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Social and Behavioral STI Risk Factors: Comparing a Two-Year Community College Setting to a Four-Year University Setting

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Title

Social and Behavioral STI Risk Factors: Comparing a Two-Year Community College Setting to a Four-Year University Setting

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Agenda

- Brief Overview
- Statement of the Problem
- Rationale for the Study
- Theoretical Foundations
- Overview of Prior Literature
- Methodology
- Results
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- Self-Disclosure

Brief Overview

- Of all STIs, two-thirds occur in individuals 25 years of age or younger with chlamydia being the second most common STI on college campuses (CDC, 2008).
- Among college students, researchers suggested that over 5,136,340 cases of the three most prevalent STIs among college students—chlamydia, gonorrhea, and syphilis—have being diagnosed in 2008 (U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009)
- The identification of risk factors associated with a high incidence of STIs among college-aged students (McMillan, 2000)
- The conduction of various statistical analysis to determine STI risk factors among college aged students in relations to educational setting

Statement of problem

- Among college students, researchers suggested that over 5,136,340 cases of the three most prevalent STIs among college students—chlamydia, gonorrhea, and syphilis—have being diagnosed in 2008 (U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009)
- various behavioral factors associated with universities and community colleges were not studied fully and the problem is that the two educational settings were never compared (Anwar, Sulaiman, Ahmadi, and Khan, 2010)

Rationale of the Study

- The goals of this research was to understand the social and behavioral epidemiology of STIs in two groups of students
- To better understand behavioral and social risk factors of STIs among college-aged students enrolled at either a 2-year community college or at a 4-year university
- To examine and evaluate risk factors associated with both environments by isolating possible associations between variables such as socioeconomic status (SES) and sexual behavioral practices

Theoretical Foundations

- Associations between the time of initiation of sexual activity and sexual behaviors and risks among university students (Ma et al, 2009)
- The precautionary-health-behavior model (Milnes, Sheeran, & Orbell, 2010)

