

Abstract

Approximately 10% of male and 21% of female high school students report having experienced physical and/or sexual victimization in a dating relationship (Vagi et al., 2015). Multiple sources report that Black/African American teens have the highest rates of teen dating violence (TDV) victimization (CDC, 2017; Eaton et al., 2012). Data for this study comes from the Youth Risk Behavior Surveillance Survey (YRBSS) collected from the Centers for Disease Control (CDC) in 2015, 2017, and 2019. A limited but growing field of research examines the effects of risk behaviors on TDV among teens. Among Black teens, the present study uses path analysis to (1) analyze the risk factors (e.g., early initiation of risky behaviors, violent behaviors, risky sexual behaviors, substance use, and risky driving behaviors) of TDV victimization (2) determine if a positive school environment can help to prevent TDV victimization and (3) determine the mental health outcomes of TDV victimization. Findings indicated that all early and current risk behaviors included in the study were associated with TDV, and the early risk behaviors mediated the relationship between TDV and mental health outcomes. At the same time, a positive school environment did not serve as a protective factor. Findings provide insights into the complex relationship between early and current risk behaviors, mental health outcomes, and TDV victimization – to better understand the opportunities for the development of prevention and intervention programs geared around early and current risk behaviors, mental health, and TDV victimization specific to Black teens.

Keywords: Teen dating violence, risk behaviors, protective factors, mental health, victimization,

BLACK TEEN'S EXPERIENCES OF VICTIMIZATION IN DATING RELATIONSHIPS:
ASSESSMENT OF RISK AND PROTECTIVE FACTORS AND OUTCOMES

by

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Chapter I: Introduction

Teen dating violence (TDV) victimization is one of the most prominent forms of violence among youth. In the United States (US), one in ten boys and two in ten girls report being victims of physical and/or sexual victimization in their intimate relationships (Vagi et al., 2015).

According to the Centers for Disease Control and Prevention (CDC), TDV is a significant public health problem, and approximately 1 in 11 high school students report experiencing physical TDV, and 1 in 9 students report experiencing sexual TDV in the past year (CDC, 2019b). TDV victimization is the experience of unsolicited acts or threats of physical and/or sexual violence by one partner on their current or former partner within an intimate relationship (CDC, 2021; Parker et al., 2017). An example of TDV victimization is when a current or former partner physically assaults or threatens their significant other, causing visible injuries, fear, and emotional distress. Although TDV victimization can occur regardless of race, socioeconomic status, or gender (Eaton et al., 2007; Vagi et al., 2015; Vivolo-Kantor et al., 2016), research examining the rates of TDV victimization concludes that Black/African American teens experience higher rates of TDV victimization than their peers from other racial/ethnic groups (Alleyne-Green et al., 2012; Nicodemus et al., 2009; West & Rose, 2000).

TDV, as a severe public health issue, significantly impacts Black teens, with the CDC reporting that nearly 15% of Black adolescents experience physical and/or sexual dating violence (Vagi et al., 2015). Further, an emerging field of research examining the predictors of TDV among Black teens suggests that youth of racial groups other than White (e.g., Black, Hispanic) have risk factors linked to TDV victimization that are distinctive from White teens who experience TDV victimization (Henry & Zeytinoglu, 2012). Despite the high prevalence of dating violence among Black/African American teens, few research studies have gone beyond

examining the rates of TDV among Black/African American teens to investigate risk and protective factors (see as an exception, Alleyne-Green et al., 2012; Black & Weisz, 2003; Black et al., 2015; Fedina et al., 2016).

Historically, Black people in the US have faced intersectional marginalization and discrimination through gender, race, sexual orientation, and other background characteristics (Remedios & Snyder, 2018). Several historical experiences of marginalization help explain why Black teens may live in communities with more violence and come from low-income families. For much of American history, Black people were subject to slavery and Jim Crow laws, creating a remnant of poverty and segregation that continues today (Alexander, 2010). Redlining and other forms of housing discrimination prevented many Black families from buying homes in certain areas in the mid-20th century, leading to the concentration of poverty in specific neighborhoods (Rothstein, 2017). Black Americans have historically faced discrimination in employment and education, which has influenced obstacles to achieving economic stability (Coates, 2014). Black teens are more likely to live in neighborhoods with higher exposure to violence and come from low-income families, which can be attributed to various social and historical differences (Kozol, 1991; Rothstein, 2017). Due to the historical occurrence of denying access to quality education, many Black teens attend under-resourced schools that lack the resources and support needed for academic success.

The various levels of oppression trickle down to beliefs, behaviors, and interactions within intimate relationships (Roberts et al., 2018). Understanding these specific cultural implications for Black people provides a better understanding of the societal impacts on their relationship contexts. For Black boys and girls, the associated adverse outcomes resulting from TDV victimization tend to be more evident when they are also unfavorably shaped by

sociodemographic risk factors such as lower socioeconomic status, systemic racism, and school discrimination (Bent-Goodley, 2007). Black teens exposed to multiple forms of violence increase their likelihood of experiencing multiple other types of victimization (Wilson et al., 2012).

Experiencing physical and sexual TDV has been related to other risk behaviors, such as getting into fights and carrying weapons at school (Vivolo-Kantor et al., 2016).

