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Rape Myth Acceptance among Adolescent Males – How to Integrate Components of Preventative Sexual Assault Programs into Sex Education

by

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requirements for the degree of

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Abstract

Rape and sexual assault have become two of the most prevalent forms of violent crime in the United States. Among all cases of sexual assault and rape, college-aged females are by far the most victimized group. Interventions within the field have focused on college male's adherence to rape myths with the belief that changing these attitudes may decrease the prevalence of sexually violent behavior. Because of this, college campuses have become the primary target of intervention with preventative sexual assault programs (PSAPs) as a common method of delivering this education. However, the delivery of these interventions has the potential to be more effective among adolescents who are developing biologically, psychologically, and sociologically. Capitalizing on these naturally occurring dimensions of adolescent development may lead to greater retention and eventual attitude change. This paper aims to analyze the critical components of PSAPs and argue for their integration into sex education as an intervention for the formation of rape myth in adolescent males.

Introduction

There is no denial that rape and sexual assault have become quite prevalent, with 20 million out of 112 million women (18%) in the US having been raped within their lifetime. This percentage does not account for unreported assaults, another 16% of sexual assaults are never reported to the authorities (Kilpatrick, Resnick, Ruggiero, Conoscenti, & McCauley, 2007). Among this population, women ages 16 to 24 were found to be four times more likely than any other age group to be assaulted (Smith & Welchans, 2000). Several studies have found that more than 80% of these victims knew their attacker (Breitenbecher & Scarce, 1999; Lonsway, 1996; Marciniak, 1998). To combat the high

victimization among college students, universities began implementing intervention and prevention strategies. College campuses became the primary target of intervention with preventative sexual assault programs (PSAPs) as a common method of delivering this education. However, the delivery of this instruction has the potential to be more effective with adolescents who are developing their sexual identity and other developmental milestones. My research aims to analyze the critical components of PSAPs and argue for their integration into sex education as an intervention of adolescent male's formation of rape myths.

Background

The National Institute of Justice estimates that one in six women have been victimized by a man either in an attempted or a completed rape (Hayes, Abbott, & Cook, 2016). Gidycz and Kelley (2016) found that women have anywhere from a 17 to 25 percent chance of being raped over the course of their lifespan. Females victims accounted for 94% of all completed rapes, 91% of all attempted rapes, and 89% of all completed and attempted sexual assaults (Rennison, 2002). Unfortunately, data about the actual prevalence of sexual assault and rape cannot be conclusive. About 63% of completed rape, 65% of attempted rape, and 74% of completed and attempted sexual assaults go unreported to the authorities (Rennison, 2002). In one of the most frequently cited articles within this body of research, Koss et al., (1987) estimated that for every rape that is reported to the authorities, anywhere from 3 to 10 rapes go unreported. While this study remains a dated estimate, Kilpatrick et al., (2007) compared statistical data on sexual assault and rape reports and found that the number of women forcibly raped and

the number of rapes reported to the authorities has stayed consistent over the past 15 years.

Among all cases of sexual assault and rape, college-aged females are by far the most victimized group (Kilpatrick et al., 2007; Koss, Gidycz, Wisniewski, 1987; Gidycz & Kelley, 2016; Hayes, Abbott, & Cook, 2016; Langston & Sinozinch, 2014; Smith & Welchans, 2000; Xenos & Smith, 2001). The prevalence of sexual assault is three times greater for college women than among the general population (Yeater & O'Donohue, 1999). Xenos and Smith (2001) found that 47% of alleged rapists are under the age of 25, suggesting that one of the reasons that college students are highly victimized is because almost half of the sexual offenders in the nation fall within the same age bracket.

Research on sexual offenders has indicated that 25 to 60 percent of college men have exhibited some form of sexually coercive behavior (Berkowitz, Burkhart, & Bourg, 1994). The growing percentage of young men displaying manipulative sexual coercion is correlated to the percentage of victimized women. As noted before, women ages 16 to 24 are four times more likely to be assaulted than any other age group (Smith & Welchans, 2000). Although less than 10% of the general population is made up of adolescents, it is estimated that 20 to 50 percent of assaults are perpetrated against them. Six out of ten of these assaults occur before the victim reaches the age of 18 (Bowley & Lawrence, 1995).

Another troubling fact about sexual assault and rape in the United States is that most people believe that a stranger is more of a threat for assault than one's peers or acquaintances. Most victims know their attacker before they are assaulted. Among the general population, anywhere from 66 to 80 percent of sexual assaults are committed by an acquaintance (Gidycz & Kelley, 2016; Treat, Viken, Farris, & Smith, 2016; Yeater &

O'Donohue, 1999). Over 200,000 of these assaults are perpetrated by an intimate partner (Mulliken, 2006). Within these college samples, 50% of forcible rapes were perpetrated by a classmate, friend, or boyfriend of the victim (Kilpatrick et al., 2007). Almost 80% of college aged victims knew their offender before they were assaulted (Langston & Sinozinch, 2014; Treat et al., 2016). The proportion of unreported assaults also skews the data on acquaintance rape; 61% of completed rapes, 71% of attempted rapes, and 82% of sexual assaults by a person known to the victim go unreported (Rennison, 2002).