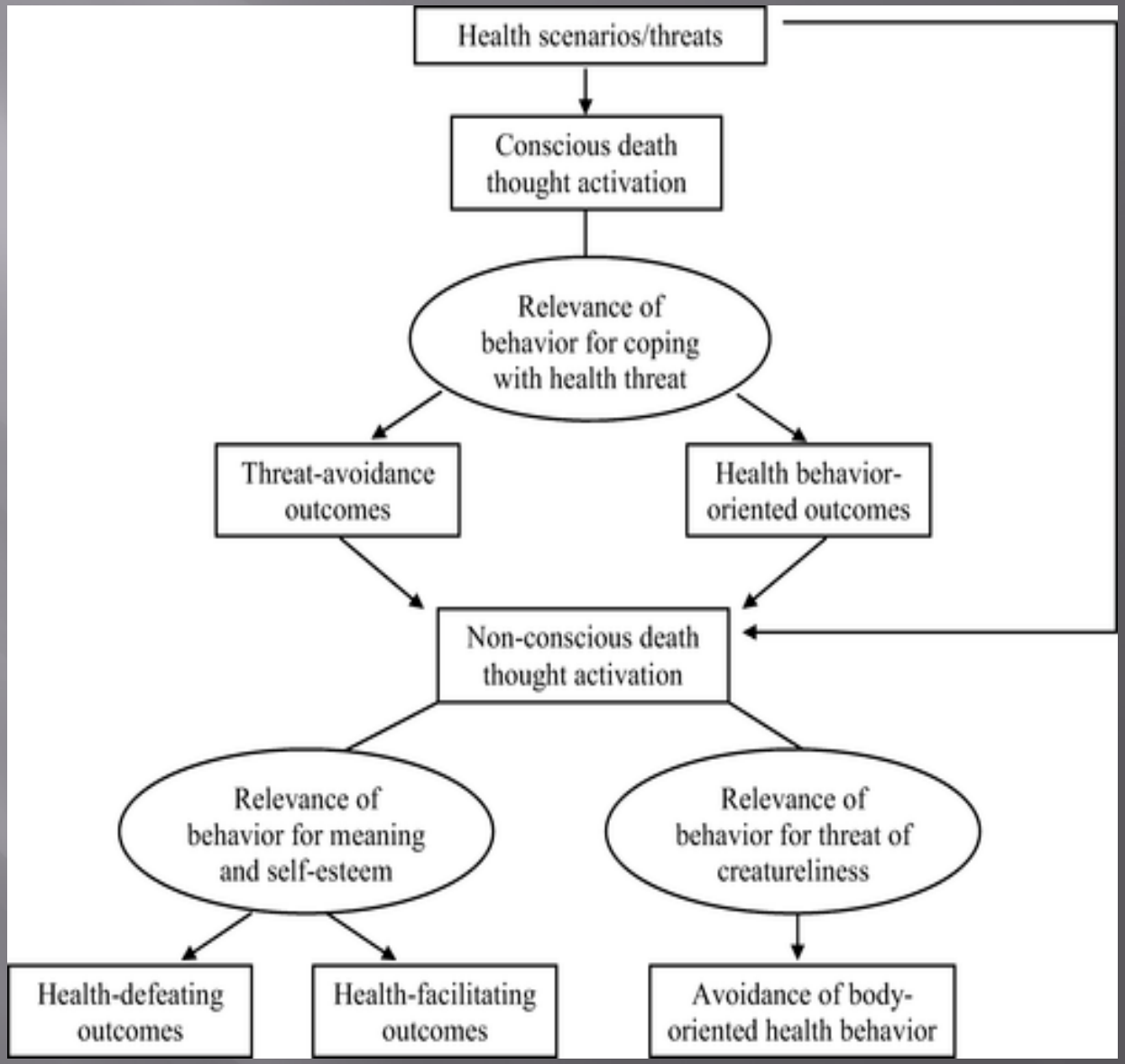
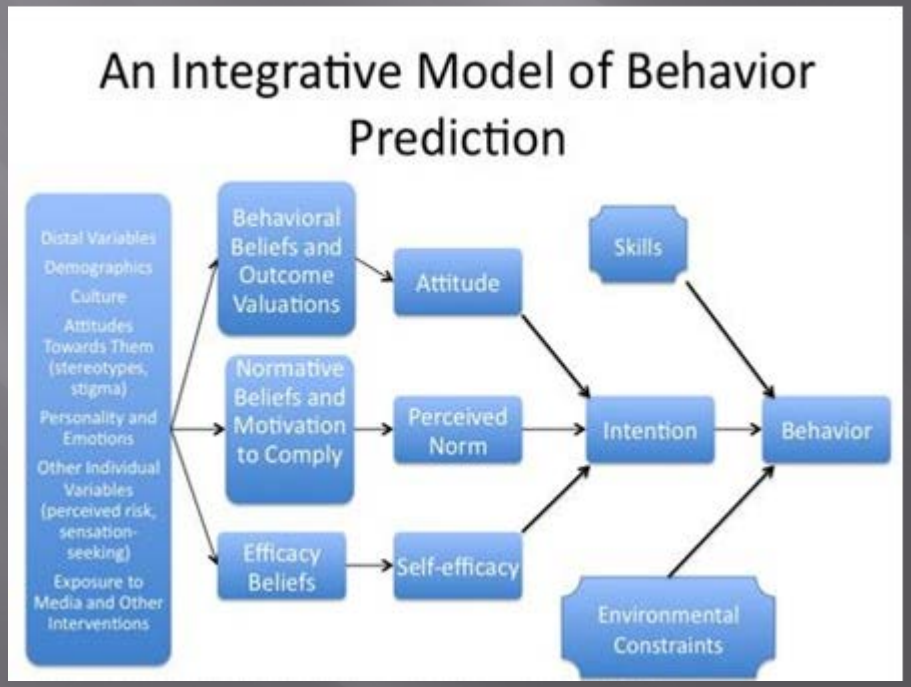


Figure 1. Precautionary-health-behavior model.

Theoretical Foundations (cont'd)

- The health-behavior-change model consists of behaviors that may have positive or negative consequences, such as contracting an STI factors (Rollnick, Mason, & Butler, 2000)



Overview of Research to Understanding the Issues

- Many studies have exposed some STI risk factors of college-aged students but no studies were found comparing risk-factor behaviors between 4-year university settings and 2-year community-college settings.
- The research compared the risk factor rates of STIs between two distinct educational settings—a 2-year community college and a 4-year university
- The determination of whether socioeconomic risk factors associated with behavioral risk factors increase the incidence of STIs among college-aged students, as well as whether the educational setting contributes to the behavior of the students

Study's Methodology

- Research questions
- Hypotheses
- Research design
- Participants
- Instrumentations
- Statistical procedures used to analyze the data

Research Questions/Hypotheses

Research Question 1: Are there more STI behavioral risk factors associated with students at a 4-year university than with students at a 2-year community college?

$H_0$1: There are not more STI behavioral risk factors such as noncondom use, number of sexual partners, type of sex, and drinking habits associated with students at a 4-year university than with students at a 2-year community college.

- $H_1$1: There are more STI behavioral risk factors associated with students at a 4-year university than with students at a 2-year community college.

Research Questions/Hypotheses (cont'd)

Research Question 2

- Are socioeconomic risk factors associated with the increase in incidence of STIs among college-aged students when comparing two educational settings (4-year and 2-year colleges)?
- $H_0 2$: SES in not related to risk factors such as noncondom use, number of sexual partners, type of sex, and drinking habits associated with STIs such as gonorrhea, chlamydia and syphilis.
- $H_1 2$: SES is related to risk factors such as noncondom use, number of sexual partners, type of sex, and drinking habits associated with STIs such as gonorrhea, chlamydia and syphilis.