Black teens report feeling unsafe at school more often than non-Hispanic White youth (Kann et al., 2018) and may be more likely to engage in violent behaviors due to feeling threatened (Xu et al., 2020). Black youth are also more likely than their White peers to fight and carry weapons at school (Beardslee et al., 2018; Kann et al., 2018), which may be attributed to discriminatory experiences in school, stress and unpredictability in the home environment, criminalization, and harsher punishment through suspension policies in schools (Bell, 2015; Kinsler et al., 2017; Losen & Skiba, 2010; Benner et al., 2018).

These societal differences contribute to the issue's complexity and may increase the risk for aggressive behavior among Black teens due to taking out frustrations of life, which may also increase their risk of experiencing TDV victimization. Social constructs such as race and gender contribute to the experiences of Black youth. Institutionalized discriminatory policies in the US continue to impact the experiences of Black people, while gender plays a considerable role in their experiences of TDV victimization (Lemke & Rogers, 2022).

Females, specifically Black females, are likelier to experience sexual TDV victimization than males (Crenshaw, 1991; Decker et al., 2005; Roberts et al., 2005; Wolitzky-Taylor et al., 2008). The Black race/ethnicity and the female sex are associated with more experiences of TDV victimization (Halpern et al., 2009). For Black females, the combination of various societal inequalities, including racism and sexism, poses a greater risk for TDV victimization (Beale,

1970). The intersectionality of gender expectations and racial biases influence the relationship between the role of gender on TDV for Black youth (Hunt et al., 2022; Roberts et al., 2018). Traditional gender norms may contribute to boys' use of physical violence to establish power and control in relationships, while girls may be more likely to experience sexual violence or coercion (Basile et al., 2016). These norms may be reinforced by peers, media, and family members, leading to the regularization of violence. Perceptions of Black men as hypermasculine and aggressive, as suggested by Cassidy and Stevenson (2005), may lead to the assumption that they are more violent and threatening, even in situations where they are not. Unfortunately, this creates a distinct connection to over-policing and stricter disciplinary actions in schools and other organizations, potentially leading to the further marginalization of Black male youth. The intersection of race and gender can compound the effects of oppression. For example, Black girls may face unique challenges related to race and gender, such as being hypersexualized and viewed as less innocent than their White peers (Crenshaw, 1991).

Age is another risk factor for TDV victimization. Encouraged by social rewards, during the developmental period of adolescence, teens often make impulsive decisions (Turnbridge, 2021; Chein et al., 2011). Because of this, adolescents may have sex (Arain et al., 2013) or experiment with alcohol and/or drugs (Turnbridge, 2021) for the first time. Early adolescence is considered a transitional period from age 10 to 14; during this time, there are strong peer group influences, and youth begin to develop behaviors that influence them later in life (Blum et al., 2014). With risk behaviors appearing in early adolescence, there is a more significant impact on subsequent risk behaviors and TDV victimization. Many adults (60 to 70%) had reported they engaged in sexual activity before they turned 18 (Carver et al., 2003, Grunbaum et al., 2004).

More specifically, 26.71% of teens in the 7th, 9th, and 11th grades reported having had sexual experiences within the past year (Rodgers & McGuire, 2012).

Several factors make the developmental period of early adolescence different for Black teens compared to other races in terms of engaging in risky behaviors and experiencing physical and sexual TDV victimization. Research has also indicated that higher levels of violence and trauma exposure among Black youth can increase their likelihood of engaging in risky behaviors and experiencing TDV (Galán et al., 2022). Further, Black youth are more likely to experience multiple forms of violence, including community violence, which can exacerbate the adverse outcomes of TDV victimization (Galán et al., 2022). These experiences can lead to higher levels of stress, anxiety, and depression, increasing the likelihood of engaging in risky behaviors and experiencing TDV victimization (Coker et al., 2000; Exner-Cortens et al., 2013). Societal marginalization can lead to hopelessness, anger, and frustration, increasing the likelihood of engaging in risky behaviors and experiencing TDV victimization (Galán et al., 2022; Niu et al., 2018). Research indicates that Black teens may use risky behaviors as a coping mechanism to deal with the difficulties they confront, such as racial discrimination, poverty, violence, and racism (Coker et al., 2000; Exner-Cortens et al., 2013; Galán et al., 2022). In addition, early initiation of alcohol and drug use is more common among Black youth than their White counterparts (Brook, Brook et al., 2006). This early initiation can lead to more severe substance use and related problems later in life, increasing the risk of TDV victimization (Ellickson et al., 2004; Swahn et al., 2008; Tucker et al., 2005).

The importance of studying TDV and the associated risk factors is highlighted by the serious consequences of TDV. Physical and sexual TDV victimization have critical short and long-term impacts on overall well-being, including physical injury, reduced mental health (e.g.,

depression), and suicide (Banyard & Cross, 2008; CDC, 2014; Exner-Cortens et al., 2013; Lormand et al., 2013; Martz et al., 2016; Vagi et al., 2015).