The prevalence of sexual assault and rape as well as the myths that have been perpetuated about them are the result of a societally constructed rape culture (Klaw, Lonsway, Berg, Waldo, Kothari, Mazurek, & Hegeman, 2005). Attitudes toward sexual assault within a male-dominated society normalize victim-blaming ideology and lead to the continued acceptance of rape myths. Examples of the ideology that results from this culture include the belief that strangers are the most common perpetrators of rape, that a victim can stop their attack (e.g., by their choice of clothing or alcohol consumption) or that a woman's consent to other physical activities inherently consents to intercourse. Hayes, Abbott, and Cook (2016) believed that this culture is the result of patterns of unconscious and conscious hetero-normative and privileged traditions that are accepted over time. From the feminist perspective, sexual violence results from male socialization and conditioning that maintain patriarchal ideals of masculine dominance and power (Burt, 1980; Bowley & Lawrence, 1995; Gidycz & Kelley, 2016). Sociocultural theorists express that rape is representative of a larger phenomenon where women are subordinate, therefore sexual violence is accepted as normal (Cowan & Campbell, 1995; Mulliken, 2006; Swauger, Witham, & Shinberg, 2013).

This type of victim blaming ideology alongside attitudes about rape that are accepting of these myths are commonly held by both men and women. Burt (1980) defined rape myths as a “prejudicial, stereotyped or false belief about rape, rape victims, or rapists”. Rape myths have also been defined as “attitudes and beliefs that are generally false but widely and persistently held that serve to deny and justify male sexual aggression against women” (Lonsway, 1996). The acceptance of these myths is found to be correlated to a man’s potential to rape (Foubert & Marriott, 1997; Smith & Welchans, 2000). Lanier and Green (2006) reported that rape supportive attitudes were a consistent foundation for predicting future sexual assault and rape, suggesting that present attitudes and beliefs about rape can predict and influence future behavior.

Although many rape myths are accepted by both genders, most researchers have found a statistically significant difference in the acceptance of rape myths between males and females. Males overwhelmingly adhere to more rape myths than females, particularly ones that place the responsibility of an assault on the victim (Berkowitz, Burkhart, & Bourg, 1994; Fetley, Ainslie, & Geib, 1991; Frese, Moya, & Megia, 2004; Hayes, Abbott, & Cook, 2016; Lanier & Green, 2006; Marciniak, 1998; Paul & Gray, 2011; Proto-Campise, Belknap, & Wooldredge, 1998; Smith & Wilchans, 2000; Swauger, Witham, & Shinberg, 2013; Xenos & Smith, 2001). In their study of 608 Australian teenagers, Xenos and Smith, (2001) found that similar to studies of American students, males were more likely to associate the length and commitment of a relationship to sexual access and a man’s “right” to have sex with a woman. Similarly, Lanier and Green (2006) reported that within a sample of 851 college males, rape supportive attitudes on early survey’s predicted forced or coerced sexual endeavors on their follow-up. The

literature clearly shows a skewed acceptance of rape myths based on gender, and that the acceptance of these myths can be a predictor for future perpetration of sexual violence.

Differences in rape attitudes have been theorized as a function of gender role expectations and socialization (Cowan & Campbell, 1995). To some degree, these differences account for rape supportive attitudes among men within a culture that perpetuates patriarchal ideals. Gender role socialization within a rape culture frames an individual's attitudes and beliefs within a set of highly gendered expectations, closely associated with traditional masculine and feminine roles (e.g., men are more powerful than women, women are more nurturing). The attitudes, values, and beliefs that are tied to this socialization process are influenced by one's family, society, and peers (Xenos & Smith, 2001). Some of these expectations for males include dominance, power, control, and emotional detachment. Berkowitz, Burkhart, and Bourg, (1994) argue that our society supports the objectification of women in this process and thus encourages violent and coercive behavior among the male population.

Sex-role socialization and gender-role socialization are linked to attitudes that are taught in systems and traditional values that are passed on from previous generations. Frese, Moya, Megias, (2004) reported that the acceptance of rape myths is linked to traditional gender-role stereotypes, particularly ones related to sexual behavior. Proof of this correlation is reflected in the finding that sexually coercive men are shown to have a higher acceptance toward hypermasculinity, aggression, and dominance within intimate relationships (Berkowitz, Burkhart, & Bourg, 1994). It is no coincidence that the belief in traditional power dynamics affects the way that men treat women within our society. Women are demeaned and commonly seen as sexual objects, thus the abuse of them is

justified and blame is attributed to victims of them (Swauger, Witham, & Shinberg, 2013). While traditional, gendered beliefs are not accepted by all males, there is a significant proportion of males that have been conditioned to accept these attitudes and make decisions based off them.

The Need for Intervention

The socialization of rape myth acceptance (RMA) is a particularly important factor to consider when contemplating intervention and prevention methods. While gender and sex-role socialization begins at infancy, there is a critical period when socialization manifests into strongly held beliefs and values. Swauger, Witham, and Shinberg (2013) found that by the age of 14, sexual attitudes are consistently and strongly held within an individual's social consciousness. Similarly, Cowan and Campbell (1995) argued that rape supportive beliefs are generally formed before adulthood is reached. Xenos and Smith (2001) supported Cowan and Campbell's argument and found that rape myths were regularly accepted among student populations.

However, most prevention and intervention programs up to this point have been focused primarily on college students. Focusing on this age group has been warranted, because it is highly victimized; nearly 6 million women attending public universities in the U.S have been raped (Kilpatrick et al., 2007). Based off the proportion of female victims on college campuses, amendments were made to the Campus Security Act in the 1990's. These amendments mandated the provision of federal funding to sexual assault prevention programs at all public universities in the U.S (Anderson & Whiston, 2005; Heppner, Humphrey, Hillenbrand-Gunn, & Debord, 1995; Treat et al., 2016). Prevention programs at public universities have generally been constructed as follows: a pre-survey

of rape-related attitudes, a 1-2-hour presentation covering typical prevention criteria, and a follow up survey 2 weeks after the presentation (Anderson & Whiston, 2005; Breitenbecher, 2000; Klaw et al., 2005). Programs following this pattern have produced results with short term attitude change, particularly with males (Anderson & Whiston, 2005; Breitenbecher, 2000; Hayes, Abbott, & Cook, 2016; Heppner et al., 1995; Mulliken, 2006; Paul & Gray, 2011; Smith & Wilchans, 2000).

