Understanding Differences in Sexual Violence Perpetration Among College vs. Non-college Men

ABSTRACT

UNDERSTANDNG DIFFERENCES IN SEXUAL VIOLENCE PERPETRATION AMONG COLLEGE VS. NON-COLLEGE MEN

by

YAMINI PATEL

INTRODUCTION: Research on sexual violence (SV) perpetration has primarily focused on undergraduate college men, despite only 40% of young adults attending college in the U.S.

AIM: This study aimed to understand men's SV perpetration over time by tracking a cohort of adolescents through their high school and college-aged years, regardless of college attendance.

METHODS: Data were collected from 347 participants from seven high schools in Houston, Texas. Hierarchical linear modeling was used to examine within- and between-person differences in SV incidence as the primary outcome.

RESULTS: SV perpetration showed a positive but attenuating increase over time. Additionally, men who reported college attendance in a given wave were significantly less likely to report SV perpetration.

DISCUSSION: This study is one of the first to directly compares SV perpetration rates over time in men who attend and do not attend college. Findings suggest a need to include non-college attending men in SV perpetration research to improve generalizability. Future research should explore the possibility of latent classes of perpetration.

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YAMINI PATEL

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APPROVAL PAGE

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by

YAMINI PATEL

Approved:

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Committee Chair

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Committee Member

_____

Committee Member

_____

Date

Author's Statement Page

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YAMINI PATEL

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DEDICATION

I would like to dedicate the following milestone to my sister, Falguni Patel, without whom I could not have done this. Didi - your advice, laughs, and support have made me who I am today. Thank you for being you.

I would also like to thank my brother, Hitesh Patel, and my dear friends Kamilla Bonnesen, Katharina Meredith, Renita Moore, Daniel Lanni, Komal Patel, and Caleb Arehart for their continued support and commiseration throughout the graduate school journey. You all have kept me sane in times of insanity.

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1. Introduction

1.1 Overview

Sexual violence (SV) is a uniquely personal act of aggression, even compared with other forms of interpersonal violence. There has been a great deal of attention on SV experienced and perpetrated by college students during the past decade. Emma Sulkowicz's *Carry That Weight* performance art at Columbia University and the Brock Turner case at Stanford University continue to resonate as reminders of the SV problem that has engulfed many U.S. colleges and universities. The #MeToo social movement touched other sectors, such as TV and film (e.g., Les Moonves and Harvey Weinstein), corporate America (e.g., Alphabet, Inc.), and the U.S. government (e.g., Sen. John Conyers Jr.). Much of what is known about SV in the U.S. is based on studies of college students. This is likely due to a combination of convenience and the fact that most highly-visible acts of SV—including many of the incidents referenced above—are perpetrated by college students or college graduates. Much less is known about SV perpetrated by individuals who will not or have not attended college.

Sexual violence is any sexual activity where consent is not obtained or freely given (Basile et al., 2014, p. 11). This broad definition encompasses a range of attempted or completed acts perpetrated against a person, from sexual touching over clothing to forced sexual penetration. SV can be facilitated in many ways, including use of verbal pressure, threats of physical violence, threats to end a relationship, weapons, physical force, or alcohol/drug incapacitation. Men perpetrate most SV, and most victims are women (Breiding, 2014; García-Moreno et al., 2013). According to a nationally representative survey, about 18.3% of women in the U.S. report experiencing rape or attempted rape compared with 1.4% of men (Black et al., 2011). Perpetration of SV against women is prevalent in almost all social environments in the

U.S.; however, what we know about SV perpetration risk comes mostly from studies of young college men (Tharp et al., 2013). Studies on perpetration trends over time indicate that men who perpetrate SV may fall into different trajectories, or patterns of perpetration, across their collegiate careers (Swartout et al., 2015; Thompson et al., 2013), though these studies have also focused exclusively on undergraduate college men.

The information gleaned from college samples on male perpetration might not be representative of the general population of male perpetrators, especially considering that about 60% of the young adult population in the U.S. aged 18-24 is not enrolled in college (National Center for Education Statistics, 2021). Differences in behavioral norms and expectations on college campuses, such as drinking and impersonal sex patterns, make college students a potentially separate population from young adults who are not in college (Abbey, 2011; Muehlenhard et al., 2016; Santana et al., 2006). These are some of the same individual and situational factors known to be associated SV perpetration: for example, higher rates of heavy alcohol consumption correspond with higher risk for SV perpetration in both college and community samples.

We must better understand SV perpetration incidence rates across time and the impact of college attendance on those trends. To achieve this understanding, we need consistent assessment of SV and related factors from adolescence, beginning in high school, through young adulthood. This approach would eliminate as many potential confounding influences as possible. Fortunately, data that meet these criteria exist, collected as part of the Dating It Safe Project (Temple et al., 2013). The present questions are, therefore: (1) How do SV perpetration rates change over time among adolescent-emerging adult men? (2) Do SV rates vary by college attendance? (3) Do SV rates change over time differently by college attendance?

1.2 Sexual violence research on college campuses

Kilpatrick and Kanin (1957) were the first scholars to research SV perpetration incidence on a U.S. college campus, documenting the first rates of SV victimization among college women in the empirical literature. Although the rates they reported of more severe forms of SV were surely underestimates due to their measurement choices, they sparked interest in the field. Koss, Gidycz, and Wisniewski (1987) published results of a nationally representative sample, concluding that one in four college women will experience rape or attempted rape by the time they finish their undergraduate college experience. Since then, several studies have supported these estimates, and the rate has remained roughly steady over the past three decades (Finley & Corty, 1993; Koss et al., 2022; Krebs et al., 2016; Murnen et al., 2002).