Among the many consequences of engagement in risky adolescent behaviors is an increased likelihood of TDV victimization. Teens who engage in risky behaviors such as bullying, fighting, emotional distress, substance use, drug and alcohol use, early initiation of sex and substance use, sexual risk behaviors, risky driving, or exhibiting violence-related behaviors are more likely to experience TDV victimization (Eaton et al., 2007; Eaton et al., 2010; Fedina et al., 2016; O'Donnell et al., 2006; Rothman, Stuart, et al., 2012; Silverman et al., 2001; Swahn et al., 2008; Vagi et al., 2015; East & Hokoda, 2015; Lormand et al., 2013; Sattler et al., 2019). Given that Black teens may be more likely to engage in risky behaviors due to the increased likelihood of exposure to violence and trauma, discrimination and racial inequality, and early initiation of drugs or alcohol, it is essential to examine the link between these risk factors and TDV victimization among Black teens (Brook, Lee, et al., 2010; Coker et al., 2000; Exner-Cortens et al., 2013).

These risk behaviors can lead to unstable or aggressive environments where victimization is more likely to ensue (Pratt & Turanovic, 2016; Jessor, 1991). Teen risk behaviors also co-occur, as when teens participate in one risk behavior, they are likely to participate in at least one other (Rothman, McNaughton Reyes, et al., 2012). TDV victimization is associated with bullying, fighting, emotional distress, substance use, and early sexual behaviors (East & Hokoda, 2015; Lormand et al., 2013; Sattler et al., 2019; Vagi et al., 2015). Teens who engage in violence-related behaviors are likely to be in circumstances where violence is more likely to occur, which relates to TDV victimization and associating with peers who may be exhibiting such violent-related behaviors. As teens engage in sexual behaviors at various ages during

adolescence, these behaviors are related to alcohol use, delinquency, and aggression (Zimmer-Gembeck & Helfand, 2008). Additionally, having more sexual partners, especially for females, was related to increased substance dependence (Ramrakha et al., 2013).

Substance use inhibits decision-making risk perceptions and influences impulsive decisions, making engagement in sexual activities more prominent (Fromme et al., 1999; Waller et al., 2006). Alcohol and drug use impairs the cognitive and neurological functioning that drives inhibition and the ability to resist advances (Lopez-Caneda et al., 2014). In studies among college women, heavy drinking was a predictor of sexual and physical TDV victimization (Parks & Fals-Stewart, 2004; Parks et al., 2008). Using alcohol and/or drugs may also be related to situations where they are around peers, which increases the risk of violence. Alternatively, using substances to cope with an unhealthy or unsatisfactory relationship could increase the risk of violence (Rothman, McNaughton Reyes, et al., 2012).

Initiating substance use at any age during the teen years is problematic, but initiating substance use during early adolescence becomes more precarious. Studies of teens who initiate sex and substance use at or before age 15 showed more onsets of other risk behaviors, such as alcohol, marijuana, and cigarettes, than their older peers (ages 16 to 18) (Zimmer-Gembeck & Helfand, 2008). Engagement in sexual activities in combination with drugs and alcohol is related to increased odds of experiencing dating violence, but substance use in early adolescence exponentially increases the association with TDV victimization (Lormand et al., 2013).

The social impact of early initiation of sex and substance use on TDV is an essential consideration for both males and females, particularly among Black teens. Cultural and community expectations based on race/ethnicity, gender, and sexuality with which teens are socialized can influence early first-sex events (Kinsman et al., 1998). There are alternative norms

for masculinity and male gender role socialization for African American males associated with early sexual experiences. However, extant literature does not extensively describe these norms (Wolfe, 2003). The cultural expectation for sexual behavior differs based on gender, as Black girls may face more stigma and negative attitudes towards early sexual initiation than Black boys (Zimmerman, 2000). Additionally, the norms of one's peer group play a role in the impact of substance use on experiencing TDV, particularly regarding attitudes toward sex and beliefs about drinking alcohol (Abbey et al., 2002). These unique contextual factors for Black teens emphasize the importance of understanding the intersection of race, gender, and sexual behavior concerning TDV victimization and the potential impact of sex and substance use initiation.

Outside of sex and substance use, other risk behaviors that may be associated with experiencing TDV include texting while driving, being a passenger with a driver under the influence of drugs or alcohol, and not wearing a seatbelt. African American teens are less likely to use a seatbelt and be injured or killed while not wearing a seatbelt than non-Hispanic White teens (Juarez et al., 2006). Distracted driving behaviors among teens have increased over time due to the increasing accessibility, demand, and advancement of compact technology devices. This includes distractions from texting or intoxication by alcohol and drugs. Even though there is a high probability of adverse consequences, teens may engage in risky driving without worrying about the outcome. Impaired judgment, brain development, and decision-making skills influence teen driving behaviors (Juarez et al., 2006). These thought processes and engagement in risky driving behaviors could be associated with subsequent risk behaviors and TDV victimization.

Understanding risk factors is only one piece to preventing TDV victimization. We must also understand early predictors and implement measures to intervene in adverse outcomes. The school environment is a notable protective factor for TDV (Parker et al., 2016). Adolescence is a

transition time for teens to form identities and learn about changing societal expectations, relationships, and priorities (Erikson, 1968; Steinberg & Morris, 2001). A positive school environment helps teens build positive school experiences, social acceptance, and autonomy (Eccles et al., 1993) and is associated with lower delinquent behaviors and suspension/expulsion rates (Brand et al., 2003; Hanson & Voight, 2014). Teens who feel they belong at school have increased self-esteem, adjustment, happiness, self-identity, and psychological functioning (Allen & Bowles, 2012; O'Rourke & Cooper, 2010; Perry & Lavins-Merillat, 2018). Safety and connectedness are part of the school climate that influence students' school experiences (Hanson & Voight, 2014). A school environment without adverse experiences could reduce the likelihood of risky behavior and victimization experiences (Vivolo-Kantor et al., 2016). Early predictors of deviant behaviors among young adolescents and school environments where many students have pro-drug attitudes are the predictors of TDV victimization (Ellickson & Mcguigan, 2000).