Many researchers have argued for the implementation of long-term programs, including follow-up assessments that go beyond the typical 2-week period (Foubert, 2000; Heppner et al., 1995; Yeater & O'Donohue, 1999). The longest follow-up survey conducted after a prevention program was conducted in 2000 by Foubert. The study focused primarily on fraternity members and showed the longest interval of attitude change (7 months). However, the program itself consisted of the standard 1-hour long presentation. Many authors have theorized about the positive effects of programs that move beyond a single presentation, one that is conducted over several months or even years. Further exploration of long-term programming will be discussed in a later section of this paper.

Because college students are the primary target for intervention, the majority of research on PSAPs has been conducted on college campuses. Most of these programs implement a certain set of criteria that have been proven to create short term attitude change. To implement these programs with a younger demographic (adolescent males), there needs to be solid evidence that the content covered with college students produces attitude change. Beyond the results of these program, there needs to be an understanding of how these elements produce change. To understand these components, the next section

will provide an overview of what researchers deemed as empirically supported components of PSAPs.

Section 1: Critical Components

It is critical to understand how each component of PSAPs create attitude change before arguing for their implementation with the adolescent population. The components that have been found to affect attitude change the most within the literature include the following: (1) educational facts and statistics about the prevalence of rape and sexual assault, (2) victim empathy induction, (3) environmental factors/risk-related dating behaviors, (4) debunking of rape mythology, (5) sex-role and gender-role socialization, and (6) discussion of dating expectations and communication of sexual intentions. This first section will also outline other factors that contribute to the success of these programs such as the target audience and the facilitator's role.

Facts and Statistics

Most PSAPs included a section that outlined basic information about sexual assault and rape (Lonsway, 1996). Topics that were commonly covered include the legal definitions of rape and sexual assault (Schewe & O'Donohue, 1993, an in-depth analysis of rape as a violent crime (O'Donohue, Yeater, & Fanetti, 2003), and discussion about the actual prevalence of sexual assault and rape (Paul & Gray, 2011). This information is critical because previous research has shown that men who commit sexually violent acts do not define their actions as coercive or manipulative (Heppner et al., 1995). The perpetuation of sexual violence has been marked by poor knowledge of sexual assault leading to stereotypical information regarding these topics.

Research has shown that knowledge about rape and sexual assault has created the most positive and lasting change, meaning that participants of these programs tend to remember this section more often than others (Anderson & Whiston, 2005). Researchers found that many participants retained significant knowledge about rape and sexual assault 4 to 5 months post-intervention (Heppner et al., 1995). The retention of this information is the strongest evidence for including this section in PSAPs. Men's reported likelihood of raping was negatively correlated with knowledge of rape trauma and prevalence (Foubert & Marriot, 1997). Engaging with factual evidence of rape and sexual assault forces participants to gain insight into the prevalence within our society. The staggering numbers in the background section of this paper represent some of the statistics that may be presented during an intervention.

Empathy Induction

The true accounts and stories of victims of sexual violence is an intuitive component to include in PSAPs. Cognitively, the goal of empathy induction is to get participants to understand the perspective of victims directly affected (Schewe & O'Donohue, 1993). Many studies have shown that creating empathy for victims decreases an individual's potential to sexually assault in the future (Yeater & O'Donohue, 1999). This approach alone has not been empirically successful in creating lasting attitude change, but when paired with other components, it can contribute to change in participants. As a supportive element, empathy induction acts as a complementary method for creating personal connection and relationship between potential perpetrators of sexual violence and their victims.

Paradoxically, Mulliken, (2006) found that certain programs that aimed to create empathy resulted in participants increased acceptance of rape-supportive behaviors. One study had men listen to an audiotape of a woman telling her account of being sexually victimized. The post survey revealed that men in this study showed a greater probability of acting sexually aggressive after listening to the tape (Mulliken, 2006). Paul and Gray (2011) found that inducing survivor empathy using female victim's stories was less effective with men. However, when male participants of these programs were given an account of sexual victimization from a male victim's perspective, they showed greater increases in attitude change and a decreased probability of future potential to perpetrate (Piccigallo, Lilley, & Miller, 2012; Schewe & O'Donohue, 1993). Berkowitz et al., (1994) suggested that programs could enhance empathy by including both male and female perspectives of victimization. The male perspective helps male participants connect and relate to victimization, and illuminates how sexual violence is not discriminatory. The female perspectives gives an account of the more commonly victimized group, connecting the empathy induced from the male perspective and humanizing women. Both perspectives provide an important basis for creating lasting attitude change.

Environmental Risk Factors

Many researchers have been considering what environmental factors trigger sexually assaultive behavior. External factors such as pornography and its transmission of stereotypical beliefs (Schewe & O'Donohue, 1993), peer groups that commonly perpetuate rape-supportive attitudes (Heppner et al., 1995), and lowered inhibitions from drug or alcohol consumption all potentially trigger assaultive behavior. These factors do

not independently create sexual violence, but they are important to consider because they can influence a potential perpetrators likelihood of acting out. The Situation X Person interaction model created by Berkowitz et al., (1994) emphasizes how there cannot be one causal factor that is particularly predictive of sexual assault. For example, males who adhere to rape myths may not sexually assault unless they are triggered by a risky environmental factor that elicits the behavior. Considering the interaction between the acceptance of rape myths and contingencies within the environment is important for programs to evaluate and discuss.

