

Theory Analysis of Condom Use in Young Adults

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Abstract

Objective. The purpose of this literature review is to determine the motives for the use of male condoms in adolescents. In tandem with Healthy People 2020, this review seeks to promote adolescent health, HIV research, and healthcare access.

Methods. I used the EBSCO and PubMed databases to find articles included in this study. I reviewed each article by abstract and included it if it addressed condom use in youths by looking at a social health theory. Theories used in this review are social-ecological theory, transtheoretical theory, health belief model, attribution theory, problem behavior theory, and theory of planned behavior.

Theories and Constructs. The three main factors that influence condom use in young adults are social support, perceived beliefs, and substance abuse. Social support of parents and peers are the most influential on youths. The review found that perceived benefits and risk associated with condoms are the most common beliefs which influence condom use. Substance abuse also negatively affected youths' decisions to use condoms.

Recommendations. Researchers should seek to find which interventions effectively provide social support and prevent substance abuse. Researchers must also find which factors influence the perceived beliefs of adolescents. Practitioners should communicate with parents, provide practical education, get involved in schools, and demonstrate healthy behaviors. Condom promotion in youths seeks to prevent adolescent pregnancy and STIs and encourages HIV research, which historically severely affects underserved populations.

Keywords. Condoms, Youth, STIs, HIV, Contraception

Introduction

Male condoms are among the most effective measures in preventing the spread of sexually transmitted infections (STIs), with particular attention to the Human Immunodeficiency Virus (HIV). Despite a failure rate of up to 13%, condoms help prevent adolescent pregnancy (Centers for Disease Control and Prevention [CDC], 2020a). While condoms are a vital tool for barrier protection in sexual intercourse, their use in young adults is low. In the United States, only 54.3% of sexually active high school students reported using a condom in their last sexual encounter (Szucs et al., 2020).

Contraceptive use is increasing in youths, but HIV transmission and adolescent pregnancy are still critical. In 2018, birth rates were 7.2 and 32.3 births per 1000 females for those aged 15-17 and 18-19, respectively (Szucs et al., 2020). Healthy People 2020 addresses these issues of HIV and teenage pregnancy by making adolescent health and HIV research a priority. Male condoms are not the most

effective contraceptive, but they provide access to temporary birth control and are vital in preventing STI transmission. HIV transmission is a critical issue in adolescents because they are a vulnerable population. In the US, youths aged 13 to 24 made up 21% of new HIV infections in 2018 (CDC, 2020b). Awareness, stigma, and substance use all impact HIV in youths, but HIV is also heavily tied to the decision to use condoms.

The purpose of this literature review is to determine the motives behind the use of male condoms in adolescents. Understanding the motivation or barriers for using condoms are essential in promoting their use to prevent STIs and adolescent pregnancy. In tandem with Healthy People 2020, this review seeks to promote adolescent health, HIV research, and healthcare access (Office of Disease Prevention and Health Promotion [ODPHP]).

Methods for Selecting Articles

I found articles for this paper from the online databases EBSCO and PubMed. Keywords for the search included a combination of “condom youth” and “health belief” OR “ecological model” OR “transtheoretical model” OR “attribution theory.” Other keyword searches included “condom efficacy,” “condom efficacy youth,” “condom use in youths,” and “Problem Behavior Theory.” Search criteria settings were for peer-reviewed journal articles only. Furthermore, I only considered articles published after 1990 for the review.

Given that articles met the previous criteria, I reviewed each abstract for relevance to the review and included those relating to both social health theories and condom use. The study must have applied constructs of theories to survey analysis to be relevant. Theories included are the Health Belief Model, Transtheoretical Model, Social-ecological Model, Theory of Planned Behavior, Attribution Theory, and Problem Behavior Theory. I included a total of 13 articles in the study. A list of these can be seen in Table 1 with a full description in Appendix A. Additionally, I included studies outside the US in the review and studies assessing sexual risk behaviors with substance abuse. For this review, I have defined adolescence as those aged 10 to 25.