Gender plays a role in the adverse risk factors of boys and girls who experience TDV victimization. Girls reported significant amounts of heavy drinking, smoking, depression, suicidality (i.e., considered suicide and attempted suicide), and experiencing subsequent intimate partner violence (IPV) (Exner-Cortens et al., 2013). Among girls, the early initiation of these risk behaviors increases the likelihood of having depressive symptoms (Spriggs & Halpern, 2008; Waller et al., 2006) and experiencing TDV victimization (East & Hokoda, 2015; Eaton et al., 2007). Girls also reported feeling sad or hopeless more persistently (57%) nearly twice as often as boys (29%) (CDC, 2023). It is essential to consider the intersection of race and gender in the study of TDV, as men, and Black men specifically face, dating violence and additional barriers to accessing support and resources (Valandra et al., 2019). However, further studies have uncovered reports of higher rates of suicidality and subsequent IPV victimization among males

(Exner-Cortens et al., 2013). These influences of TDV victimization are from teens who face long-term repercussions and are subject to continue experiencing TDV victimization in potential future relationships.

Regardless of gender or race, survivors of TDV may internalize the abuse and may have self-blame, anger, fear, and guilt towards themselves (Preble et al., 2018). Frequent experiences of TDV could result in self-destructive behaviors or suicide (Ackard & Neumark-Sztainer, 2002b; Coker et al., 2000). Approximately 42% of teens have experienced feeling hopeless or sad in the last year for at least two or more weeks, and this prevalence has been increasing over the last ten years (CDC, 2023). While feeling sad for a few weeks is not enough evidence as diagnostic criteria for depression, sadness as a symptom of depression is a significant predictor of suicide (Young et al., 1996). Youth who experience depression are more likely to be negatively impacted by peers and drop out of school, use substances, and engage in uninhibited sex than someone who is not depressed (Brent & Birmaher, 2002). A summable portion of suicide attempts maintain a projected pathway to suicide that starts with depression, leading to suicidal thoughts, planning suicide, and potentially the suicide attempt (Millner et al., 2017).

The rising rates of suicide in the US often get overlooked among Black youth. Black youth have increased risk factors that include experiencing food and financial insecurity, racism, and health disparities, which also relates to increased concern about mental illness in Black communities. Until recently, even though Black youth were facing multiple challenges, the rates of suicide were generally low. More recently, suicide has become the second leading cause of fatality among Black teens in early adolescence (10 to 14 years) and the third leading cause in Black teens in late adolescence (15 to 19 years) (Bridge et al., 2018). Combined data from 2001 to 2015 finds that Black youth aged 12 and younger were more likely to die by suicide than their

White peers (Bridge et al., 2018). Over time (1991 to 2017), the number of Black children attempting suicide has risen exponentially at an alarming rate (Lindsey et al., 2019). Especially for teen girls (13 to 19 years), rates of suicide increased by 182% from 2001 to 2017 (Price & Khubchandani, 2019). Suicide is already a significant concern among teens — especially Black teens — and TDV is an influential factor in those numbers.

The present study examines the role of risk and protective factors, such as age at initiation into risky sexual activity, substance use, and other risky behaviors associated with TDV victimization. Additionally, the study analyzes the potential mental health outcomes, including depressed mood and suicidal ideation, associated with TDV. The role of the school environment buffering the adverse influence of risk factors on TDV is also explored.

This dissertation aims to contribute to the literature on physical and sexual TDV victimization among Black teens by utilizing data from the Youth Risk and Behavior Surveillance Survey (YRBSS) (CDC, 2019c) to examine the behavioral risk factors contributing to physical and sexual violence victimization. This study also recognizes the importance of time sequence and the potential influence of risk behaviors in early adolescence on current TDV victimization. The study aims to provide a theoretical understanding of methods to predict and prevent TDV victimization among Black teens by analyzing these factors. Ultimately, this research will inform policies and practices that promote the well-being and safety of adolescents by examining the unique experiences of Black teens who experience TDV and identifying effective strategies for prevention and intervention.

Chapter II: Review of Literature¹

Participating in positive intimate, romantic pursuits is a healthy part of adolescent development (i.e., gaining autonomy and a sense of identity) (Kelly et al., 2012). Dating relationships present a unique opportunity for teens to learn conflict management, negotiation, and balancing interpersonal relationship needs (Simon & Furman, 2010). Still, as teens develop their sense of self through physical and emotional growth, their interpersonal interactions can increase their vulnerability to TDV victimization (Furman & Shaffer, 2003). As adolescents involve themselves in dating relationships and learn how to negotiate solutions that satisfy the needs of both partners, the interactions of relationship stress and expectations may lead to circumstances where the behaviors are fixed on maintaining the relationship by any means necessary (Harper & Welsh, 2007). When destructive conflict tactics are used, it may lead to violence within the dating relationship (Simon & Furman, 2010). Teens may mistake signs of unhealthy behaviors (e.g., dishonesty, hostility, name-calling, and teasing) as patterns of a normal relationship (National Center for Injury Prevention and Control, Division of Violence Prevention, 2022). These unhealthy behaviors could initiate teens' experience with TDV.