While considering environmental risk factors, it is important to attribute the responsibility of assaults fully to the perpetrator. This point should be explained to the participants of these programs before factors are presented. Failing to do so could result in negative outcomes such as increased victim-blaming ideology. Schewe and O'Donohue, (1993) found that programs that have individuals identify high-risk situations help them understand how these environments influence or contribute to potentially dangerous and reckless decisions. While some of these sociocultural factors cannot instantly change, creating awareness begins the process of changing these environments.

Debunking Rape Mythology

Teaching men how to recognize rape-supportive myths and disputing these beliefs is the most common form of male-focused rape prevention efforts (Schewe & O'Donohue, 1993). Anderson and Whiston, (2005) found that this intervention tactic has the second largest effect on lasting attitudes (knowledge of rape prevalence has the largest effect). Rape myths are the result of a societally constructed rape culture that

supports and excuses the actions of perpetrators and places blame onto victims. An example of a rape myth would be the belief that a woman's attire contributed to why she was assaulted. The assumption that the victim is "asking for it" and that she is to blame for being attacked because she is "scantily clothed". These beliefs have led our society to excuse unjustified behavior and allow for the continuation of violent sexual acts.

Researchers have shown that higher rates of RMA are correlated to reported likelihood of sexual aggression (Foubert & Marriott, 1997; Paul & Gray, 2011). The common acceptance of these myths causes concern among intervention developers in trying to combat these highly ingrained patriarchal ideals.

There is ample evidence to support the negative correlation between debunking rape myths and one's potential to engage in sexually assaultive behaviors (Foubert & Marriott, 1997; Paul & Gray, 2011; Yeater & O'Donohue, 1999). However, there is still debate on the extent to which changing attitudes cause a change in behavior. There is no empirical evidence to support a causal relationship between attitude and behavior change. Programs that aim to debunk rape myths aim to create a new set of beliefs about rape and sexual assault that will lead to change in future behavior. Unfortunately, there is no way to measure causality. Programmers must rely on the notion that attitude change has the potential to change future behavior. O'Donohue, Yeater, & Fanetti, (2003) reported that sexual violence is the result of multiple factors, one of which is directly connected to a person's internal inhibitions. This theory is based on the idea that one's perception and how they react to external stimuli is dependent on the regulation of their own thoughts and beliefs. A key factor of this process is regulation, the ability to introspect and make a conscious decision about how those thoughts align with their morals and values. The

authors concluded that in this circumstance, a lack of internal inhibition led to stereotypical and traditional beliefs about a male's role in society and the myths that support them. Programs that include a section on debunking rape myths are addressing the root cause of sexually violent crimes that continue to be excused and perpetuated.

Gender and Sex Role Socialization

While rape myths tend to be the most commonly addressed topic of PSAPs, these myths are rooted in ongoing cultural norms. Children learn their role within society first from their parent's example, then from other family members and peers. Additionally, an individual's gender categorizes them into a specific role that they are expected to fill. These roles are defined by stereotypical beliefs and actions that separate males from females. Examples of early gender role expectations include boys being more aggressive, violent, strong, and powerful. Girls are expected to fill the submissive role within our society, being soft, empathetic, passive, and less powerful (Klaw et al., 2005). As girls and boys grow up within the parameters of their societies inherent expectations, they are socialized to conform to their roles belief system and behave accordingly.

Gender inequality is a result of the normal socialization process. Males that adhere to these traditional and stereotypical beliefs are far more likely to accept rape myths and are therefore more likely to be potential perpetrators of sexual violence (Paul & Gray, 2011). From a young age, women are taught to protect themselves against an attacker by carrying a whistle or pepper spray, avoiding dangerous areas, and dressing modestly. It is important to give women the resources they need to keep themselves safe, but focusing solely on how women protect themselves neglects a necessary focus on the men who are attacking them. Women will continue to be vulnerable to sexual violence "to the extent

that there are men who will commit acts of sexual assault” (Schewe & O’Donohue, 1993). Meaning that no matter how many resources we give women to protect themselves, they still have the potential to become a victim of sexual violence so long as men continue to deem such behavior as acceptable. Schewe and O’Donohue, (1993) found that the interpersonal nature of rape has led many researchers to conclude that the perpetration of this crime is based within social learning. Many of these researchers suggest that a lot of sexually violent crimes are motivated by a man’s desire to feel dominant and powerful. Both power and dominance are socialized into boys from a young age through sexually aggressive messages in the media (i.e., advertisements that campaign women as sexual objects for men to conquer).

Discussion of gender role socialization in prevention programs is crucial in contextualizing the development of RMA from a sociocultural perspective. Burt (1980) found that stereotypical sex role beliefs were associated with RMA, acceptance of interpersonal violence, and adversarial sex role attitudes. These beliefs have since been found to be correlated to sexually aggressive behavior among men (Breitenbecher, 2000). Specific topics related to gender socialization that prevention programs have addressed and successfully created lasting attitude change within include: countering the belief that power, sexual dominance and control are related; teaching men how to find prosocial sources of power; reducing and redirecting anger and hostility towards women; and attempting to reduce the desire to inflict pain onto others (Mulliken, 2006; Paul & Gray, 2011; Schewe & O’Donohue, 1993).

Expectations and Communication

Only a handful of programs have emphasized the importance of communicating dating expectations in avoiding potentially risky situations. Consent has become an important topic within PSAPs, keeping a dialogue open about what consent is and how to make sure that both partners engaging in sexual activities are giving their full consent. While many situations are clearly abusive or coercive, a spectrum of communication confusion exists within many sexual encounters. Schewe and O'Donohue (1993) stated that the development of a curriculum that enhances social skills “especially the interpretation of negative cues from women” is an important intervention tactic. This component should include open discussion about dating and the expectations that each person has in a relationship. Participants should understand that consent should not be assumed based on body language, appearance, or past sexual activity. Discussion about the dynamics of communication has the power to highlight the importance of verbal consent and how the absence of a ‘no’ does not mean ‘yes’ when pertaining to sexual consent.