Research design

- Cross Sectional Quantitative research
- Independent variables for both institution

  condom use

  number of sexual partners

  types of sex

  drinking habits

Dependent variables for both institution

SES measuring income of birth family

education level of parents

Participants

- The participants were identified as college students aged 18–24 and they must attend a college that fits the research purpose
- The target population in this study was community-college students and university students

Instrumentations

- The primary techniques for collecting the quantitative data was the use of the self-developed questionnaire compiled from the CDC questionnaire and the New York State Health Department questionnaire .

Limitations

- The study was localized, meaning that it only affected the local schools being studied; this is not a national study.
- Other institutions are excluded, such as online-learning and technical schools. The survey answers relied on the truthfulness of the participants, therefore reporting bias may have affected the results of the study.

Statistical Procedures Planned to Analyze the Data

- Linear regression analysis was used to show whether SES, specifically those from a low-income family, had any relationship to STI risk factors
- Logistic regression analysis was used to find out the probability of occurrence of behavioral risk factors that may lead to STI contraction
- Multiple regression analysis to examine linear relationships between variables and the nature of the relationship between the two variables

Results

Research Question 1

Which educational setting has more STI behavioral risk factors?

- $H_0 1$: There are not more STI behavioral risk factors such as noncondom use, number of sexual partners, type of sex, and drinking habits associated with students at a 4-year university than with students at a 2-year community college.
- $H_1 1$: There are more STI behavioral risk factors associated with students at a 4-year university than with students at a 2-year community college.

Results (Cont'd)

- on average, individuals who were enrolled in a community college were more likely to report engaging in two more risky sexual behaviors than those enrolled in a 4-year school (B = 0.55; 95% confidence interval: 0.30–0.79; $p < .0001$), even after controlling for relevant demographic characteristics (B = 0.50; 95% confidence interval: 0.23–0.78; $p < .001$)

Results (Cont'd)

- on average, individuals who were enrolled in a 2 year community college were more likely to report engaging in two more risky sexual behaviors than those enrolled in a 4-year university (B = 0.55; 95% confidence interval: 0.30–0.79; $p < .0001$), even after controlling for relevant demographic characteristics (B = 0.50; 95% confidence interval: 0.23–0.78; $p < .001$)

Results (Cont'd)

Table 13

Examination of the Associations Between Institution Type and Behavioral Risk Factors

Risk factors	Odds ratio	*SE*	95% confidence interval
Logistic regression analysis			
Condom\condom and oral contraception use[b]	0.58*	0.27	0.34–0.98
Condom used during vaginal intercourse[c]	2.78***	0.27	1.64–4.71
Condom used during anal intercourse[c]	Cannot be computed due to limited sample size		
More than one sexual partner in the past year[d]	2.97***	0.27	1.76–5.01
Engaging in intercourse under the influence[e]	1.19	0.26	0.71–2.00
Unwanted sexual intercourse[e]	0.06**	1.04	0.01–0.50
Linear regression analysis	B	*SE*	95% CI
Number of lifetime sexual partners	0.27**	0.10	0.08–0.47
Number of drinks in the past week	0.15	0.10	-0.04–0.34

[a] 0 = 4 year college, 1= community college; [b] 0 = yes, 1 = no; [c]0 = always, 1 = not always; [d] 0 = 1 partner or less , 1 = more than one partner; [e] 0 = no, 1= yes; *$p < .05$; **$p < .01$;***$p < .001$.

Results (Cont'd)

- the acceptance of the null hypothesis, which means that students enrolled in a 4-year university are not more likely to report STI behavioral risk factors such as noncondom use, a higher number of sexual partners, type of sex (vaginal and anal), and worse drinking habits than students enrolled at a 2 year community college.

Results (Cont'd)

Research Question 2

- Are socioeconomic risk factors associated with the increase in incidence of STIs among college-aged students when comparing two educational settings (4-year and 2-year colleges)?
- $H_0 2$: SES in not related to risk factors such as noncondom use, number of sexual partners, type of sex, and drinking habits associated with STIs such as gonorrhea, chlamydia and syphilis.
- $H_1 2$: SES is related to risk factors such as noncondom use, number of sexual partners, type of sex, and drinking habits associated with STIs such as gonorrhea, chlamydia and syphilis.

Results (cont'd)

- Lower parental income was associated with a greater likelihood of attending a 2-year community college. Specifically, students whose parent's annual income was less than 19,999 were 12 times more likely to attend a community college than those whose parent's annual income was 50,000 or more (O.R. = 12.23, 95% CI: 5.78-25.90, p <0.001).
- Students who parent's annual income was 20,000-49,999 were 2 ½ times more likely to attend a 2-year community college than those with parents who made 50,000 or more per year (O.R.= 2.59, 95% CI: 1.22-5.50, p<0.05).