Physical and Sexual TDV Victimization

Physical and sexual TDV victimization remains among the most prominent forms of violence among youth, with 33.4% of US high school teens (84% White) reporting experiencing TDV victimization in a national study (Coker et al., 2014). Physical TDV victimization occurs when an adolescent is physically attacked by their dating partner in a manner that could result in injury (Foshee, 1996). These actions include biting, kicking, punching, hitting, slapping, shoving, spitting, suffocation, using a weapon, being held down, having objects thrown at them,

¹ Literature included in this chapter include data and studies from the U.S. unless otherwise specified.

or having their property broken (Wincentak et al., 2017). Approximately 1.5 million high school students experience physical TDV victimization in the US each year (Murray et al., 2016), and it accounts for between 10% to 20% of TDV incidents (Ackard et al., 2003; Baker & Helm, 2011; Foshee et al., 2009; Wincentak et al., 2017).

Sexual TDV victimization involves unwanted and aggressive sex or touching (e.g., hitting, kicking, punching, or slapping) in their private parts by a dating partner (Wincentak et al., 2017). Conceptualizations of sexual TDV victimization also include being forced, threatened, or pressured by a dating partner to engage in unwanted sexual activity (Wincentak et al., 2017). Unwanted sexual activity may also consist of sexual touching or assault, rape, exposing a partner to STIs, forcing a partner to have sex with other people or watch pornography, forcing a partner to have a baby or an abortion, preventing the use of birth control, and unwanted sexting (Wincentak et al., 2017). According to studies, rates of sexual TDV victimization range from 2% to 10% (Ackard et al., 2003; Baker & Helm, 2011; Foshee et al., 2009; Wincentak et al., 2017).

Approximately 8% to 53% of teens have experienced physical and/or sexual TDV victimization (Baker & Helm, 2011; Exner-Cortens et al., 2013; Foshee et al., 2009; Goncy et al., 2017; Halpern et al., 2009; Marquart et al., 2007; Niolon et al., 2015; Simon et al., 2010). Many adult survivors of sexual and/or physical TDV claim they first experienced these forms of violence during adolescence before age 18 (26% women and 15% men) (Smith et al., 2022). One study found that 40% of teens experienced physical and/or sexual TDV victimization at least once before adulthood (Halpern et al., 2009).

The experience of TDV victimization exhibits a gender divide that also varies based on the type of TDV, whether physical or sexual. Every year, nearly 8% to 47% of boys and 20% to 52.3% of girls experience physical and/or sexual TDV (Exner-Cortens et al., 2013; Vagi et al.,

2015). Among high school teens who reported experiencing physical, sexual, and/or psychological TDV victimization, the overall rate of TDV was highest among females (37.2% of females (n = 2,935) vs. 28.7% of males (n = 1,803)) (Coker et al., 2014). A meta-analysis among adolescents aged 13 to 18 showed that approximately 20% of boys and girls experienced physical TDV, while 8% of boys and 14% of girls experienced sexual TDV (Wincentak et al., 2017). Multiple studies also found that girls were more likely to experience sexual TDV victimization than boys, whereas boys were more likely to experience physical TDV victimization than girls (Wincentak et al., 2017). Additional literature describes no gender difference in rates of physical TDV victimization (Wincentak et al., 2017).

TDV and Black Youth

Race is a critical factor in TDV victimization, with Black teens being more likely to experience physical and sexual TDV than White or Hispanic teens (CDC, 2009; Eaton et al., 2012; Peskin et al., 2018). Eaton et al. (2020) reported that nearly one in four Black adolescents experienced physical or sexual TDV victimization, with Black adolescents having the highest prevalence of TDV victimization among racial groups (East et al., 2016). For African American teens, the prevalence of physical and sexual TDV victimization ranges from 11.8% for girls and 12.4% for boys (Eaton et al., 2012). Black female teens have reported the highest rates of sexual TDV victimization compared to Black males and other racial groups (CDC, 2006; CDC, 2011; Silverman et al., 2001).

Furthermore, research has shown that the factors associated with TDV victimization may differ for Black teens compared to their peers of other ethnic groups. A study by Exner-Cortens et al. (2013) found that Black adolescent girls were more likely to report experiencing physical

TDV if they had a history of childhood sexual abuse, whereas, for White girls, parental divorce was a significant risk factor for physical TDV.

Through critical race theory (CRT), Crenshaw (1991) emphasizes that experiences of racism are an ever-present reality for people of color. The premise of CRT includes how one who experiences oppression, racism, and sexism would experience physical or sexual TDV victimization. The CRT framework helps address the intersectionality of human experiences in a social context. Racial and gender discrimination are prominent in one's experiences with TDV victimization. The societal macro-level factors of structural institutions and beliefs have a trickledown effect on individuals' behaviors and experiences—the social inequalities Black/African American youth face can also be displayed in personal relationships. With TDV highest among Black youth, it is crucial to consider CRT in the context of TDV victimization among youth whose lives are regularly impacted by the social construct of race. Crenshaw (1991) positioned the need to pay critical attention to the intersectionality involving the experiences of women of color regarding gender, race, and ethnicity. It is essential to understand the intersection revolving between race, ethnicity, and gender when understanding intimate partner violence and health disparities comprehensively.