White and Smith (2004) conducted the first longitudinal study of SV, beginning in 1988 and concluding in 1994, recruiting three successive cohorts of incoming first-year university students and following them for a 4-year period (5 assessments for each cohort). First-wave surveys assessed men's pre-college SV perpetration from age of 14 to college matriculation; each of the following 4 waves assessed men's SV perpetration in the last year. Findings from this study suggested that many of the men perpetrated SV before college matriculation, and pre-college SV perpetration significantly predicted perpetration in students' first year of college. By utilizing the risk ratio to calculate attributable risk, the researchers determined that SV incidence in the first year of college could have been reduced by 25% by preventing pre-college SV perpetration. Although overall prevalence of violence decreased over time in college, incidences per individual increased over time suggesting there may be distinct types of perpetrators that desist and those that persist over time. Subsequent analyses using these data paints a more nuanced picture, finding continuity in *less severe* SV across the pre-college and college years

(e.g., verbal coercion), but not more severe SV (e.g., competed rape; Swartout, Swartout, & White, 2011; Swartout et al., 2015).

These findings regarding the continuity of adolescent offending across time have been supported in other longitudinal perpetration studies using multidisciplinary theories from criminology and human development. Developmental psychology literature suggests two trajectories of elevated delinquency and antisocial behavior during adolescence (Moffitt et al., 2002). The first trajectory includes most of the people who engage in delinquent behavior only in adolescence, since adolescence is a time of experimentation; for this group, delinquent behavior tends to desist when they become adults (Seto & Barbaree, 1997). The other trajectory included a smaller proportion of those who engage in antisocial behavior, but those individuals engage in delinquent and antisocial behavior persistently across the life span (Moffitt et al., 2002).

To test this theory of different types of antisocial behavior in SV perpetration, Abbey and McAuslan (2004) collected SV perpetration data from 194 college men across two time points, one year apart. The authors defined four mutually-exclusive subgroups of men based on their SV perpetration behavior reported at the two assessments: *non-assaulters*, who never perpetrated before the study or during the 1-year period of the study; *repeat assaulters*, who reported assaulting at least once or more at each time point; *past assaulters*, who only reported perpetrating in the first time point; and *new assaulters*, who only reported perpetrating in the second time point. The authors found significant differences in predictors by perpetration subgroup. Namely, non-assaulters reported lower levels of hostile attitudes towards women, fewer dating and consensual sexual experiences, less alcohol consumption in dating and sexual interactions, and fewer acts of adolescent delinquency when compared to repeat assaulters. Repeat assaulters had more extreme scores on attitudinal measures compared to past assaulters,

including hostile gender-role beliefs, callous attitudes towards women, and acceptance of verbal pressure to obtain sex. Together, these findings support the idea that there may be different types of sexually violent perpetrators.

Although Abbey and McAuslan (2004) found differences in predictor variables that were associated with each of their subgroups of perpetrators, these subgroups of perpetrators were researcher-defined, and the study's two time points limited any conclusions regarding enduring trends across time. Swartout and colleagues (2015a) conducted a latent class growth analysis on White and Smith's (2004) data to allow heterogenous latent trajectories to emerge from the data. Results supported the hypothesis that SV perpetrators are heterogeneous, with distinct patterns across time. Specifically, Swartout and colleagues (2015a) found low/none, moderate, increasing, and decreasing SV trajectories spanning the pre-college and college years; additionally, adverse childhood experiences increased odds of membership in the moderate and decreasing trajectories—which exhibited elevated pre-college SV likelihood—compared with the low/none group.

1.3 Situational and cultural differences between the college and community environments

College environments foster behavioral norms that may not be as common in non-college environments. Situational risk factors – such as heavy alcohol consumption – and individual factors – such as sexual promiscuity and endorsement of impersonal sex – are known risk factors for SV (Dawson et al., 2004). These situational risk factors are also a common part of many people's college experience. The following section details the predictors of SV perpetration and how they are understood in college culture.

Alcohol is linked with SV perpetration in multiple ways; approximately half of all SV incidents involve alcohol use by the victim, perpetrator, or both (Abbey, 2002). Several theories

attempt to explain the pathways in which alcohol impacts SV perpetration, such as drinking motives attempting to justify inappropriate behavior (Abbey et al., 2001) and alcohol myopia, which is cognitive impairment caused by alcohol that can lead to a greater likelihood of misperceiving friendly interactions as sexual (Steele & Josephs, 1990). Occasionally consuming large amounts of alcohol is associated with attending college above and beyond factors related to one's genetics and familial background (Slutske et al., 2004). Although it is not a direct cause of SV or a reason to blame survivors, young college adults generally are more likely to meet the DMS-IV criteria for alcohol abuse than their non-college attending peers (Slutske, 2005). A nationally representative study of over 8,000 participants found that rates of heavy episodic drinking were higher for college versus non-college youth (Dawson et al., 2004).

Person-level predictors of male SV perpetration include levels of sexual promiscuity, and engagement with impersonal sex (Malamuth et al., 1995); both behaviors are normalized or even encouraged in college or party culture. College men who perpetrate SV have more consensual sex partners than their counterparts who do not perpetrate SV (Abbey & McAuslan, 2004), exemplifying the link with sexual promiscuity. In a sample of over 400 college students, over 70% of those surveyed agreed that it was acceptable to have sex with someone they did not know very well (Feldman et al., 1999), normalizing impersonal sex as a part of college culture. Although consensual casual sex is not inherently problematic, an environment that prioritizes casual encounters over clear communication and respect for boundaries can increase risk for SV.

Taken together, college campuses seem to perpetuate norms of heavy drinking, sexual promiscuity, and impersonal sex. These norms may not hold influence for young adults outside of college culture. For these reasons, rates, trajectories, and predictors of SV perpetration based

on college-going young adults may not generalize to all young adults. We must investigate men's SV perpetration outside of the collegiate experience.

1.4 Sexual violence research in non-college community samples: The little we know

Most young adults do not attend college. The U.S. Department of Education's National Center for Education retains statistics on education attendance categorized by type: primary, secondary, and higher education. In 2018, only about 41% of all Americans aged 18-24 were enrolled in some form of post-secondary educational institution (National Center for Education Statistics, 2021). It is unclear if findings from studies involving undergraduate samples should be generalized to the entire young adult U.S. population, yet much of the data on SV in young adults is collected from college samples and is used to inform our general understanding of the social problem (Tharp, 2013).