Table 1. Summary of articles reviewed by theory (Total unduplicated studies = 13)

Theory/Model	# of studies
Social-Ecological Theory	3
Health Belief Model	3
Transtheoretical Model	3
Theory of Planned Behavior	2
Attribution Theory	1
Problem Behavior Theory	1

Note: A description of each study is in Appendix A.

Theories and Constructs

The articles in this review showed three main influential categories for consistent condom usage in youths. These categories were social support, perceived beliefs, and substance abuse. In this section, I summarized the findings of the studies based on these three categories. I described social support and perceived beliefs first as they are the largest influential factors, with substance abuse following.

Social Support

The areas of social support that most heavily influenced consistent condom usage were family and peer support, partner communication, and societal norms. Substantial evidence suggests that family and peer support are the largest influencers of social support for condom use. Using the social-ecological theory, Elkington et al. (2011) found that familial promotion and condom usage support were more influential than potential risks, such as substance abuse. Furthermore, research found that peer groups that engage in less risky behavior reported more consistent condom usage in individuals (Elkington et al., 2011). This study suggests that parental and peer support greatly influence whether an adolescent chooses to use a condom. Laraque et al. (1997) further supports this evidence in their study's conclusion that consistent condom usage was associated with parental and peer support.

The second aspect of social support that influences the decision for youths to use condoms is partner communication. Using the transtheoretical model, Grimley et al. (1995) found that individuals in a further stage of change for communication with sexual partners were more likely to use a condom. Individuals who are more open to communicating with their partner or who already do so are more inclined to use condoms for protection, either with a new or regular partner, than individuals in the earlier stages of change (Grimley et al., 1995). Also, using the transtheoretical model, Grossman et al. (2008) found that consistent use of condoms increases with better partner communication. The more comfortable a person is in discussing the use of a condom with a sexual partner, the more likely they are to use one.

The final aspect of social support that influences adolescent use of condoms is societal norms. Sanchez-Dominguez et al. (2017) found that attitudes and societal norms about using condoms influenced the decision to use a condom according to the Theory of Planned Behavior. A study using the Social-cognitive and social-ecological theory found that social norms, self-representation, and societal communication all impact youths' decision to use a condom (Protogerou and Hagger, 2017). Self-representation is essential to the use of protection in society. Szucs et al. (2020) found that 89% of students report using condoms, but there is a racial disparity as Black students reported less condom usage than white or Latinx students. Societal norms and representation are vital to condom usage in students.

Protogerou and Hagger (2017) also found that control perception also played a large part in using protection. This finding led to one of the most significant known factors for condom use in society, which is self-efficacy for condom use and communication, particularly in the US (Naar-King et al., 2008). This fact is interesting as Naar-King et al. (2008) also showed that self-efficacy for condom use and communication is not as influential in other cultures, such as Thailand, where readiness to change is more meaningful. It appears Americans are more inclined to do something if they feel confident in their ability to do so. A study done by Kalolo and Kibusi (2015) supports this notion in their finding that an attitude can reflect the intention to use protection. Still, self-efficacy condom use and communication is what leads to the actual usage of condoms (Kalolo and Kibusi, 2015).

Perceived Beliefs

The second category of influence on the use of condoms in youth populations was perceived beliefs, meaning their attitudes and thoughts toward condom use and sexual behaviors. There were two crucial beliefs, the first of which is condom effectiveness and benefit. A study by De Irala et al. (2016) using the social-ecological model showed that 1 in 7 youths thought condoms were 100% effective, and those youths were 82% more likely to have sex. Meaning that youths who believed condoms were

effective were more likely to use them and have more careful sexual interactions. Perceived benefits and effectiveness of condoms were important to students in the decision to use protection. Grossman et al. (2008) also found that consistency was associated with perceived benefits of condom use and increased awareness of vulnerability to HIV. This finding leads to the second critical belief that is important to the consistent use of protection.

The second critical belief for condom use is perceived risk. A study by Laraque et al. (1997), based on the Health Belief Model, showed that condom use was associated with avoiding pregnancy, HIV, and STIs. These perceived risks are key components in the decisions of youths. It is vital to educate youths on the risk of unprotected sex to increase the use of condoms. Oyekale and Oyekale (2012) support this suggestion in their study, which showed that knowledge of HIV transmission methods increased the use of condoms in youths. In addition to education, an acknowledgment of individuals' attribution method is also necessary for the promotion of condom use. Burnett et al. (2013) found that males and females with an internal attribution style were more likely to engage in behaviors that increase the risk of HIV.