It is essential to consider societal-level discourses in the examination of behaviors related to TDV victimization to avoid overemphasizing individual-level factors that could wrongly place blame on the person for shortcomings. Additionally, societal-level determinants could also influence behaviors related to TDV victimization. Societal-level discourses refer to the broader cultural narratives, beliefs, and attitudes that shape our understanding of social issues and influence our behaviors and actions. These discourses are often reflected in the media, popular culture, public policy, and other social institutions and can significantly impact how we perceive

and respond to issues such as dating violence. Larger societal structures contribute to dating violence and perpetuate inequalities of race, economics, and gender (Storer, 2017), promote a masculine cultural ideal (Jewkes et al., 2015), and cater to conditions in society that support gender-based violence (Renzetti et al., 2011). A study informed by CRT suggested that teens who reported gender and racial discrimination (40.1%) were more likely to experience TDV victimization (93%) than teens who did not report both gender and racial discrimination (Roberts et al., 2018). However, it is important to consider the social and economic factors contributing to these differences, such as poverty and prejudice.

Race is a complex factor in TDV that varies based on cultural values, socio-economic status, and individual experiences. Black youth are often subjected to situations contributing to violent experiences, including racism, limited occupational and/or educational opportunities, and other potential socioeconomic disadvantages (Wilson, 2012). Racism is a pervasive social problem that exacerbates other contributing factors to TDV among Black teens, including poverty, lack of resources, and exposure to violence. Discrimination and inequality may lead to feelings of depression (Belle & Doucet, 2003) whereby, increasing the likelihood of TDV (Roberts et al., 2018). Racism may also contribute to feelings of low self-esteem and powerlessness, increasing the likelihood of adverse health consequences among people who identify with the Black race (Belle & Doucet, 2003).

Furthermore, societal norms and cultural beliefs surrounding race and gender may perpetuate TDV among Black teens. For example, Black men are often stereotyped as aggressive and hypermasculine, which may increase their risk of perpetrating violence against their partners (Reidy et al., 2014). At the same time, Black girls are often stereotyped as promiscuous and

sexually available, which can increase their risk of experiencing sexual violence and coercion (Belle & Doucet, 2003; French, 2013).

CRT helps us understand that addressing this issue requires a comprehensive approach that addresses the root causes of TDV among Black teens, including institutionalized racism, interpersonal prejudice, and structural inequalities. Additionally, cultural norms and values may play a role in shaping attitudes toward dating violence.

While both girls and boys identifying as Black/African American may experience physical and/or sexual TDV victimization, females experience more adverse effects (Crenshaw, 1991). Crenshaw (1991) describes the importance of the intersectionality of abuse that women of color experience because of their race and gender – in that it is essential to understand that IPV and health disparities can only be understood more comprehensively after examining how those events intersect with various issues/matters of social construction such as race, ethnicity, gender, or socio-economic status. There are multiple facets to consider when examining the issues when considering the patterns of social oppression (Bent-Goodley, 2007).

Community violence predicts TDV victimization for African American teens (Black et al., 2015). Jain et al. (2010) noted that Black/African American teens might be exposed to environments where aggressive behaviors are more commonly observed and deemed acceptable. This may include showing strength and having a defensive or protective mentality. In various studies, African American youth with higher prevalence rates of TDV victimization often live in economically underprivileged communities and are considered high-risk (Black et al., 2015; Howard & Wang, 2003; Nioloin et al., 2015; Roberts & Klein, 2003; West & Rose, 2000). Roberts et al. (2018) found that 40.1% of Black and Latinx teens experienced racial and gender discrimination, and 93% of teens experienced some form of dating violence.

For African American teens, the various predictors of TDV included age, gender, school violence (Black et al., 2015), risky sexual activity, and substance use (Lormand et al., 2013). A sample of middle school teens (48.5% African American) who experienced physical dating victimization were found to have also used drugs and alcohol, and had sex (Lormand et al., 2013).

Risk Factors of TDV

Early Initiation of Risk Behaviors

Age is an important factor in the risk of TDV victimization. Early risk behaviors linked to TDV victimization include early initiation of sexual behaviors (East & Hokoda, 2015; Silverman et al., 2001) and early initiation of substance use (e.g., marijuana, cigarettes, alcohol) (East & Hokoda, 2015; Swahn et al., 2008). A study of Latino and African American (31%) youth revealed that participating in risky behaviors such as having sex, drinking alcohol, and associating with deviant peers during early adolescence was related to a higher likelihood of being victimized in late adolescence (East & Hokoda, 2015). These results suggest that social networks and behaviors during early periods in one's life increase the susceptibility to victimization in later periods. In addition, adolescents who initiated substance use early were susceptible to having more risky patterns of use, such as using the substance alone or daily, than those who did not begin substance use before high school (Kingston et al., 2017).

Since 1997, about 50% to 70% of students in high school first experience sex by the age of 18 (Eaton et al., 2008; Carver et al., 2003). Though, boys, more often than girls, have sex for the first time before age 13 (Lindberg et al., 2019). The early age of initiation of sex has been defined as 14 or younger (French & Dishion, 2003). About 21% of teens had their first sex at 14 or younger (9.2% at age 14, 5.69% at age 13, 3.08% at age 12, and 3.24% at age 11 or younger)

(Cavazos-Rehg et al., 2009). About 7.1% of youth reported having their first sexual intercourse before age 13 (Eaton et al., 2008; Finer, 2007).