There have been some cross-sectional studies on SV perpetration and related factors using samples of community men. In one study, researchers collected information on patterns of alcohol consumption and sexual behavior from men in two independent samples: a community sample from the Detroit metropolitan area and an undergraduate student sample from a large urban university in Detroit. Latent profile analysis distinguished four drinking categories in each of the two samples (Helmers et al., 2019). Differences in drinking patterns between the groups were non-significant, so the community and undergraduate samples were ultimately combined for further analysis. However, this study did not explore SV perpetration and was limited to a cross-sectional design. Other studies suggest college students may consume more alcohol and consume it more frequently compared with their non-student peers (Dawson et al., 2004; Slutske, 2005; Slutske et al., 2004).

Research comparing SV perpetration of college samples to community samples was not found, but some SV *victimization* research has directly compared the two populations with mixed findings. In one study, a direct comparison found that women who were not in college reported higher SV victimization than their college-going counterparts (Zweig et al., 1997). However, the items used to assess rape and other forms of sexual assault were direct and targeted, shown to be a methodologically weak form of SV assessment due to the taboo around the words "rape" and "victimization," (Koss et al., 1987; Koss & Gidycz, 1985). A more recent survey used behaviorally-oriented items (Coker et al., 2016), generally thought to produce more reliable reporting among participants. Here, researchers detected no significant differences in rates of any of the forms of victimization between the college and community samples. Based on these results, there may not be a difference in SV across college and non-college contexts, although more study is needed, especially on SV perpetration.

Most often, community samples of men include college students, as college students are members of the more general communities sampled. This limits the extent to which past research can cleanly compare college and non-college men's SV perpetration risk. As examples, two publications mention that in a sample of over 400 men, 15% already had their bachelor's degree, but the authors do not quantify or report on the current college-enrollment status of participants (Abbey et al., 2011; Wegner & Abbey, 2016). Other publications from the same data source indicate 26% of the sample of 423 (Abbey et al., 2012) and 19% of a sample of 432 (Jacques-Tiura et al., 2015) identified their occupation as student. Every publication from these data offers insight on predictors, associations, or patterns of men's SV perpetration against women, but they do not distinctly compare college and non-college men or assess the impact of living on or off campus, which might capture norms to a certain extent. The current thesis project addresses this

gap in the literature by directly assessing the impact of college attendance on men's SV perpetration across time.

1.5 Teen dating violence

A significant portion of violence generally experienced during the adolescent years occurs within the context of dating relationships, where the relationship is longer in duration, and adolescents have more frequent contact with each other (Giordano et al., 2010). This body of literature defines teen dating violence (TDV) as a broad term that encompasses harmful psychological, physical, or sexual behavior directed toward a romantic partner (Centers for Disease Control and Prevention, 2020). Overall TDV rates vary greatly from study to study; national surveys of adolescents in high school report conservative estimates that 1 in 11 girls and 1 in 15 boys experience some sort of violence each year (Kann et al., 2018). A full review of TDV is outside the scope of this thesis; although, comprehensive reviews on TDV prevalence, correlates, predictors, and outcomes can be found elsewhere (Silverman et al., 2001; Vagi et al., 2013; Wekerle & Wolfe, 1999; Wincentak et al., 2017).

Many instances of SV represented in overall prevalence rates occur within the context of a dating or intimate relationship and are thus a type of TDV (Molidor & Tolman, 1998; Spencer et al., 2016). One study surveyed 463 high school boys and girls about their experiences with physical and sexual TDV (Bennett & Fineran, 1998); twenty-two percent of the sample reported experiencing at least one form of SV in the past year. Of these students, over 60% (15% of the entire sample) reported that their experience happened within a current or past dating relationship. Another early study examined both physical and sexual violence in adolescent relationships and found girls were more likely to be forced into engaging in sexual activity than boys (Molidor & Tolman, 1998). More recently, in a sample of over 500 middle- and high-

school boys, Reidy and colleagues (2015) used four items to assess SV perpetration history within a dating context, and one additional item that assessed general SV perpetration. Although 7.5% of the boys with a dating history reported engaging in some sort of sexual dating violence, only 2% reported perpetration (or attempted perpetration) with someone outside of a dating relationship. Thus, SV among adolescents must be discussed within the context of dating relationships and vice versa.

As reviewed, most research on SV in adolescents generally aims to understand TDV broadly and includes SV as one of specific forms of TDV, while often situating research questions within the context of dating relationships. There are several studies to date that specifically examine peer-to-peer SV in adolescents, regardless of relationship status. One study examined prevalence and characteristics of SV among youth using cohort data collected annually for four years from middle and high school adolescents (Ngo et al., 2018). Another study implemented a national, longitudinal online survey assessing for SV among adolescents (Ybarra & Thompson, 2018); data collection began with youth ages 10-15 years old, aging through 21 by the end of the study. SV perpetration was assessed from grade school into the college years, but college attendance was not included as a predictor or grouping variable; thus, differences in SV perpetration as a function of college enrollment could not be determined.

In some studies of college men's SV perpetration, participants are asked to retrospectively recall any coercive sexual behavior they perpetrated in the years leading up to college matriculation. For example, in a sample of 1,133 college freshmen, nearly one-fifth self-reported perpetrating SV perpetration at least once before college (Salazar et al., 2018). The nature of these studies' assessment of peer-to-peer violence, regardless of dating relationship status, is a notable deviation from most SV research on adolescents. This kind of retrospective

data is commonly included at the baseline in many longitudinal designs that assess cohorts of incoming college freshmen. This baseline covers many adolescent years and contributes to TDV literature, but it is subject to greater recall bias than more proximal assessments. Thus, there is a need to follow the same cohort of adolescents throughout their lifespan from high school into college years to collect data on their behaviors and experiences more accurately.