Target Audience

Many researchers have found evidence to support that single-sex programs are more successful than mixed-sex programs (Anderson & Whiston, 2005; Berkowitz, Burkhart, and Bourg, 1994; Foubert & Marriott, 1997; Hayes, Abbott, & Cook, 2016; Paul & Gray, 2011; . Piccigallo, Lilley, and Miller, 2012; Proto-Campise, Blknap, & Wooldredge, 1998; Yeater & O'Donohue, 1999). Prevention efforts that focus primarily on the female population run the risk of perpetuating victim blaming ideology that could prevent efforts to provide helpful information (Berkowitz, Burkhart, & Bourg, 1994; Yeater & O'Donohue, 1999). Multiple authors argue for targeting males based on the fact

that males are the primary perpetrators of rape (Anderson & Whiston, 2005; Hayes, Abbott, & Cook, 2016), and that males are more accepting of rape myths than females (Berkowitz, Buckhart, and Bourg, 1994; Fetly, Ainslie, & Geib, 1991; Frese, Moya, & Megías, 2004; Hayes, Abbott, & Cook, 2016; Lanier & Green, 2006; Marciniak, 1998; Paul & Gray, 2011; Proto-Campise, Blknap, & Wooldredge, 1998; Smith & Welchans, 2000; Swauger, Witham, & Shinberg, 2013; Xenos & Smith, 2001).

Other factors that contribute to the success of PSAPs in creating lasting attitude change is the environment within which participants are adhering to the content. Berkowitz, Buckhart, and Bourg (1994) found that programs that were all-male offered a safe environment for men to openly discuss attitudes and behaviors that make them potential perpetrators. Single-sex programs addressed specific issues pertaining to the male participant's perceptions of sex role socialization and how it has affected their current attitudes towards sexual assault. Piccigallo, Lilley, and Miller (2012) asked participants in their study what they believed was “the best way to get male students involved in the prevention of acquaintance rape”, many responded that discussing the topic with other men was the most effective approach. For true prevention to occur, men must be engaged and actively participating in the program. Surrounding participants of these programs with their male peers gives them an open environment to be vulnerable and honest about their beliefs. This method has proven to be the most effective in creating lasting attitude change.

Facilitator Credibility

The extent to which participants view the facilitator as credible is pertinent to the success of a program. The facilitator has the responsibility of actively engaging participants in the content. In a meta-analysis of prevention programs, Anderson and Whiston, (2005) concluded that professional presenters were more successful in promoting positive attitude changes when compared to graduate students and peer educators. Similarly, Paul and Gray (2011) made the argument that although peer education may aide in participant's overall comfort, programming that was led by a professional presenter were more successful in creating lasting change. They found that attitude change and behavior change were positively correlated with perceived facilitator credibility and the persuasiveness of the programs content. Piccigallo, Lilley, and Miller (2012) also supported these findings; the authors found that adult educators were more effective than peer educators in transferring important information. The authors believed that professional facilitators are more successful because participants view them as credible sources and therefore critically thought about the content that was presented to them.

Attitude Change

The overarching goal of PSAPs is to create lasting and effective attitude change in participants. It is assumed that those who complete these programs with less rape-supportive beliefs will be less likely to perpetrate in the future. Researchers have found that most educational programs are consistent and effective in changing attitudes toward rape (Anderson & Whiston, 2005), but cannot conclude definitively that this attitude change will reduce actual incidence of sexual assault or rape. There is no empirical evidence to support a causal relationship between attitude and behavior change

(Breitenbecher, 2000). However, many authors theorize that attitude change is correlated to behavioral intentions and therefore can create shifts in behavior (Hayes, Abbott, & Cook, 2016). Piccigallo, Lilley, and Miller (2012) found that male participants in their study could identify specific changes that resulted from attending an intervention. These changes included combating sexist behavior and language of their peers and providing more support to victims of sexual assault. Unfortunately, the only evidence of lasting behavior change is the overall decrease of rape and sexual assault incidence in the United States since the 1990's when PSAPs were implemented and federally mandated for public universities.

One of the biggest concerns in creating the kind of attitude change that will result in behavior change is the depth of program content. Many interventions are brief, lasting anywhere from 30 minutes to 2 hours in length (Foubert & Marriott, 1997; Klaw et al., 2005). These short programs are unable to produce attitude change that lasts longer than a few weeks (O'Donohue, Yeater, & Fanetti, 2003). Anderson and Whiston (2005) believed that it is "unrealistic" to expect short programs to have any type of a lasting impact on the attitudes and behaviors of participants. However, longer programs have proven to create lasting change in rape-supportive attitudes (Anderson & Whiston, 2005; Heppner et al., 1995; Klaw et al., 2005; Mulliken, 2006; Paul & Gray, 2011). Klaw et al., (2005) studied an intensive semester-long program and found that this longer format led to participant retention and attitude change two years post-completion. The success of this program came from breaking up interventions into multiple sessions (Paul & Gray, 2011). Multiple sessions over the course of several weeks kept the participants engaged and allowed time for an in-depth exploration of each component. The increased length of

time for each topic and repetition led to the program's long-term success (Heppner et al., 1995).

