DiCEY Tool Use to Improve Condom Use Self- Efficacy

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Introduction

- Sexually transmitted infection (STI) transmission and contraction is a directed result of risky sexual behavior (RSB), or lack of condom use.
- Young adults and minorities experience disproportionate rates of STI.
  - Minorities affected in Texas include racial/ethnic minorities and sexual minorities. These minorities experience higher rates of gonorrhea, chlamydia, and syphilis.
- More than half of the 2.5 million STIs reported in the US in 2021 occurred in those ages 15-24 years.
  - Those ages 15-24 years account for only a fourth of the sexually active population in the US.
- Condoms, when used appropriately, are 98% effective in preventing STIs including HIV.
  - STI prevention, through condom use, prevents long term consequences such as: increased risk of HIV, pelvic inflammatory disease, chronic pelvic pain, infertility, negative pregnancy outcomes, and negative newborn outcomes.
- 15 billion dollars were spent on STI care in the US in 2018
  - 26% of that cost incurred by those ages 15-24 years.
- Condom use is affected by an individual's condom use self-efficacy.
  - Self-efficacy varies in young adults due to inconsistent safe sex education in in Texas public schools.
- The literature shows that education is effective in increasing one's self-efficacy and, further, that digital education is found to be more effective than print education.
  - STI education information that is comprehensive has been determined to be more effective than education discussing HIV alone.

Project Goals

Purpose:
- Strengthen condom use self-efficacy in college students through the utilization of a digital condom education tool.

Objectives:
- Provide consistent condom education to all students that present to the study site.
- Determine what demographic factors affect condom use self-efficacy and if specific groups have greater condom use self-efficacy at baseline.
- Determine if digital condom education is effective in improving condom use self-efficacy in college students.

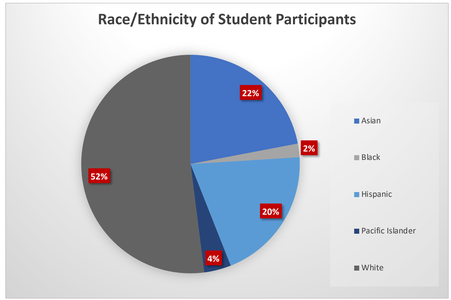
Project Description

- IRB approval was received from Texas A&M University
- Students presenting to University Health Services medical clinic Pod 1A at Texas A&M University were invited to voluntarily participate in the study, regardless of presenting concern, then directed to a QR code posted in a private exam room.
- Upon accessing the QR code, the student was provided written informed consent. After acknowledging the consent and verifying age (>18), the student was electronically directed to the pre-intervention survey.
- The initial survey included:
  - Demographic data: age, birth sex, race/ethnicity, gender, and sexual orientation
  - Sexual experience data: sexual status, sexual preferences, sexual practices, number of partners and sexual interactions in the last month, safe sex practices, and history of STI testing
  - Condom Use Self-Efficacy Scale (CUSES)
- Qualtrics was utilized for consent, the initial survey, and the follow-up survey.
- After completion of the initial survey, the student was provided a HTML link to access the digital condom education tool (DiCEY tool).
  - Access to the DiCEY tool was initiated independently by the student for review and available to the student indefinitely.
- One-month post participants completing the survey and receiving the DiCEY tool participants were sent a follow-up survey, to a provided email, containing only the CUSES.

Evaluation Strategy

- SPSS 29 was used to perform statistical analysis of the collected data.
- Analyses:
  - Independent sample t-test and One-way ANOVA to compare mean CUSES scores within the demographic categories.
  - Pearson correlation to determine if any correlations exist among the sexual experience categories.
  - Paired sample t-test to compare mean CUSES scores before and after the intervention (presenting the DiCEY tool).

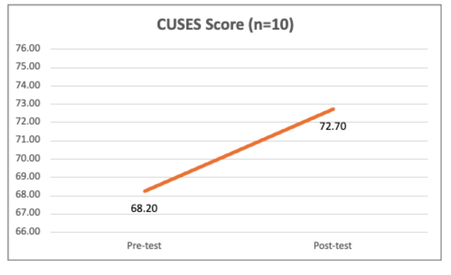
Findings



	n (%)	CUSES Score M±SD	t/F
Age	23.2±3.45		-
Sex			1.40
Male	16 (32%)	72.69±10.31	
Female	34 (68%)	68.15±10.84	
STI Test			1.64
Yes	24 (48%)	67.04±9.79	
No	26 (52%)	71.96±11.29	
Pre-CUSES score	50 (100%)	69.60±10.78	-2.85

Demographic Findings:
- A diverse sample of students participated in the study, with most of the participants identifying as white.
- Most participants (68%) were born female.
- Participant ages ranged from 19-36 years.
- No significant differences were found in the baseline CUSES within the various demographic categories.

Sexual Experience Findings:
- ~69% of participants reported that they were sexually active and only 48% of participants reports a history of STI testing.
- Correlations amongst sexual experience categories existed, but these correlations were expected.



Mean CUSES did significantly improve after the intervention (providing the DiCEY tool for review) with a p-value of <0.05 and power of 70%.

Conclusions and Implications

- This project supports the hypothesis that condom use self-efficacy can be improved using digital condom education.
- This evidence supports use of digital condom education in clinics to reduce RSB in college students and the associated negative consequences.
- This intervention is highly sustainable due to it being free of any financial cost and low impact on clinic efficiency.
  - It is common practice in many clinics for providers to given digital education to patients during and after appointments.
- Future legislation and policy should support use of digital condom education among college students to minimize participation in RSB and reduce the associated negative consequences.
- Limitations include small sample size, the timeline for data collection, and avoidance of student participation related to the project's subject matter.
- The project was seen as a success overall and supports future research on RSB and STI prevention in college students and young adults.

References

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