Results (Cont'd)

- Lower parental education was also significantly associated with attending a 2- year college; students whose parents' highest educational attainment was high school were nearly 5 times more likely to attend a 2-year community college than those who parents attended graduate school
- Logistic and linear regression analyses were used to examine differences in likelihood of engaging in risky behaviors between institution types

Results (Cont'd)

- individuals enrolled in a community college are nearly 2 times less likely to report not always using a condom or a condom with oral contraception as a chosen method of pregnancy prevention (odds ratio = 1/0.58= 1.7; 95% confidence interval: 0.34–0.98; $p < .05$).
- In contrast, individuals enrolled in a community college were more likely to report not always using a condom during vaginal intercourse (odds ratio = 2.8; 95% confidence interval: 1.64–4.71; $p < .001$). Individuals enrolled in a community college were much more likely to report having more than one sexual partner in the past year (odds ratio = 2.97; 95% confidence interval: 1.76–5.01; $p < .001$).

Results (Cont'd)

- Individuals from a 4-year college were considerably more likely to report engaging in unwanted sexual intercourse (odds ratio = 1/0.06= 16.7; 95% confidence interval: 0.01–0.50; $p < .01$).
- Individuals from a 4-year university also reported a greater number of lifetime sexual partners ($B = 0.27$, 95%; confidence interval: 0.08–0.47, $p < .01$).
- The acceptance of the alternate hypothesis: SES is related to risk factors such as noncondom use, number of sexual partners, type of sex, and drinking habits associated with STIs.

Discussion (Cont'd)

Table 16

Logistic Regression Examination of the Associations Between Institution Type[a] and Risky Behaviors, Adjusted for Demographics

Logistic regression	Odds ratio	*SE*	95% confidence interval
Unwanted sexual intercourse[i]			
Gender	1.08	0.57	0.35–3.31
Parental Education[c]			
High school graduate	5.03	1.16	0.52–48.47
College graduate	6.03	1.10	0.71–51.53
Income[d]			
Less than $19,999	1.69	0.77	0.37–7.64
$20,000–$49,999	1.41	0.69	0.37–5.43
Institution type[a]	0.05**	1.09	0.01–0.40

[a] 0 = 4 year college, 1= community college; [b] 0 = always, 1 = not always; [c] post graduate degree is the reference category, [d] 50,000 or more per year is the reference category; [e]0 = 1 partner or less , 1 = more than one partner; [f] 0 = no, 1= yes; *$p < .05$; **$p < .01$;***$p < .001$.

Discussion

- 2-year community-college students who have lower SES are at risk of participating in STI behavioral risk factors. Even though 2 year community college students reported more STI bound risky behavior, 4 year university students were also found to engage in certain risky behaviors such as unwanted sexual intercourse and multiple sex partners.
- More community-college students injected drugs and most of them drank more and were more likely to have sex under the influence.

Discussion (Cont'd)

- Community-college individuals are most likely to have lower SES when accounting for parental level of education and family income
- The individuals in a 2-year community-college setting with a lower parental education were more likely (odds ratio = 4.34; 95% confidence interval: 1,78–10.58; $p < .01$) to report engaging in more STI behavioral risk factors than their counterparts at a 4-year university

Discussion (Cont'd)

- The study showed that more STI risk factors were significantly associated with 2-year community-college students than with 4-year university students.
- However the study showed that more STI risk factors were significantly associated with 4-year university students than with 2-year community college students.
- 4-year university students tend to have more sexual partners than 2 year community-college students
- Community college students may appear to be more prone to contracting STIs
- 4 Year University Students according to the accepted hypotheses are also more susceptible to Contracting STIs.

Implication for Social Change

- More emphasis can be put on the community-college setting to provide better sex education
- Now students may be better able to understand the risk factors they are more prone to have, thus reducing behavioral risk factors and decreasing STI contraction
- This research may help healthcare professionals and colleges to implement a plan to help reduce these behavioral risk factors
- The study also help show that both educational setting are in danger of STI contraction

Self Disclosure

- Names of participants and schools they attend will not be mentioned anywhere in the dissertation or other written reports due to the fact that they will not even be in the survey documents because that information is irrelevant

Summary

- The research problem addressed shows a grave social crisis and a connected research problem, which has yet to be effectively addressed by other researchers.
- Researchers have carried out a number of reviews of the literature and pinpointed a gap between STI risk factors associated with community-college students and those of university students

Summary (contd)

- This study is looking to contribute to a better comprehension of risk factors associated with STIs among community-college and university students
- The study will aid to minimizing long-term medical consequences in the targeted population such as pelvic inflammatory disease (PID), tubal scarring, ectopic pregnancy, chronic pelvic pain, and infertility.

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