Younger Populations

With a better understanding of the components that lead to the success of PSAPs in changing negative attitudes, researchers are beginning to focus on a shift in the target demographic. Sexual attitudes are being formed earlier in development, leading many researchers to hypothesize about the positive effects of implementing intervention strategies with a younger age group (Klaw et al., 2005; Lonsway, 1996; Mulliken, 2006; Piccigallo, Lilley, & Miller, 2012). Mulliken (2006) reported that many of the beliefs about sexuality, gender roles and social attitudes are solidified before college. Therefore, incoming freshman who already accept rape myths that participant in PSAPs must be re-educated. By targeting a younger demographic, the critical program components identified have the potential to change student attitudes before they are solidified. The second section of this research paper will highlight the biological, psychological, and social factors that occur in late adolescence that arguably make this developmental period primed for intervention. The theoretical underpinnings that support this argument include social learning theory, and stage theory of psychosocial development which will be explained at length within the body of the second section.

Section 2: Adolescent Development

There are several biological, psychological, and social factors that contribute to an individual's growth and development. Particularly in adolescence the development of cognitive processes, socialization practices, and formation of identity are heightened by the drastic hormonal and physical changes that occur. Compared to young children,

adolescence is a developmental period marked by incredible strength and resilience (Dahl, 2004). Alongside the physical changes that compliment puberty, there are dramatic changes in identity and cognition that coincide with new social and environmental factors (Blakemore & Choudhury, 2006). The following section aims to analyze the essential processes that occur within adolescence. Understanding how these factors influence and drive development will aide in clarifying how adolescence is a short window of opportunity for intervention.

Biological Factors

Adolescence is a developmental period that begins with puberty and a set of biological changes and concludes when a person is socially and cognitively mature (Blakemore, Burnett, & Dahl, 2010). The onset of puberty generally occurs between the ages of 8 and 14 for girls and ages 9 and 15 for boys (Blakemore et al., 2010). During adolescence, the body goes through rapid growth and maturation in a relatively short amount of time. Dahl (2004) stated that while an adolescent develops a sexually mature body, their neurobiological systems for self-control take more time to develop. This leaves the adolescent with hormones that drive them towards risk-taking behavior without the ability to regulate those emotions properly.

Hormonal changes in the adolescent body are set and regulated by the brain. Brain development during adolescence is marked by the development of the prefrontal cortex. The amygdala is a part of the brain that is already developed, it regulates emotional responses and during adolescence this region is hyperactive and highly responsive to incoming stimuli (Choudhury, Blakemore, & Charman, 2006). The prefrontal cortex (PFC) is associated with the development of rational decision making. This region does

not fully develop until around age 25, leading many researchers to believe that the interplay between the amygdala and the PFC is responsible for the impulsive and emotionally driven behaviors that mark adolescence (Choudhury, Blakemore, & Charman, 2006; Cowan & Campbell, 1995; Dahl, 2004; Steinberg & Morris, 2001). Alongside the development of these regions, a process called synaptic pruning occurs throughout many neural pathways in the brain. Synaptic pruning is the process by which important neural pathways are strengthened while ones that are less important are pruned (Choudhury et al., 2006). Ultimately the pathways that are left help adolescents process information faster and more effectively. Many of the strengthened pathways are affected by repeated exposure to external environmental stimuli.

Synaptic pruning is the primary process by which researchers understand and conceptualize brain plasticity. Plasticity is the brain's natural ability to change and adapt throughout the life cycle. The pruning of neural pathways throughout adolescence is seen in MRI scans of the brain through the decrease of gray matter, which is the measure of the density of cells within a region. There is a decrease in gray matter during periods of mass synaptic pruning (Blakemore, Burnett, & Dahl, 2010). Alongside these decreases in cell density, an increase in white matter occurs (Blakemore & Choudhury, 2006). White matter is representative of the myelination of neural pathways. Myelin is the sheath of fatty acids that aid neurotransmitters in processing information. Myelinated neurons process information at a faster rate, thus the increase of white matter and decrease of gray matter represent adolescent brain plasticity.

The biological changes that occur during adolescence directly affect their psychological, cognitive, and social development. The brain during adolescence can take

information and process it at a faster rate than it can during childhood. Choudhury, Blakemore, and Charman (2006) argued that the synaptic reorganization that occurs during puberty makes the brain more sensitive to social and cognitive inputs. Utilizing this period to educate adolescents is arguably one of the best opportunities for intervention based upon the plasticity of the brain and the strengthening of lasting neural pathways. Information can simultaneously be processed efficiently and retained within the adolescent's long term and working memories.

Psychological Factors

A combination of fMRI and behavioral studies have documented the development of brain regions responsible for executive functions during adolescence (Choudhury et al., 2006). Executive functions are defined as cognitive abilities that allow a person to control their thoughts and behaviors (Blakemore & Choudhury, 2006). Some skills that are developed through executive functions include risk assessment, selective attention, decision making, impulse control, and social cognition (Choudhury et al., 2006). Executive function is associated with PFC maturation. Corollary evidence supports the relationship between the PFC and one's ability to exercise cognitive control. Blakemore and Choudhury (2006) argue that once social cognition is established, it can be difficult to change and incorporate new skills. While these processes begin in childhood and preadolescence, the adolescent brain integrates these cognitive abilities and exhibits a higher capacity for controlling thoughts and behaviors. As stated before, the amygdala develops at a faster rate than the PFC, potentially explaining the proclivity of an adolescent to engage in risky, emotionally driven behavior. However, their ability to

assess behavior is not totally inept, leading researchers to believe that adolescents can adhere to interventions.

Alongside the biological changes that occur during adolescence, cognitive processes are simultaneously developing. Cognition is an overarching term that encapsulates the many dimensions of thought. It is the development of processing, interpreting, and conceptualizing information among other aspects of brain development. The foundation of understanding shifts in cognition as we develop began with Jean Piaget and his stage theory of cognitive development. Through his longitudinal studies of children, he developed a theory that categorizes cognition into four stages: sensorimotor (birth to age 2), preoperational (age 2 to 7), concrete operational (age 7 to 11), and formal operational (adolescence through adulthood) (Steinberg & Morris, 2001) These stages are no longer considered consistent brackets defined by age parameters, but his theory gave a foundation for the progression of cognitive development. While the earlier stages are marked by a lack of awareness beyond the self, the formal operational stage is marked by an ability to think beyond one's perspective.