Regarding gender, the early age of initiating sex is before age 14 for girls and before age 13 for boys (Schofield et al., 2008). About 34% of boys and 30% of girls have had sexual intercourse by age 16 (Eaton et al., 2008; Finer, 2007). Specifically, during early adolescence, a national study found that among males (ages 15 to 24), 3.6% to 7.6% reported having sex for the first time before they turned 13 (Lindberg et al., 2019). Among males who reported their first sexual experience before age 13, 8.5% described their first sexual experience as unwanted. The highest rates of first sex before age 13 were reported among Black and Hispanic males compared to other ethnic groups (Lindberg et al., 2019).

The age of first sex initiation is a crucial risk factor for TDV victimization. Thus, it is critical to understand how it impacts the Black youth community. The age of sexual initiation among teens 12 to 16 years old is higher in Black youth than among Asians and other ethnicities compared to White youth (Carlson et al., 2014). Racial/Ethnic differences in first-sex experience among youth found that 43% of African American males had sexual intercourse by age 14, compared to a combined 20% or less for all other ethnic groups of males (Cavazos-Rehg et al., 2009). For African American teens who engaged in sex before, boys had sex at ages 12 (15%), 13 (28%), and 14 (42%). African American girls showed a lower rate of early sex initiation, having sex at ages 12 (3%), 13 (8%), and 14 (17%) (Cavazos-Rehg et al., 2009).

Multiple national data sources demonstrate that substance use is another critical risk factor for TDV victimization. Studies by Baiden et al. (2021) and Hingson et al. (2002) indicated that 3% to 15.4% of teens and adults who have reported their first alcoholic drink did so before the age of 13/14. Substance Abuse and Mental Health Service Agency (SAMHSA, 2014) reports

that the age of initiation of substance use is 13 years for boys and 14 years for girls. According to Poliakova et al. (2015), 9.8% of 12-year-olds and 25.7% of 13-year-olds initiated their first alcohol use, while 1% of 12-year-olds and 4.5% of 13-year-olds reported smoking tobacco. Furthermore, data from the Global Youth Tobacco Survey collected in over 100 countries estimate that about 10% of teens aged 13 to 15 smoke cigarettes (Warren et al., 2008).

Studies have indicated that Black girls initiated marijuana use at a slightly earlier average age (age 14.99) than White girls (age 15.33), while Black teens initiated alcohol use at an older average age (age 14.08) than White girls (age 13.7 years) (Sartor et al., 2020). Marijuana was the most reported substance to start before the age of 14 in substance use treatment centers, with 29.2% starting between ages 12 to 14 and 32.6% starting at or before age 11 (SAMHSA, 2014).

Among adult participants (age 18 to 30) enrolled in a substance use treatment center and reported their age at substance use initiation, 10.2% initiated substance use by 11 years old or younger, and 29.7% began substance use between ages 12 to 14 (SAMHSA, 2014). Among the group studied, a higher percentage of males (68.9%) than females (31.1%) started using before age 11, as well as 64% of males compared to 36% of females initiated between ages 12 to 14 (SAMHSA, 2014). In a study by Couturiaux et al. (2021) primarily consisting of White teens (92%), respondents who reported cannabis and alcohol use had a higher likelihood of experiencing physical TDV. Early initiation of sex and substance abuse are critical risk factors for TDV victimization, a growing problem for youth in the US. The age of initiation of risk behaviors should be considered in efforts to mitigate TDV victimization.

Violence-Related Behaviors

Violence-related behaviors are commonly linked to key risk factors for TDV victimization. National research data suggests that about one in four students have been in a

physical fight on school property at least once (Zhang et al., 2019). When high school students reported experiencing fear at school, they were also at a higher risk for participating in fights (Sattler et al., 2019). Physical fighting is connected to multiple repercussions, including weapon-carrying (Pham et al., 2017), dropping out of school (Staff & Kreager, 2008), absenteeism (Vaughn et al., 2013), substance use (alcohol, cigarettes, drugs) (Rudatsikira et al., 2008), and suicidal ideations (Davaasambu et al., 2017). Teens who reported physical fighting or carrying a weapon(s) at school were also more likely to experience severe sexual and/or physical TDV (Coker et al., 2000; Vagi et al., 2015; Vivolo-Kantor et al., 2016).

According to Sattler et al. (2019), experiencing multiple incidents of physical TDV, including bullying and sexual TDV, increases the likelihood of fighting at school for both males and females, with a more significant association observed for males. They are also more likely to be bullied, injured with a weapon, or threatened on school property than teens who do not report TDV (Vivolo-Kantor et al., 2016). In data on youth (ages 13 to 21) visiting the hospital for non-emergency care, physical fights were frequently associated with physical and/or sexual TDV victimization (Carroll et al., 2011). Female youth (age 15 to 21) with a history of TDV also reported physically fighting and riding in a car with someone under the influence of alcohol or drugs (Erikson et al., 2010). While teen fighting can occur for boys and girls, delinquent-related behaviors occur more noticeably among males over time (Exner-Cortens et al., 2013). National data from high school students found that about 4% of girls and 10% of boys had been in a physical fight in the last year (Elgar et al., 2015; Muula et al., 2009; Šmigelskas et al., 2018; Swahn et al., 2013).

