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Predictors of Condom Use Among High School Students in North Carolina

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PRESENTATION**

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Abstract

Sexually transmitted diseases are one of the major public health issues among adolescents in North Carolina. The purpose of this quantitative study was to evaluate the predictors of condom use. The socioecological model theoretical framework was applied to understand the knowledge of sexually transmitted diseases and school-based and parent or other adult sex education. Results showed that sexually active males used condoms more than females and there was no relationship between condom use, knowledge of sexually transmitted diseases, and school-based sex education. Findings indicated that family and community relationships should be engaged to improve sexual health and education among adolescents.

Doctoral Capstone

Problem

The **public health problem** was the increasing occurrence of **sexually transmitted diseases** (STDs) among high school students.

STDs have increased among high school students in North Carolina (NC). According to the North Carolina HIV/STD/ Hepatitis Surveillance Unit (2018), North Carolina ranked fourth among the 50 states for STD rates (i.e., chlamydia, gonorrhea, and syphilis).

Compared to young and older adults, high school students had disproportionately high STD incidence (Coeytaux, Kramers, & Sullivan, 2014). Dehghani, Dehghani, and Dehghani (2017) stated that high-risk behavior among high school students is likely to continue into adulthood.

Purpose

The purpose of this **quantitative, cross-sectional study** was to evaluate predictors of condom use (e.g., STD education, school-based sex education, and parental or other adult sex education) and condom use among high school students in North Carolina.

Significance

STDs among 13 to 19 years old increased by 16% (NC HIV/STD/Hepatitis Surveillance Unit, 2018). This **significant increase** among teens demonstrated the need to focus on their sex education and behavior.

The **outcome** of this study might support the improvement or implementation of sex education programs and courses.

Potential contributions to social change include establishing or modifying comprehensive sex education to accommodate students statewide.

Resources containing thorough knowledge about STDs, condom application instructions and accessibility, and statistical facts about STDs in the geographical region of the high school students could increase STD awareness and prevention.

Theory or Framework

The **socioecological model (SEM)** is a public health behavior model that focuses on the decisions and behavior of individuals and their interactions within their physical and social environment (Dryson et al., 2018).

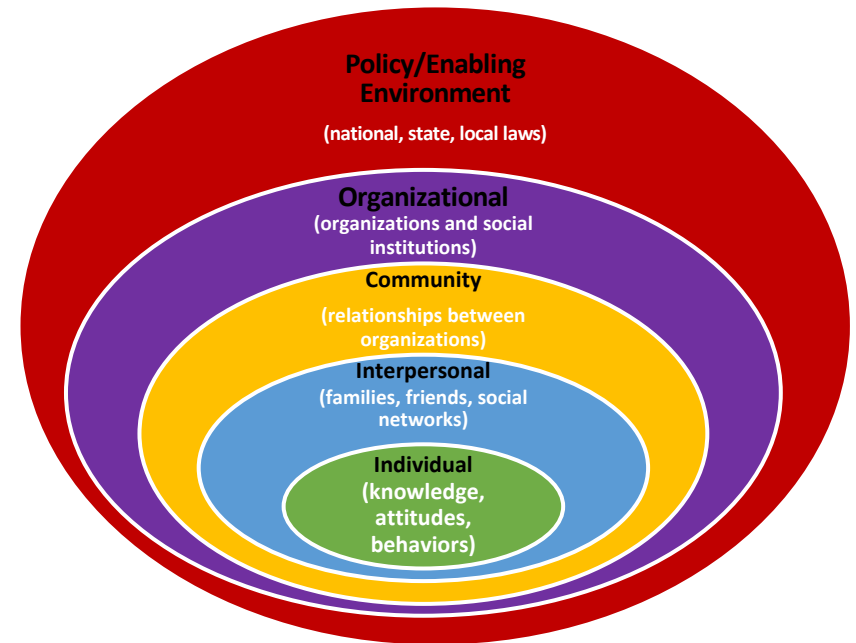


Figure 1. The Social Ecological Model. Figure from UNICEF, *Communication for Development (C4D) Capability Development Framework*, 2009.