Adolescents that have achieved formal operational thought are able to engage in abstract thought, logical processing, and deductive reasoning (Choudhury et al., 2006). Deductive reasoning is the process of taking one or more statements that are true and using them to reach a logical conclusion. According to Blakemore and Choudhury (2006) adolescents are more self-aware and self-reflective than their younger counterparts. The ability to think abstractly and strategically is an important milestone to meet for an adolescent to understand and consider the complexities of their world. Pertaining to education, the ability to think logically taps into the understanding of sexual assault and

rape from a sociological view rather than solely from an individual perspective.

Adolescents that have achieved formal operational thought are able to grasp the societal influences that create and perpetuate a rape supportive culture.

Another psychological process that occurs during adolescence is identity formation and development. Steinberg and Morris (2001) argued that most identity formation occurs late in adolescence, and sometimes doesn't occur until early adulthood. In a meta-analysis of adolescent self-reported identity statuses, Kroger, Martinussen, and Marcia (2010). found that a large proportion of the samples had not reached "identity achievement" by the time they were young adults. Adolescents are searching for how they fit into society, exploring different lifestyles to find the one that best suits them. Two major theorists that contributed to the topic of identity formation are Erik Erikson and James Marcia. Erikson's stage theory of psychological development did not exclusively pertain to adolescent development, rather development throughout the entire lifespan. Marcia extended this theory, focusing primarily on adolescent development and what he described as the four dimensions of identity formation.

Erikson was the first researcher to define identity within the context of development. His theory of psychosocial development over the lifespan is defined by eight separate and distinct stages. According to Erikson, each stage is marked by a certain "crisis" that must be resolved to move forward to the next stage (see Figure 1) (McLeod, 2013). Identity versus Confusion is the stage that Erikson theorized adolescents are naturally addressing and working through. In the Identity versus Confusion stage, adolescents (ages 12-18) are transitioning from the role of a child into an independent adult. Successfully achieving this stage results in a young adult feeling comfortable with

themselves and establishing a sense of who they are within society. Two of the most demanding dimensions of identity formation during this period of development are sexual and occupational (McLeod, 2013). Role confusion is how Erikson defined adolescents that didn't know how to define themselves and were left unsure about their role in society.

Stage	Psychosocial Crisis	Basic Virtue	Age
1	Trust vs. mistrust	Hope	Infancy (0 to1 ½)
2	Autonomy vs. shame	Will	Early Childhood (1 ½ to3)
3	Initiative vs. guilt	Purpose	Play Age (3 to 5)
4	Industry vs. inferiority	Competency	School Age (5 to 12)
5	Ego identity vs. Role Confusion	Fidelity	Adolescence (12 to 18)
6	Intimacy vs. isolation	Love	Young Adult (18 to 40)
7	Generativity vs. stagnation	Care	Adult hood(40 to 65)
8	Ego integrity vs. despair	Wisdom	Maturity (65+)

Figure 1: Erik Erikson's (1963) stage theory of psychological development. Each psychological crisis must be successfully resolved and accomplished before moving forward to the next stage. The stages are marked by an underlying virtue that is 'achieved' when it is completed.

Refining Erikson's theory of psychological development, Marcia created four identity statuses that occur during adolescence that relate to the individual's exploration and eventual commitment to an identity. The four identity statuses developed by Marcia are diffusion (no exploration or commitment), foreclosure (no exploration but committed), moratorium (exploration but no commitment), and achievement (exploration and commitment) (Marcia, 1966). Through the exploration of identity, an individual is searching to understand their sexual orientation, values, and occupational goals (Kroger,

Martinussen, & Marcia, 2010). As the adolescent develops into an adult, the traditional trend of identity formation goes from diffusion to achievement with variation between the moratorium and foreclosure statuses.

Preventative sexual assault education can be advantageous by utilizing the indefinite nature of adolescent identity status. While the adolescent is searching for their ideological and sexual identity, educators have an opportunity to influence their formation of values. Kroger, Martinussen, and Marcia (2010) presume that once an individual reaches identity achievement, their ideology is much harder to change or influence. Adolescence is a brief period where teenagers are cognitively mature enough to adhere to educational advances while being flexible enough in their values and ideals to change traditional or stereotypical beliefs. Adolescents have a new-found ability to imagine their future selves and how their actions can affect this projected self. The ability to think logically about this sense of self aides in their understanding of the personal consequences of assaulting another person.

Social Factors

From a social learning perspective, adolescent development is driven by the interaction between an individual and their social environment. Attitudes are not activated independent of the influence of social stimuli. There are two primary social learning theories that are applicable to the intersections of adolescent development and their social environment: B.F Skinner's theory of positive and negative reinforcement and Albert Bandura's theory of social imitation (Bartol & Bartol, 2009). Skinner believed that humans respond to their social environment based off reinforcing factors. Bandura suggested individuals don't necessarily need direct reinforcement, rather they can

observe and model behavior (Bartol & Bartol, 2009). The foundation of both theories is that people learn their behavior from their social environment which include their parents, peers, romantic partners, and teachers.

Social environment has a huge influence on adolescents, particularly the influence of peers and friends. The social groups that are formed during this age and the behaviors they engage in influence the socialization process. Social communication is learned through these interactions, and the ability to understand another person's perspective is reinforced. Educators must be aware of the co-influential nature of executive functions and a highly persuasive social environment. Societal influences are often overlooked, even though teens watch an average of 23 hours of television and are exposed to over 200,000 violent acts in the media each week (Bartol & Bartol, 2009). Exposure to pornography and other sexualized media also influence the values and attitudes of adolescents. While there is no evidence that these forms of media create traditional gender role beliefs or cultivate a rape supportive culture, they may contribute to the normalization of objectifying women.