1.6 Study objective

SV against women is a serious social problem requiring more research and insights to inform prevention and intervention efforts. Most research on SV perpetration relies solely on undergraduate college men as participants. College cultures often promote heavy alcohol consumption and acceptance of impersonal sex, which are strong and robust predictors of SV perpetration (e.g., Thompson, Swartout, Koss, and Su, 2015). The college environment, and the contextual risk factors it presents, may lead to increased SV rates among male college students compared with their non-college counterparts. These differences may be due to selection effects associated with young men's decision to attend college, demographic differences between men's families (e.g., socioeconomic status), influence of the college environment or peers may have on an individual, or some combination of these factors. Regardless of any potential root etiological processes, an important first step is to gauge the impact of college attendance on young men's SV perpetration within dating relationships both in general and across the adolescent and young adult years.

Therefore, the current study expands literature by comparing SV perpetration over time in populations of young men who attended and did not attend college. The study is designed to assess change in SV perpetration across time following a cohort of men across their high school and college years, whether they attend college or not. Based on a review of literature, including

college norms and risk factors for SV perpetration, it was hypothesized that college attendance would be associated with a higher likelihood of SV perpetration compared to non-college attendance.

2. Methods

2.1 Data Source

The current study involves a secondary analysis of data collected in the *Dating It Safe* study, a project designed to collect information regarding adolescent engagement in violence and other risky behaviors (Temple et al., 2013, 2016). The longitudinal study was conducted in partnership with seven high schools across five school districts in the Houston, Texas area. The first wave of data collection began in spring 2010, and data were collected annually for the next 7 years. Students were recruited in their daily required classes. All students were sent home with parental consent forms, and those who returned the forms within the deadline, in addition to a completed assent form, were allowed to participate in the study. Of the 1,702 students who were initially invited to participate, 1,119 provided parental consent and student assent, and 1,046 completed the baseline survey. Follow-up surveys were administered to participants in each of the subsequent 7 springs. Each student received a $5 gift card for completing the baseline assessment, and a $10 gift card for completing each follow-up survey.

The current study was made possible through a data-sharing agreement with the primary investigator, Dr. Jeff Temple. The data set contains eight assessments spanning adolescents from grade 9 into college seniors. Of this full dataset, the current study included data from seven assessments in my analyses. Assessment in one wave (Year 7) was limited due to funding availability and did not include the SV measure. All data were deidentified before they were shared for this analysis.

2.2 Participants and Procedure

Only the 1,119 students who returned the completed parental consent and assent forms were given the option to participate in the study. At baseline, participants were mostly in 9th or 10th grade. The current study only included data collected from male-identified students who reported that they had been in a dating relationship at least once on any of the assessments. Because of the goal of this study is to understand incidence of male SV against women across time, men who identify as heterosexual and men who identify as bisexual and reported dated a woman at least once were included in the analyses. At the first wave (*N*=459), the mean age for this analysis sample was 15.11 years old (*SD*=0.81). The racial and ethnic composition of the analysis sample was Caucasian (33.1%), Hispanic (30.9%), African American (25.1%), Asian/Pacific islander (3.9%), and another racial/ethnic identity (7.0%).

2.3 Measures and variables

2.3.1. Demographic information.

The survey assessed participant age, gender, sexual orientation, college status, and type of college attended, in addition to SV perpetration within dating relationships. Most of these variables were collected at each wave of the study; items assessing college status and type of college attended were added in Wave 4 and following waves. Age did not need to be controlled for in this study because participants were recruited in cohorts by grade. College status was coded as a dichotomous variable at each applicable wave representing (1) men who attended any post-secondary institution during that assessment period and (0) men who indicated that they did not attend any post-secondary institution during that assessment period.

2.3.2 Sexual violence assessment.

The survey battery included the Conflict in Adolescent Dating Relationships Inventory (CADRI) subscale for sex abuse within dating relationships to assess SV perpetration (Wolfe et al., 2001). This four-item subscale includes two items to measure sexual assault ("I touched her sexually when she didn't want me to," and "I kissed her when she didn't want me to,"), and two items measure rape and attempted rape ("I forced her to have sex with me when she didn't want to," and "I threatened her in attempt to have sex with her"). Although the CADRI measures both perpetration and victimization experiences for each type of SV, only perpetration items were used in the current analyses. Responses to each item were answered in the survey on a 4-point scale: "Never," "Seldom," "Sometimes," and "Often." All four responses were collapsed for analyses, 0 for "Never," and 1 for "At least once or more acts of perpetration," resulting in a dichotomous SV perpetrator or non-perpetrator status for each participant at each assessment wave. Incidence and prevalence of SV perpetration were calculated for each participant (see Table 1). SV incidence of perpetration indicated if a male perpetrated any form of SV at a given wave. SV prevalence scores collapsed a participant's responses across all waves to indicate if a respondent ever perpetrated SV at any wave. All these metrics are reported as a pre-text to the inferential models described below in the *Analyses* section.

2.4 Data Management Plan

An original data source has been provided by Dr. Jeff Temple from the *Dating It Safe* project upon the agreement that data would not be released or shared with any other parties. Data have been de-identified, and each participant was assigned an anonymous ID. For the current study, data were stored using Georgia State University's license to OneDrive with the University-level two-factor authentication required to access files. Due to the hybrid educational/working environment during much of this study, a Cisco VPN (provided through

Georgia State University) was used to privately and securely access, download, and upload data files to facilitate analysis. When the proposed analyses are completed, all data pertaining to *Dating It Safe* in the author's possession will be destroyed, per signed agreement plan.

2.5 Analysis Strategies

All data were managed using IBM SPSS (IBM Corp., 2017) and hypothesized models were fit to data using Mplus v.8 (Muthén & Muthén, 2017). Table 4 contains participant demographics, including age and race/ethnicity. Table 1 and 2 contain descriptive statistics on the primary variables of interest (overall college enrollment and SV incidence at each survey wave).

