Promoting Positive Sexual Health Behaviors Among Rural College Students: Results of a Targeted STI Prevention Program

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Introduction

Sexually transmitted infections (STI's) remain a significant public health concern.

Approximately one in five people in the U.S. have an STI on any given day, totaling twenty-six million new cases annually (cdc.org)

STIs take a particularly heavy toll on young people; young adults, aged 15-24, who represent only 25% of the sexually active population in the U.S., account for almost half of the newly diagnosed sexually transmitted infections (cdc.org)

STIs cause many harmful, often irreversible, and costly clinical outcomes:

- Women: PID, infertility, ectopic pregnancies infertility or ectopic pregnancies
- Pregnant women: neonatal opthalmia (blindness)
- Men: sterility, prostatitis, and epididymitis. (cdc.org).

Clinical Question

Among 18- to 25-year-old students at a rural Tennessee university, can a targeted web-based STI education intervention improve the knowledge and attitudes of sexually transmitted infections, and positively affect their sexual practices in a manner that supports the prevention of these infections?

Project Design

Interventional pilot study

A series of five daily tailored STI prevention intervention videos

Measurement of STI knowledge:

❖ STD Knowledge Questionnaire (STD-KQ) (Jaworski & Carey, 2007)

Measurement of Safe Sex Attitudes and Self-efficacy:

❖ Mathtech Sexuality Questionnaire (MSQS) Attitude and Value Inventory (Kirby, n.d.).

Pre and post-test administration of the STD-KQ and statistical analysis was used to assess the impact of the intervention on the participant's body of knowledge of STIs and their prevention.

A bivariate correlational analysis of the responses to the MSQS subsets was used to determine if safer sex self-efficacy is associated with demographic and attitudinal variables.

Pre-experimental design, does not require randomization or a control group. Is practical and capable of measuring change in health-related outcomes after an intervention when it is not feasible to use a true experiment (Moran et al., 2020)

Methodology

Now that I have your attention, we need your help!

Please consider volunteering for a research project to determine your knowledge and attitudes about Sexually Transmitted Infections (STIs)

The project will require you to view 5 10-minute videos and then take a brief post-test. Your participation is completely *confidential* and *voluntary*.

You will receive a $10 Amazon gift card and/or 2 community service hours for your participation

If interested, scan the QR code to sign up today!! Call Julie Loyke, APRN (Student Health Center) with any questions: (423)869-6249.

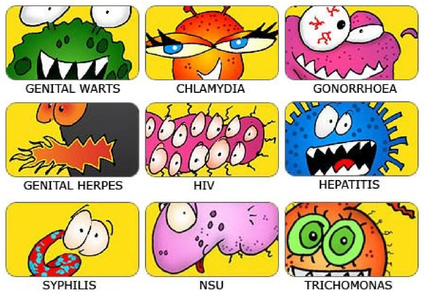
Convenience sampling began in early January 2023

Accomplished through flyers distributed throughout the university directing interested students to register and complete the demographic information survey on the Qualtrics platform. This included the variables of age, gender, level of education, ethnicity, race, and home zip code. No personal identifying information was collected, and a numbering system was used to match pre- and post-intervention responses with the demographic information.

Signed consent was attained, including background information about the study, duration, eligibility, procedures, risks/benefits, compensation, and confidentiality of the study.

An Amazon gift card and two community service hours was offered to everyone completing the post-intervention questionnaire as compensation for their time and effort.

Sampling goal= 50 students. Actual sample size= 28 students.



A series of five STI educational interventional videos were distributed to the eligible participant's LMU email inbox.

The videos were presented on the YouTube platform and included lecture material and embedded videos from vetted sources such as TED-Ed, ClassHook, and others.

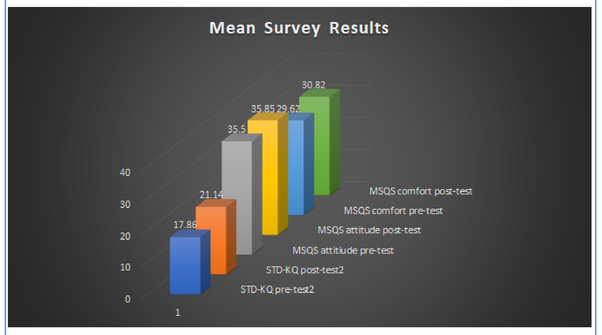
The daily videos are based on the constructs of knowledge of STIs, knowledge of sexual practices, knowledge of prevention and attitudes towards safer sex practices, with one topic discussed on each day.

Data Analysis

Qualtrics software programming was used to administer the survey, to collect survey responses, and SPSS was utilized to perform the statistical analysis of the data.

Descriptive statistics:

The mean values of survey results are represented below. The convenience sampling reflects a normal distribution which corrects for bias among this population.



Statistical Analysis:

To evaluate the effect of the STI intervention on knowledge about STIs, a statistical analysis using paired *t*-tests was performed to determine the difference between the pre- and post-evaluation knowledge scores of the STD-KQ.

The analysis produced a significant *t*value ($t(28)$= -3.971, $p<0.001$; d=4.379 with 95% confidence level between -1.165 and -0.324.

To evaluate the effect of the STI intervention on sexual attitudes and comfort level, a statistical analysis using paired *t*-tests was performed to determine the difference between the pre- and post-evaluation scores of the MSQS comfort and attitude subsets.

The analysis failed to produce a significant *t*value ($t(28)$=-.690, p=.496 for sexual attitudes or a significant *t*value ($t(28)$= -2.00, p=.056.for comfort with sexual action/self-efficacy.

In addition, a multiple regression analysis was conducted to examine the predictors of scoring on the STD-KQ pre-test. Two variables were simultaneously entered into the model; age and rurality. Together, these variables accounted for 58.5% of the variance in the STD-KQ pre-test. Although both variables were statistically significant as predictors of scores on the SD-KQ, age (B=6.571, p=.002) was more positively associated than rurality ((B=.744, p=548).

Conclusions

At the conclusion of this project, I demonstrated that web-based video STI prevention interventions is a valuable tool in cultivating knowledge and motivating sexual behavior change among college students.

Data gained from this study will be used to promote follow up studies that reinforce self-regulation skills and safer sex practices in this age group.

The results of this pilot project will be shared with the important stakeholders, including LMU administration and will be disseminated in the professional literature as appropriate.

References

Center for Disease Control (2020). *Sexually Transmitted Disease Surveillance, 2020*. https://www.cdc.gov/std/statistics/2020/default.htm

Jaworski, B. C., & Carey, M. P. (2007). Development and psychometric evaluation of a self-administered questionnaire to measure knowledge of sexually transmitted diseases. *AIDS Behavior, 11*(4), 557-574. https://doi.org/10.1007/s10461-006-9168-5

Kirby, D. (1998). Mathtech questionnaires: Sexuality questionnaires for adolescents. In Davis, C, Yarber W., Bauserman R., Scheer, G., & Davis, S (Eds.). *Handbook of sexuality related measures* (p. 35-46). Thousand Oaks, CA: Sage.

Moran, K., Burson, R., & Conrad, D. (2021). *The Doctor of Nursing Practice Project: A Framework for Success (3rd ed.).* Burlington, MA: Jones and Bartlett Learning.

YouTube video links:

https://youtu.be/KIBGdLTRFyQ
https://youtu.be/MPuCQ58ee5Q
https://youtu.be/rzpAH7hZtwc
https://youtu.be/_JtlG6p1tOQ
https://youtu.be/YcwWu-C-2cc

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