Substance Abuse

The final category of factors influencing condom usage in youths was substance abuse, which is not a construct of a behavioral theory but had enough influence on condom use for the study. Substance abuse is often negatively associated with condom usage (Sanchez-Dominguez et al., 2017). Problem Behavior Theory speaks to risky sexual behavior and substance abuse, saying that any problem behavior increases the risk of another behavior (Jessor & Jessor, 1977). Alexander et al. (2018) found that risky sexual behavior increases the risk for illicit drug use, supporting the constructs of Problem Behavior Theory. Elkington et al. (2011) also found that condom use was reported less for individuals influenced by substance abuse. Condom usage and substance abuse are negatively associated when the individual abuses any substance, but this is also the case for individuals who are at high risk, meaning those who are heavily exposed to substance abuse. Youths' social groups may participate in substance abuse and encourage individuals to do so as well. Szucs et al. (2020) supports this suggestion in their study, which showed that high-risk groups are less likely to use condoms. Substance abuse by the individual and their social groups influence the decision to use protection.

Main Findings

The three main factors that influence condom use in young adults were social support, perceived beliefs, and substance abuse. The social support of parents, peers, sexual partners, and society play a critical role in a youth's decision to use protection. A person's perceived beliefs about the benefits of a condom and risks of having unprotected sex suggest a need to educate youth more thoroughly. Finally, substance abuse has a negative impact on condom use, not only when the individual is abusing substances but also in a high-risk situation or group.

Recommendations for Researchers

Recommendations for further research apply to each of the three critical factors for condom use. The first of these recommendations is to **find which interventions are most effective at providing social support and preventing substance abuse**. Interventions need support to become widespread, and social support is one area where public health promotion needs to intervene. Interventions may teach people how to build social support or teach families to give social support. Once researchers have support built for intervention, we can implement them on a large scale and make lasting change.

Substance abuse is a large area of research already in motion, but information is still needed to prevent substance abuse for sexual health promotion. Interventions for substance abuse may address the individual youths and their inclination to partake in substance abuse or target the peers and families of youths. Before public health professionals can address substance abuse for sexual health, researchers need to find which substance abuse areas impact sexual behavior.

The second recommendation is to **find what influences perceived beliefs**. Much like the first recommendation, public health professionals need to know that the influencing factors are for youths' perceived beliefs. Programs need to know which areas to address in terms of beliefs before they can effectively make a change. Researchers should seek to understand the influences of youths' beliefs for condom usage, so practitioners can develop programs to address the community's specific needs.

Recommendations for Practitioners

- **Communicate with parents.** Social support is one of the three critical factors for condom use in youths. To promote familial support, parents need to understand the importance of protection. Parents must also understand that their influence on their children is vital, and they need to promote safe sex. Practitioners need to have conversations with parents on the importance of condoms and how to communicate this importance to their children.
- **Provide practical education.** Self-efficacy for condom use and communication, as well as perceived beliefs, are essential to condom use in youths. Practitioners need to provide practical education, which demonstrates the importance of condoms. This education needs to include STI awareness and contraception effectiveness. Practitioners should also speak with youths about how to use condoms and have effective conversations with their partners. Educating youths in practical application will help increase awareness and self-efficacy.
- **Get involved in schools.** The school environment influences youths in the areas of social support and perceived beliefs. Youths should be met in their environment and addressed by their needs to create lasting change. Practitioners can get involved in schools to promote sexual health through improved sex-ed, social support interventions, and substance abuse education. Schools provide an excellent environment to reach many students and promote sexual health and condom use.
- **Demonstrate healthy behaviors.** Observational learning helps increase self-efficacy for condom use. While demonstration is challenging to achieve for condom use, practitioners should still demonstrate the importance of safe sex. Practitioners can demonstrate how to get condoms as well as how to communicate their use with a partner. Practitioners who are close to youths should lead by example by offering social support and abstaining from substance abuse.