Data were fit within a hierarchical linear modeling (HLM) framework. Because of the clustered nature of the data, simple linear regression would not account for the dependance associated with multiple assessments of the same individuals across time (i.e., within-person covariance). HLM is an analytic best practice for handling individual-level clustering (Woltman et al., 2012). Using HLM, the analyses accounted for both within- and between-person variation in SV incidence across time as the primary outcome.

Data were restructured into a 'long format' for these analyses. As suggested by Singer & Willett (2003), Level 1 specified an unconditional growth model to identify if there is within-person variation in SV perpetration likelihood across time. The intercept was modeled as the wave before participants graduate high school to estimate SV perpetration likelihood most immediately before some participants enrolled in college. The Level 1 formula was:

$$y_{ij} = \beta_{0j} + \beta_{1j}X_{ij} + r_{ij}$$

where i is the observation, j is the individual, β_{0j} is the Level 1 intercept, X_{ij} is time (i.e., survey wave), β_{1j} is the relation between time and SV perpetration at Level 1, and r_{tij} is the Level 1 error,

nested within person, not expected to be normally distributed due to the dichotomous nature of the outcome. This also necessitated a logit link function to model the probability of SV perpetration at a given timepoint as a function of the model covariates. At the individual level, the effect of time on perpetration was interpreted as the change in perpetration likelihood associated with the passage of 1 year across the study. The intercept at Level 1 indicates the estimated likelihood of perpetration prior to high-school graduation across all participants.

At Level 2, the model represents variation between individuals in the average likelihood of SV perpetration at baseline as well as the rate of change in SV likelihood across time. The Level 2 formulas are:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}G_{01j} + U_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}G_{11j} + U_{1j}$$

where *G*'s are the value of the Level 2 predictor (individual), γ's are overall mean intercepts adjusted for *G*, and *U*'s are random effects associated with each level-one coefficient.

3. Results

3.1 Descriptives

3.1.1 Perpetration

Perpetration incidence at each wave ranged from 7.5% to 14%, which corresponds with rates established in the literature for adolescent and young adult perpetration. Overall, 31% of participants reported that they had perpetrated at least one form of SV at some point across the entire study. Incidence of SV perpetration across the study waves are described in Table 1.

3.1.2 College Status

College status was assessed and calculated dichotomously at each wave, with those who indicated any sort of higher education status categorized as "college," including trade school, technical school, community college, or public/private university. Participants were faced with an item that assessed their "grade" first, where they indicated their school grade of if they had entered college yet. This item was dichotomized into the college/non-college status used for analysis at each wave. A follow-up question was asked to participants to identify which type of college they attended; not all participants completed the follow up question identifying college type, resulting in missing data at this granular level. Overall, participants' college status incidence across the waves ranged from 45.7% to 72.9%, indicating that the study's sample had a higher proportion of participants entering college compared to the national average for adults in this age range. Overall, 66.9% of the sample indicated attending college at some point during the survey assessment period. Note that Wave 7 did not collect data on college status; Wave 7 survey implementation was limited due to funding and resources, thus limiting the questionnaire participants received. In this wave, participants did not receive an item obtaining college or

education status, but they did respond to SV perpetration items. Rates of college attendance by waves are detailed in Table 2.

3.2 Model Results

Initially, two linear models were fitted to the dataset; later, an additional two models were added to the analysis strategy. Model 1 was an unconditional growth model with a random intercept and slope, as suggested by Singer and Willett (2003), to test if there is within-person variation in SV perpetration likelihood across time. Model 1 consists of only the outcome variable, SV perpetration, as a function of time across individuals. The next model, Model 2, extended model 1 by adding time-varying college status as a covariate.

Model 1, the unconditional growth model which included only time as an independent variable, suggested that the natural log of SV perpetration is significantly different from 0. However, this model did not suggest that SV changes significantly over time, with a nonsignificant effect of time on SV. Individuals' slopes did vary significantly, suggesting that there was a significant amount of variation in how SV likelihood changed over time between people that could be accounted for by covariates.

The portion of the dataset available to test Model 2 was smaller than for Model 1, because college status was not assessed until Wave 4. Thus, the data were limited to participants that answered items relating to college status, resulting in a reduced, final sample size. All models were run with the reduced, final sample size. See Table 4 for demographic comparison between the full and final sample demographics. Model 2 intercept and slope results were like those of Model 1, suggesting a significant incidence of SV but no significant change in SV likelihood over time, in general. There remained a significant degree of variation between

individuals SV trajectories over time. College status significantly predicted the SV intercept; the effect was negative, suggesting that young men enrolled in college had a lower likelihood of SV perpetration compared with non-college men.

Because both Model 1 and Model 2 had non-significant linear slopes, Models 3 and 4 were added during the analysis phase to further explore the potential shape of SV change over time with the addition of quadratic effects to the models. Model 3 was an unconditional model with both linear and quadratic growth, and Model 4 estimated the same growth effects with the addition of college status predicting SV. Thus, Models 1 and 2 are nested within Models 3 and 4. Models 3 and 4 both resulted in a significant positive linear slope and negative quadratic slope for SV over time. This suggests that perpetration likelihood generally increased across time, but the rate of this increase attenuated as time went on. In Model 4, college status remained a significant and negative predictor of the SV intercept suggesting that young men enrolled in college had a lower likelihood of SV perpetration compared with non-college men.

Because Models 3 and 4 were significant for quadri-linear slopes and Model 4 a significant covariate for college status, Model 5 was also added during the analysis phase to test for interactive effects between time and college status. Model 5 included all terms (linear time, quadratic time, college status) and two interactive terms: linear time by college status, and quadratic time by college status. No terms in the model reached significance, indicating that that the effect of college status on perpetration does not vary by time. As with all previous models, variance in perpetration remained significant, indicating that perpetration varies greatly between participants. All models are described in Table 3, with full model results in Table 5.

4. Discussion

4.1 Overview

The purpose of this thesis was to examine the extent to which college attendance impacts a young man's likelihood of SV perpetration within a dating relationship. Research on SV perpetration has established different perpetration trajectories over time. However, most SV research is derived from undergraduate college samples, limiting the generalizability of those results because less than 40% of young adults in the U.S. attend post-secondary school (National Center for Education Statistics, 2021). It was necessary to test college status as a predictor to understand if college attendance may impact the likelihood of SV perpetration over time.