Relevant Scholarship

Previous studies evaluated condom use, sexual behavior, knowledge, and attitudes among high students. Subbarao and Akhilesh (2017) found that individuals between the ages 16 and 24 years old were at a **higher risk of STDs**, and that the internet, media, and teachers were sources of their sex education.

Newton-Levinson, Lichliter, and Mouli (2016) reported that students had **limited knowledge about STDs**. Maheswari and Kalaivani (2017) found that youth between the ages of 10 and 19 years were **highly sexually active** and **required better knowledge** about condom use compared to young adults between 20 to 24 years old.

Previous experimental studies presented **incidence trends** associated with STDs and condom use. Kuru et al. (2016) calculated STD incidence trends for NC and concluded that STD screening was required to reduce the transmission of STDs.

Van Handel, Kann, Olsen, and Dietz (2016) **found that at least 34% of the U.S. high school student population** was having sexual intercourse with four or more partners.

Statistics **showing increased newly diagnosed cases and prevalence rates** for STDs indicated a need to measure education to determine what programs should be developed and implemented to promote condom use among sexually active high school students (Ethier et al., 2018; Reif et al., 2015).

Studying condom use and sex education may discover unknown information about the sexual behavior of high school students that might better inform STD prevention and sex education efforts.

Research Question

RQ1: What is the relationship between ever having been taught about STDs and condom use among high school students in NC?

RQ2: What is the relationship between ever having received school-based sex education and condom use among high school students in NC?

RQ3: What is the relationship between ever having been taught by or asked a parent or other adult about sex and condom use among high school students in NC?

Participants

The **target population** consisted of high school students enrolled in NC.

Each school used a **systematic probability sampling** to identify the sample of **1,002 students** at public and charter schools.

Private, alternative, vocational, and special education schools were excluded.

Procedures

Data were collected from the **2017 North Carolina Youth Risk Behavior Survey (NC YRBS)** (Department of Public Instruction, 2018).

Grade level, race, and ethnicity were expected to show patterns and trends in **sex education, knowledge of STDs, influences, and effects of condom use.**

The intention for using **gender** was to show patterns and trends between males and females.

Analysis

Binary logistic regression analyses were used to predict the relationship between the independent and dependent variables.

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Findings

RQ1: Condom use was not significantly predicted by knowledge of STDs and school-based sex education.

RQ2: Parent or other adult sex education and condom use showed statistical significance (Yes = $p < .034$; Not sure = $p < .035$).

RQ3: Gender was the only demographic variable that revealed significance to the predictors of condom use (RQ1 = $p < .002$; RQ2 = $p < .001$; RQ3 = $p < .001$).

Interpretation

This study showed **some consistency** with previous studies. Unfortunately, a specific type of knowledge of STDs or sex education could not be measured.

The **increase of STDs** among adolescence indicated that sexual behavior requires intervention.

Findings showed that condom use, knowledge of STDs, and school-based sex education were not statistically significance.

Results revealed that **males** used condoms more than females and **high school students** were influenced by parent or other adult sex education.

This **outcome** shows that interpersonal, organizational, and community relationships appear to involve parents and other adults as influential factors in sex education.

Limitations

There are several limitations to consider:

- NC YRBS sample group did not include high school students that were home schooled or enrolled in private, alternative, vocational or special education schools.
- YRBS did not ask students about their socioeconomic status (SES)
- Sample size
- Use of cross-sectional study design
- Level of trustiness in students' responses

Recommendations

For future research:

- Surveys should be permitted for use at the schools that were excluded.
- Instrumentation revisions to include detailed questions about sexual behavior, knowledge about sex education, and SES.
- More evidence-based research on various types of sex education and prevention programs.
- Educators should apply surveys results to improve sex education instructions.
- Educators should use survey results to determine any necessary change for future sex education curriculum and programs.

Social Change Implications

Social change requires long-term effects across multiple levels:

- Relationships strengthened between child, parent, teacher, school nurse, health organizations, and community for positive reinforcement.
- Sex education more comprehensive and students aware of services and resources provided.
- Behavior change through practicing safe sex and abstinence.
- Communication to improves sex education and safe sex advocacy.
- Policy change that mandates sex education and STD testing.
- Research on risk factors, SES, sex education programs and services provided.

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