant increase in learning outcomes when compared to those that participate in a traditional, lecture-based approach?

Hypothesis: Teens in low-income areas who participate in interactive, collaborative STI prevention education will have an increase in learning outcomes when compared to those that participate in a traditional, lecture-based approach.

Methods

- A Quasi-Experimental Design
- Sample size for the experimental groups is a goal of 30 each (60 total)
- Adolescents from low-income areas in Hampton Roads
- Demographic data collected:
 - Age, Gender, Race, number of people in household, perceived socioeconomic class, and number of sexual partners.
- Sexual knowledge assessed using *A Survey of Current Knowledge on Sexually Transmitted Diseases and Sexual Behavior in Adolescents* (Drago, 2016)
- STI education sessions approximately 30 mins long
- 20 minutes for pretest, 15 minutes for posttest to complete section 2 of the questionnaire
- Students will not collaborate during the tests

Data Analysis

- Demographic data analyzed using descriptive statistics with measures of central tendencies to describe sample characteristics
- Knowledge portion of the test will be graded and given a percentage of correct answers
- Survey scores will be analyzed using a paired sample t-test to assess the difference between pretest and posttest scores for each group
- Two-way t-test will be utilized to analyze the statistical difference between the learning outcomes of collaborative and lecture-based educations

Limitations

Limitations of this study include the limited sample size, the adolescents' self assessment upon completing the questionnaire, and the adolescents' knowledge that is being examined.

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Youth bear disproportionate share of STIs

Americans ages 15-24 make up just **27%** of the sexually active population

But account for **50%** of the **20M** new STIs in the U.S. each year



CDC (2013)

15-24 year olds account for half of all new STD Infections



Interprofessional Roles and Responsibilities

- Consider the cognitive development of adolescents and their current ability to process information presented to them
- Encouraging application of prior knowledge with newly-presented knowledge is essential for making new information meaningful and memorable
- Ensure presented information is simple and brief. Adolescents' WM, the workspace of the mind that temporarily holds, manipulates, and accesses information is of limited capacity and may only hold about seven "items" at one time
- With current adolescents being consumed with electronics, including movies, games, the Internet, hands-on experience within lectures can enhance learning and attention
- Including both biological and psychological aspects of sex will create a holistic view on sexuality
- Promote self-esteem among young adolescents, especially girls. Research shows that sexually active teenage females show higher depression levels than those not sexually active
- Include school counselors in the lectures. Counselors will know how to collaborate with teenagers, and students can begin a trustworthy relationship with them in case they may need more sex education

Young people account for a substantial proportion of new STIs