Given behavioral norms associated with college attendance such as heavy episodic drinking and hypersexuality, typically excused on campuses as "party culture", are robust predictors of SV perpetration, the current study hypothesized that men attending college would be more likely to perpetrate SV compared to their non-college, community counterparts. To test this research question, data from a longitudinal study that followed adolescents during high school and into their college-aged years were analyzed to assess the impact of college attendance of SVC perpetration likelihood at each study wave. The full study, *Dating it Safe* (Temple et al., 2013) surveyed students across seven high schools from five school districts in the Houston, Texas area and measured delinquency, violence, and other risky behaviors. *Dating it Safe* began in 2010 and the survey was implemented every year for the following seven years, totaling eight waves of available data. Because of its early sampling and high retention, this dataset was ideal for exploring SV perpetration patterns over time in a sample of men who do and do not attend college.

4.1.1 Statistical Approach and Modeling

Hierarchical linear modeling (HLM) best suited this study, nesting time points within people. Using HLM, two models were initially proposed and tested. Model 1 consisted of an unconditional growth model. Model 2 added college status as a predictor of the SV intercept, allowing the ability to understand how college attendance generally impacted participants' likelihood of SV perpetration. Both models had significant intercepts but nonsignificant linear slopes, signaling the potential need for further exploration of how SV might change over time in this sample. Models 3 and 4 therefore added quadratic change to the model to test non-linear change in SV perpetration likelihood over time.

4.2 Review of Key Findings

Through an iterative analysis approach, perpetration trends over time were best described by a positive linear slope and a negative quadratic slope, essentially suggesting an increase in overall SV perpetration over time that decelerated toward the end of the study. Contrary to the proposed hypothesis, college attendance was a significant negative predictor of SV likelihood, meaning young men attending college at a given survey wave were less likely to report SV perpetration compared their non-college counterparts.

4.3 General Discussion

4.3.1 Administrative Implications

It was hypothesized that men in college would perpetrate SV at higher levels compared to their non-college, community counterparts, due to their exposure to campus "party culture" and associated activities – such as frequent and excessive drinking, binge drinking, and sexual promiscuity. However, college status was a significant negative predictor of SV across all

models, indicating that college attendance can be seen as a protective factor against SV perpetration, at least in this sample. This directly opposed the presented hypothesis that the college environment would be associated (positively) with perpetration. Most higher education institutions receive federal funding, mandating the institutions to implement Title IX and its associated policies, including sexual assault prevention programs. Although colleges and universities typically provide informational pamphlets and resources at a one-time student orientation, simply exposing individuals to the issue of SV can raise awareness and potentially influence behavior. This heightened awareness may have led to a decrease in SV perpetration among college attendees versus the non-college attending youth who do not experience the same interventions.

For the youth who did not attend college, it may be that they were not exposed to the same training or SV education that college students are mandated to attend, thus are not as aware or sensitive to the issue of SV against women. Those who enter the workforce will typically have some sort of workplace harassment training or awareness program, educating employees on acceptable and unacceptable behavior among colleagues and in the workplace. However, such employee trainings are limited to cover the guidelines in the workplace; they do not generally discuss romantic, committed relationships, consent, and sex with a continued partner.

Additionally, it may be possible that college students are more careful about their sexual encounters due to fear of sanctions from their institution—wanting to maintain their student status—and may not engage in SV perpetration out of fear that it might endanger their overall standing in the institution. Therefore, belonging to a larger institution, and perceiving the sanctions that institution might levy in response to SV perpetration, may play a role in reducing SV (Salazar et al., 2018). This might be especially true for those who are affiliated with

extracurricular activities–such as athletics, leaders in campus-based clubs or organizations, and fraternities – where the ramifications of an accusation of sexual misconduct might be especially damaging.

4.3.2 Research Implications

Although untested in the current study, it might be possible that this sample encompasses different classes of perpetrators. There is an overall increasing-but-attenuating pattern of SV likelihood across time, but there could be subgroups with different patterns manifesting a composite curvilinear shape. For example, there could be a group of participants that decrease perpetration over time, a group that increases over time, and groups that remain steadily high and steadily low in perpetration over time (e.g., Swartout, Swartout, Brennan, & White, 2015). One way to test for the presence of these subgroups would be to use growth mixture modeling, which is outside the scope of the current study but would be a valuable future direction in this research. Previous growth mixture models applied to SV perpetration research suggest that different perpetration patterns over time can be predicted differently based on factors that have conventionally been linked to SV perpetration as a whole (Swartout et al., 2011; White & Smith, 2004). See Swartout et al. (2015) for more details on latent class modeling. To my knowledge, the current study is the first of its kind to cleanly test the impact of college attendance on SV likelihood in a longitudinal design. Attempts should be made to replicate the effects described in this thesis and explore additional avenues for studying SV perpetration among men outside of college undergraduate populations.

4.3.3 Socio-Political Implications

In social science research it is imperative to consider the contextual factors and secular events that happened during a given study. This is particularly important when examining the impact of societal and cultural influences on human behavior. In the context of the present study, two important aspects warrant discussion: social media and political developments. It is possible that the following culture-defining events, which occurred within the time frame of the *Dating It Safe* study implementation, could have affected the true SV perpetration rates at those times or the accuracy of reports on SV perpetration during those times.

The current study's cohort experienced the rapid growth and development of Facebook, as well as the rise of several other popular social media sites that remain multi-billion-dollar platforms to this day. Social media can be a powerful tool to connect with family and friends, but it can also be a place to find new connections and develop relationships outside of one's typical geographical limitations. These platforms have revolutionized communication, information sharing, and social interactions, ultimately shaping individuals' perceptions, attitudes, and behaviors. Many social media "trends" – patterns of language or behaviors that spread across accounts, platforms, and popular media – begin with posts that *go viral*. The #MeToo movement, rising to broad popularity in 2016, was one of the most powerful social media movements of this generation. These two simple words posted by a person – most often a woman – indicated that they were a survivor of some form of sexual victimization. This trend swept the globe, informing many for the first time about the true prevalence and violence and harassment against women in our societies. It remains unclear how this social movement may have affected research on SV during that time, if at all.