The Big Picture: Macro-level Implications

Condom use is vital to global health for STI and adolescent pregnancy prevention. Healthy People 2020 includes the goals of adolescent health, HIV research, and healthcare access. Condom use in youths addresses each of these goals. Unintended pregnancy alone has implications for adolescent health, but adolescent health becomes critical when paired with STIs. Condom promotion has the potential to reduce unintended pregnancy and STIs in adolescents across the globe.

HIV prevention and research are also goals of Healthy People 2020, which condom promotion addresses. Male condoms are one of the most effective prevention methods for HIV (CDC, 2020a). This

fact makes condoms critical for use and access. One of the most concerning issues is that HIV more severely impacts underserved communities everywhere (CDC, 2020b). Condom access is critical to HIV prevention, which is in line with the final goal for Healthy People 2020 of healthcare access. HIV and unintended pregnancy pull government and private funding each year, which could be given to research if condoms were accessible and used regularly. Condoms can address one of the largest international public health issues, yet they are not accessible or used regularly. By promoting condom use to youths, public health practitioners could create habits that will last a lifetime.

Appendix A. Summary of Theory-based Articles Reviewed

#	(Authors, Year)	Purpose	Sample	Design	Theory/ Constructs	Results/ Conclusions
1	(Alexander et al., 2018)	Identify risk and protective factors for illicit drug use in adolescents.	770 Boy Scouts participating in Tennessee, Arkansas, and Mississippi. Participants identified as 73.38% white and 26.62% Black. Ages were 45.71% under 12, and 42.6% were 13-15.	Cross-sectional study of the proctored Boy Scouts Health and Safety Survey, measuring risk and protective factors for substance abuse.	Problem Behavior Theory	Problem behavior theory had less explanatory power for illicit drugs than other forms of drugs (tobacco, alcohol, and marijuana). Engaging in risky sexual behavior or other drug use increases the risk of illicit drug use.
2	(Burnett et al., 2013)	Understand the locus of control for males and females in relation to safe sex practices and substance abuse.	1, 874 students in health and drug courses from three universities. The average age of participants was 19.6 with 70.3% female and 29.4% male participants. Sample was 82% Caucasian, with 67.18% reporting sexual activity in the prior three months.	Survey assessing demographics and sexual risk behaviors. Scales included locus of control assessment, HIV knowledge, and attribution style.	Attribution Theory	Males with external attribution factors are more likely to engage in risky sexual behavior. Males and females with internal attribution are more likely to engage in HIV risk behaviors.
3	(De Irala, 2016)	Understand the influence of the social-ecological model in young adults in school. Assessing their beliefs on sexual health and relationships.	Representative groups of High school students in the Philippines, El Salvador, and Peru, age 13-18.	Cross-sectional survey on beliefs about HIV transmission and condom use effectiveness and frequency.	Social-Ecological Theory	Beliefs are influenced by social circles. One of seven believed condoms were 100% effective. These individuals were 82% more likely to have sex. No correlation between risk perception and condom use.

#	(Authors, Year)	Purpose	Sample	Design	Theory/ Constructs	Results/ Conclusions
4	(Elkington et al., 2011)	Examines any correlation due to parent and peer risk or promotive measures and condom use. Examines substance abuse factors in relation to condom use.	Black high school students in Flint Michigan with a 3.0 GPA or lower, and mean age of 14.86. Sample was 50.8% female.	Eight-year longitudinal study. Interview based data collection with additional self-administered questionnaire on sensitive information.	Social-Ecological Theory	Family promotive factors impacted condom use more than risk factors. Peer risk factors influenced condom use more than promotive meaning in groups of less risk, condoms are used more frequently. Less consistent condom usage was reported in those who used substance.
5	(Grimley et al., 1995)	Examines condom and contraceptive use in the application of the transtheoretical model.	248 single, heterosexually active students at Northeastern University. 62.5% of participants were female. Sample mean age was 18.88 with a range of 18 to 26.	Cross-sectional, self-administered, anonymous survey assessing stages of change for certain sexual behaviors.	Transtheoretical Theory	Individuals were furthest in the stages of change for the following categories: general contraceptive use, condom use with new partners, and condom use with regular partners.
6	(Grossman et al., 2008)	Examines factors influencing consistent condom use in high-risk adolescents.	446 participants from a control group in HIV prevention program. Individuals were between 15 and 21, and reported unprotected sex in the previous 90 days.	Computer assisted survey assessing demographics, stages of change, sexual attitudes, and substance abuse.	Transtheoretical Model	Consistent condom use was correlated with increased benefit perception, communication with partners, and more perceived vulnerability to HIV.
7	(Kalolo and Kibusi, 2015)	Examines the influence of empowerment, attitudes, societal norms, and perceived behavior's impact on condom use.	Adolescents aged 14-19 from 9 randomly selected schools in the Newala district, in Tanzania. Sample included n=403 students.	Cross-sectional study using a self-administered questionnaire.	Theory of Planned Behavior	Perceived behavior and attitudes reflect the intention to use condoms, while empowerment reflects reported use of condoms.