Within the socialization process, adolescents go through a period of being focused solely on their own perspective. This phenomenon is called egocentrism, and it had two complementary processes: the imaginary audience and the personal fable. Before explaining how these processes work, it is important to note that although many adolescents are formally operant cognitive beings, they are not totally free of concrete operations (Lapsley, Milstead, Quintana, Flannery, & Buss, 1986). These processes reflect the concrete operations that are still being developed throughout adolescence and affect their social cognition. The imaginary audience refers to the belief that other people

are constantly noticing, criticizing, and judging them. This mindset leaves a teenager feeling vulnerable, self-conscious, and constantly on alert for signs of their peer's disapproval (Choudhury et al., 2006). A construct related to this process is the personal fable which is the adolescents inflated sense of uniqueness and the belief that they are special compared to their peers.

Egocentrism and the related social constructs that adolescents experience make their socialization process more complex. The influence of peer groups and their friends is more prevalent for adolescents because they are experiencing persistent cognitive restraints. They can think logically and rationally, but are simultaneously triggered by their emotions. Adolescents can still adhere to the information presented by preventative sexual assault programs, but these programs must be altered toward this demographic. Older adolescents tend to be less egocentric, having developed out of the narrow perspective that marked their early pubescent years. Educators can target older adolescents (juniors and seniors in high schools) who have developed perspective taking and other social cognitive abilities and may understand and adhere to the presented information more thoroughly.

Conclusion

The aforementioned areas of biological, psychological and social development in adolescence may align with the core components of PSAPs more effectively than with college-aged populations. This developmental period is primed for synaptic reorganization, creating lasting adherence to interventions. Based on this research, a logical step for researchers is to integrate preventative sexual assault education into high school sex education programs. The components outlined in the first section are shown to

create lasting attitude change with college aged participants, displaying how young adults learn and hold onto the associated values. These components can easily be implemented with a younger demographic, based off the development of the adolescent mind, late adolescence is the best period for this intervention.

The critical components outlined in the first section can be understood and retained by adolescents based off their bio-psycho-social development. Because adolescents can think logically and rationally, the facts and statistics outlined in the first component have potential to be thoroughly understood. They have developed social cognition during this period, and are able to take the perspective of other's. This pertains to their ability to empathize with victims and attempt to understand their perspective. In terms of dating behaviors and their environment, this period is essentially perfect to begin the process of thinking about how these external factors affect their thought process and evidentially their behavior. Adolescents are cognitively aware enough to understand that social systems have developed them to think about the world within a certain set of expectations. This allows them to comprehend how rape myths are perpetuated and the ways in which they are socialized into society. Finally, adolescents are in a heightened state of socializing with peers, friends, and romantic partners. The discussion of dating expectations and communication of sexual intentions is arguably necessary for this demographic to process in order to understand the importance of consent and dismiss any stereotype or prejudice beliefs about power dynamics in relationships.

Sexual assault and rape continue to be a prevalent crime within the general population, and are a particularly common occurrence on college campuses. By implementing the components outlined in the first section and educating younger

students, interventions could decrease the frequency of sexual assault and rape at universities. Interventions that begin in high school can be formatted for long-term programming, allowing facilitators to go into each component in depth and give students enough time to process and retain the presented information. Beginning preventative sexual assault education in high schools prepares students before they are in an environment that is highly victimized. Programs in college universities neglect the fact that students have already developed preconceived notions of the world that are hard to change. These beliefs are practically impossible to change within a single intervention session.

Limitations

There is no guarantee that long term programming of PSAPs in high schools would generate effective behavioral change on college campuses. Evidence that such programs exist, particularly ones that integrate all of the critical components outlined in the first section is lacking. Because attitude change is not causally linked to behavior change, researchers and program developers can only measure change by implementing programs and keeping track of the resulting prevalence rates. Within the field of prevention, there is no empirical evidence to support the success of such a program, only theories of attitude and behavior change. Future research should be conducted using existing PSAP criteria and implementing it with the adolescent population. Pre-and post-surveys that measure rape myth acceptance and stereotypical or traditional gender beliefs would be beneficial for researchers to conduct and analyze. These programs have the potential to create attitude change that is more salient with adolescents versus the commonly targeted young adult population.

The scope of sex education is dependent on individual school districts and what their communities deem as critical information. Without federally funded programs, the implementation of an intervention with PSAP components would most likely only be used in progressive districts. Many schools still that teach abstinence based sex education, these school wouldn't use this program because it fundamentally neglects the core curriculum. Without changing the federal government's role and responsibility in funding equivalent education programs across states, the use of this intervention is unlikely. Legislation needs to be passed in order to develop these programs and make them more consistent and comprehensive across states. Congress has only scratched the surface in terms of discussing the implications of these programs and interventions in creating long-term economic gains.

Implications

While this research is not being used to immediately revolutionize sex education programs, it can serve as an addition to existing research and synthesize evidence supporting the integration of preventative sexual assault programs. Future surveys could be conducted based off this research to understand the longitudinal effects of comprehensive sex education. While the components of preventative sexual assault programs have shown short-term attitude change in participants, it is unclear whether the change in attitude is directly related to decreased rates in sexual assaults. However, there is corollary evidence of behavior change. Early intervention is a method of dispelling rape myths, which could systematically reduce future rates of sexual assault and rape. Overall, this research has the potential to help create more effective sex education criteria. The effects of comprehensive sex education using preventative sexual assault

methods and topics can lead to better communication and a decrease in rape myth acceptance.

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