A Dear Colleague Letter issued by the U.S. Department of Education in 2011 provided guidance for how colleges and universities were expected to investigate cases of sexual

misconduct under Title IX, and it put those institutions on notice moving forward. This prompted a revival of sexual misconduct prevention and intervention programming across campuses. In 2017, during Former President Trump's administration, several changes were made to how Title IX is enforced, including the specific definitions used to parse the policy. These changes had a dramatic impact on how college campuses investigated Title IX misconduct reports and adjudicated those cases. One of these changes was the shift in level of evidence from "preponderance of the evidence" to "clear and convincing," raising the necessary evidence required to charge students of sexual misconduct.

The emergence of the #MeToo movement brought widespread attention to issues of sexual harassment and SV, creating a social climate that encouraged survivors to come forward and increased public discourse on these topics. Consequently, it is plausible that the movement might have affected the participants' awareness and understanding of SV, potentially altering their self-reported behaviors. Additionally, the Dear Colleague Letter could have influenced the overall cultural and institutional responses to SV, potentially having a major impact on college participants but not likely on non-college participants.

4.4 Limitations

The current study had notable several limitations. The longitudinal nature of the study allowed for directional interpretations of effects, but we cannot interpret any causal relationships based on this design. Time points were not predictive of perpetrations at later dates. Although college status significantly predicted SV perpetration, we cannot infer that attending college at a given point in time causes someone to have lower risk for SV perpetration. As noted in the introduction to this thesis, there are several other variables, or potential mediators, that could explain this effect. For example, accounting for childhood and adolescent covariates—such as

youth delinquency or exposure to adverse childhood experiences—might account for the effect of college status on SV perpetration in the current study. It is also important to note that the effect of college status on SV perpetration was the opposite of what was predicted, so this further indicates the need for caution when interpreting those effects.

Dichotomizing the college status as a predictor resulted in some limitations to note. The dichotomization of college status forced a broad range of post-secondary educational experiences all at the same level (the "college" level, for the current study) for comparison against community peers (the "non-college" level). This dichotomization statistically assumes that all experiences in the "college" level are equal. In reality, there are comparable lifestyle differences against those who attend technical school, trade school, or a 2-year community campus for an associate degree versus other college students who might live in dorms for a 4-year university. Those attending larger universities, living in dorms on campus, without a commuter lifestyle may be more immersed in a typical college environment, resulting in considerable environmental differences.

As is natural with longitudinal designs, the current study also faced the challenge of attrition. The participants who were included in Model 2 were limited compared to the participants in the entire study at baseline, resulting in a restricted sample being utilized for all final models. Although there were no significant differences in the full versus final analysis sample, participants who remained in the study over time may be at least somewhat different from those who dropped out during one of the early waves.

The current study was also limited by the measure used to assess SV perpetration. The Conflict in Adolescent Dating Scale (CADRI) was developed to measure various types of conflict – physical, emotional, and sexual – and was meant to capture signs of turbulent

relationships in adolescence (Wolfe et al., 2001). By the end of this longitudinal study, the participants exceeded the age range for which this measure was developed. Additionally, the sex-abuse subscale only included four items, and they were worded in such a way that those who are unaware of the force they may be using in an interaction would not answer necessarily endorse specific forms of perpetration. For example, two of the items measure rape and attempted rape by asking if the participant if they "forced her to have sex with me when she didn't want to." A participant may have engaged in tactics that they may not consciously acknowledge as "force" but may have been experienced as forceful or coercive by the other person. In addition to the subjective nature, the measure also conflates both tactic and outcome within a single item. For example, the participant is asked if they "threatened her in attempt to have sex with her." The item fails to capture attempted rape via other possible tactics, such as coercion. It also fails to capture if threats have been used to force engagement in other sexual activities. Thus, the subscale may be missing violence that occurs in dating relationships but does not adhere specifically to how the item is crafted. Additionally, the CADRI only measures violence within dating relationships; the survey did not capture violence between acquaintances, short term partners, "friends with benefits", or any other non-committal sexual relationships in which violence could have occurred. It is also possible that participants who were in long-term relationships may have been better informed of their partner's sexual desires and boundaries, resulting in lower prevalence of SV perpetration for those in committed dating relationships compared to those not in committed relationships.

4.5 Future Directions

As previously discussed, it is possible that there are different subgroups of perpetrators that have varying trajectories (or patterns) of SV perpetration over time. Like the work of

Swartout and colleagues (2015), there may be persistent, desistent, steadily high, and low classes of SV perpetrators whose varying slopes are being forcibly averaged together for the current study, thus manifesting as a single increasing but attenuating change over time. All models in the study had significant variability in both the SV intercepts and slopes, further supporting this theory.

The current study's participant composition consisted of roughly equal proportions white, Black, and Hispanic/Latino students, with a smaller proportion of Asian students. Future studies might examine how the relationship between college attendance and SV perpetration varies across different demographics, including race/ethnicity and socioeconomic status. Socio-economic status is a significant predictor of college attendance and college outcomes (Walpole, 2003); therefore, understanding how SES affects college attendance and SV perpetration is key in unpacking the confluence of factors related to perpetration.

These models should be replicated using different data, which would provide valuable confirmatory evidence. Additionally, the current dataset was impacted by multiple political and secular events that occurred during data collection (Dear Colleague Letter and #MeToo movement). Thus, it would be valuable, ideally, to test these models using archival data collected before Dating It Safe and data collected after 2020 for a more recent assessment. The current study was also limited by the measures included in the survey, which only assessed SV perpetration within dating relationships. Future research should cast a broader net by testing these models using data collected on SV perpetration incidents that occurred both within and outside of dating relationships.