#	(Authors, Year)	Purpose	Sample	Design	Theory/ Constructs	Results/ Conclusions
8	(Laraque et al., 1997)	Examines condom use in correlation with demographics, psychosocial factors, and perceptions of condom use.	557 adolescents in a pregnancy prevention program in Harlem Hospital. Ages ranged from 12 to 23.	Cross-sectional self-administered survey assessing risk factors and condom use.	Health Belief Model	Condom use if most influenced by the following factors: intent to avoid pregnancy, avoidance of HIV, and avoidance of STIs. Gender, parental, and peer support also influence condom use.
9	(Naar-King et al., 2008)	Applies the Transtheoretical model to predict unprotected sexual behavior in HIV positive youth from Thailand.	70 HIV+ Thai youth between the ages of 16 to 25, from three HIV clinics in Bangkok, Thailand.	Interviewer administered confidential survey assessing sexual behavior, substance abuse, social support, self-efficacy, readiness to change, and mental health symptoms.	Transtheoretical Model	Unlike in the US, readiness to change influences condom use instead of self-efficacy for condom use in Thailand.
10	(Oyekale and Oyekale, 2012)	Uses the health-belief model to interpret HIV attitudes and risky sexual behavior.	Nigerian youths between the ages of 14-30 chosen from the 1991 census. Sample included n=27,757 participants.	Retrospective analysis of data from the National Living Standard Survey, with descriptive and prohibit regression methods.	Health Belief Model	Knowledge of HIV transmission methods increased the use of condoms. Men have a less likelihood of changing risky behavior.
11	(Protogerou and Hagger, 2017)	Develops an integrated theoretical model for the use of condoms in adolescence.	Reviewed studies in which condom use was the measured variable, measured condom use as a partial variable, sampled young people, used a cross-sectional or intervention designs, or were full-text and peer reviewed.	Scoping literature synthesis to determine key points and determinants of condom use.	Social-Ecological, Social-Cognitive	Social-cognitive factors which impact condom use are attitudes, control perceptions, norms, and self-representation. The social-ecological factors which influence condom use are relational, individual differences, societal/ structural, and community and peer influences.

#	(Authors, Year)	Purpose	Sample	Design	Theory/ Constructs	Results/ Conclusions
12	(Sanchez-Dominguez et al., 2017)	Evaluates the differential item functioning for substance abuse in the theory of planned behavior.	N=50 students age 18-25 in Mexico City, typically at universities. Sample included 29 men and 21 women.	Two phases, both of which were a convenience sample with a self-administered questionnaire.	Theory of Planned Behavior	For study one, factors influencing condom use were self-efficacy, attitudes, and subjective norms. The second study showed an impact in attitude and norms with a negative correlation to substance abuse.
13	(Szucs et al., 2020)	Estimates contraceptive and condom use in sexually active high school students in the US.	Public school students, grades 9-12 in 50 states and D.C. who were sexually active within the last three months.	Data collected from the Youth Risk Behavior Service, a cross-sectional high school-based survey. Data was then analyzed for contraceptive use in sexually active students.	Health Belief Model	89% of students reported using condoms in their last sexual encounter. Demographics studies showed that Black students used condoms less than white or Hispanic students. Additionally, students in high risk situations for substance abuse were less likely to use condoms.

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