4.6 Conclusions

The current study was the first of its kind, to the best of the author's knowledge, that assessed the impact of college attendance on young men's SV perpetration against women between. Key findings from this thesis were that SV perpetration likelihood generally increases and levels off between the ages of 15 and 24, and young men are less likely to report SV perpetration when they are enrolled in college, which was counted to the initial hypothesized effect. Studies like this are important given the bulk of SV perpetration literature has relied on sampling undergraduate men and may or may not generalize to the greater U.S. population. Although more research is needed to fully interpret these effects, one interpretation is that sexual assault interventions employed by many college institutions may increase awareness and sensitivity to the issue of SV, thus decreasing the likelihood to perpetrate among young men enrolled in college.

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Appendix

Table 1. Descriptives by wave and item on perpetration. Perpetration calculated dichotomously at each wave, and total participants at each wave.

Item/ Year	I touched her sexually when she didn't want me to, N (%)	I kissed her when she didn't want me to, N (%)	I threatened her in an attempt to have sex with her, N (%)	I forced her to have sex with me when she didn't want to, N (%)	Dichotomized Perpetration (N, %)	Total Participants
Wave 1	9 (2.0)	41 (9.3)	4 (0.9)	2 (0.5)	52 (13.0)	401
Wave 2	8 (1.8)	28 (7.8)	3 (0.7)	1 (0.2)	32 (9.0)	357
Wave 3	8 (1.8)	24 (7.3)	1 (0.2)	1 (0.2)	27 (8.2)	331
Wave 4	12 (2.7)	19 (4.3)	0	4 (0.9)	22 (7.5)	292
Wave 5	7 (1.6)	20 (4.5)	3 (0.7)	2 (0.5)	23 (10.0)	231
Wave 6	14 (3.2)	39 (8.8)	8 (1.8)	5 (1.1)	40 (14.0)	273
Wave 7	6 (1.4)	16 (3.6)	1 (0.2)	1 (0.2)	16 (11.9)	134
Wave 8	7 (1.6)	29 (6.5)	1 (0.2)	5 (1.1)	29 (11.9)	244
Overall	55 (12.1)	127 (28.7)	19 (4.3)	16 (3.6)	140 (31.0)	443

Table 2. Descriptives by wave on college status. College status calculated dichotomously at each wave, and total participants exposed to the college status item at each wave.

Year	Public/ Private University	Technical/ Trade School	Community College	Dichotomized College status (N, %)	Total Participants
Wave 4	14 (3.2)	1 (0.2)	14 (3.2)	51 (72.9)	70
Wave 5	98 (22.1)	8 (1.8)	63 (14.2)	170 (68.8)	247
Wave 6	104 (23.5)	14 (3.2)	60 (13.5)	170 (59.6)	285
Wave 8	80 (18.1)	4 (0.9)	26 (5.9)	113 (45.7)	247
Overall	234 (52)	22 (5.0)	104 (23.5)	232 (66.9)	347

**Note that the college-type item was a follow-up question that not all participants answered. Additionally, college status is was a time-varying variable in the current study.*

Table 3. Models 1-5, descriptions.

Model	Slope	Covariates
Model 1	Linear	Unconditional
Model 2	Linear	College
Model 3	Linear + Quadratic	Unconditional
Model 4	Linear + Quadratic	College
Model 5	Linear + Quadratic	College and Interaction terms

Table 4. Demographic comparison between full and final sample.

	Full Sample (%)	**Final Sample (%)**
Age M(SD)	15.12 (0.81)	15.29 (1.15)
Race		
Hispanic	136 (30.7)	108 (31.6)
White/not Hispanic	148 (33.4)	104 (30.4)
African American	111 (25.1)	89 (26)
Asian/Pacific Islander	16 (3.6)	15 (4.4)
Mixed/Other	32 (7.2)	26 (7.6)
Total	443	342

Table 5. Models 1-5, results.

Model	Estimate	SE	Ratio	p	Std (Beta)
Model 1					
Within Level					
Time	0.16	0.088	1.784	0.074	0.13
Between Level					
Thresholds					
Perpetration	3.36	0.404	8.316	<.001	1.85
Variance					
Perpetration	3.31	1.280	2.590	0.010	1.00
Model 2					
Within Level					
Time	0.10	0.09	1.163	0.245	0.08
College Status	-0.79	0.30	-2.65	0.008	-0.21
Between Level					
Thresholds					
Perpetration	2.79	0.43	6.50	<.001	1.57
Variance					
Perpetration	3.17	1.26	2.52	0.012	1.00
Model 3					
Within Level					
Time (Linear)	0.80	0.03	2.67	.008	0.65
Time (Quadratic)	-0.12	0.06	-2.14	0.032	-0.52
Between Level					
Thresholds					
Perpetration	3.97	0.51	7.73	<.001	2.14
Variance					
Perpetration	3.45	1.34	2.57	0.010	1.000
Model 4					
Within Level					
Time (Linear)	.075	0.30	2.50	0.012	0.59
Time (Quadratic)	-0.12	0.06	-2.16	0.031	-0.52
College Status	-0.80	0.30	-2.65	0.008	-0.21
Between Level					
Thresholds					
Perpetration	3.40	0.53	6.43	<.001	1.88
Variance					
Perpetration	3.28	1.31	2.50	0.01	1.00
Model 5					
Within Level					
Time (Linear)	0.87	0.49	1.79	0.074	0.69
Time (Quadratic)	-0.13	0.08	-1.62	0.104	-0.56
College Status	-0.49	0.82	-0.59	0.553	-0.13
Time (Linear) X College	-0.14	0.70	-0.21	0.835	-0.11
Time (Quadratic) X College	0.00	0.14	0.03	0.973	0.015
Between Level					

Thresholds					
Perpetration	3.62	0.75	4.84	<.001	1.98
Variance					
Perpetration	3.37	1.35	2.5	0.013	1.00

Note. SE = standard error; Ratio = estimate / SE (i.e., Wald statistic); Std = fully standardized value.