There are multiple factors involved in adolescent weapon carrying, including a history of substance use, identifying as male, TDV, experiencing bullying, or sexual violence victimization.

Teens who initiated alcohol use before age 13 were two times more likely to carry a weapon than teens who did not initiate alcohol use before age 13 (Baiden et al., 2021). Approximately 13.5% of teens have carried a weapon in the last 30 days (Baiden et al., 2021). Teens in a physical fight and carrying a weapon at school were more likely to experience physical and sexual TDV compared to students not reporting experiencing TDV victimization (Vivolo-Kantor et al., 2016). Girls who used a weapon and reported being victimized by one also reported TDV victimization (O'Donnell et al., 2006).

Risky Sexual Behaviors

Risky sexual behaviors are closely linked to TDV victimization. Sexual risk behaviors, such as inconsistent condom use, acquiring sexually transmitted infections, having multiple sex partners, and pregnancy, have an increased probability of TDV victimization (Oudekerk et al., 2014; Teitelman et al., 2008; Wilson et al., 2012; Wingwood et al., 2001). Silverman et al. (2001) described an association between sexual risk behaviors and physical and sexual TDV in girls. Raj et al. (2000) further linked sexual abuse in a relationship to high-risk sexual behaviors (e.g., unprotected sex and multiple partners). Data finds that 40% of students in high school had sexual intercourse at least once in their teen lifetime, and 29% of high school students were sexually active (Kann et al., 2018).

Adolescents with more intimate partners have a higher likelihood of physical and/or sexual TDV victimization (Carroll et al., 2011). Age, gender, and race significantly influence the likelihood of having multiple partners. Carlson et al. (2014) analyzed data from the 1997 National Longitudinal Study of Youth to investigate the differences in sexual risk behaviors between Black and Hispanic youth compared to White youth. The study found that Black, Hispanic, and other racial/ethnic groups of color who had sex before age 21 were likelier to

report having multiple sex partners than non-Hispanic White and Asian teens. Older adolescents and Black males were likelier to report having multiple sex partners (Carlson et al., 2014).

Younger teens were more likely to have sex for the first time and reported having higher numbers of total partners (56% of teens with four or more partners under age 15, 27% at age 15 to 16, and 19% at age 17 to 19) (National Center for Health Statistics, 2010).

Condom and birth control use is closely linked to TDV. Condoms are among the most common contraceptive methods used among females, with 95% used at least once, the withdrawal method used 58% of the time, and the birth control pill used 55% of the time (National Center for Health Statistics, 2010). Use of contraceptives at the time of last sex, about 6.7% of boys and 16.5% of girls did not use any method, with 93.3% of boys and 83.5% of girls using at least one contraceptive method (e.g., birth control pill, other hormonal methods, condom, and other (i.e., withdrawal, sterilization) at the time of last sex (National Center for Health Statistics, 2010). When teens do not use birth control, they are more likely to be in a controlling relationship, and their partner is more likely to influence or restrict their use of birth control. For example, one partner may use psychological abuse to convince the other partner that condom use is inappropriate. Contraception and condoms are also used less regularly among teens who had their first sex before age 16 than among teens who had their first sexual intercourse between age 16 and 18 (Zimmer-Gembeck & Helfand, 2008).

Regarding race, a sample of predominantly Black youth (aged 15 to 21) who experienced TDV victimization was discovered to report inconsistent condom use and pregnancy compared to youth with no TDV victimization (Fedina et al., 2016). Not using condoms was related to having ever experienced TDV victimization for African American teens (Alleyne et al., 2011;

Walton et al., 2011). It is also likely that teens who engaged in sexually risky behaviors were more likely to be victimized by the odds of increased risk.

In examining sexual relationship power, IPV, and condom use, Teitelman and colleagues (2008) found that Black girls reported significantly less sexual relationship power than their non-Black peers, associated with a higher likelihood of IPV victimization (Teitelman et al., 2008; Wingood et al., 2001). In addition, the study found that IPV victimization was linked to inconsistent condom use among Black girls (Teitelman et al., 2008) and more likely to fear the perceived consequences of negotiating condom use and pregnancy prevention discussions in general (Wingood et al., 2001). These findings suggest that Black girls may face unique challenges in negotiating sexual relationships and protecting themselves from the negative consequences of IPV, including sexually transmitted infections and unintended pregnancies.

Substance Use

Substance use, such as alcohol, cigarettes, and marijuana, co-occurs with other risk behaviors (i.e., driving, sexual behaviors)—especially regarding TDV victimization. Substance use impairs cognition functioning, is associated with relationship dissatisfaction, and can occur in contexts where distress or aggression is normal (Rothman, McNaughton Reyes, et al., 2012). Teens who use substances (e.g., cigarettes, alcohol, marijuana) are more likely to experience TDV victimization than those who do not (Temple & Freeman, 2011). Substance use is often first initiated during adolescence (Monitoring the Future, 2019) and relates to other adverse outcomes such as violence/abuse and depressed mood (Banyard & Cross, 2008). SAMHSA defines heavy alcohol use as binge drinking on five or more days in the past month (Bose et al., 2016).

Marijuana is the most used drug among all illicit drugs. High school students who reported marijuana use recently had a higher likelihood of physical TDV victimization than teens who used little to no marijuana (Parker et al., 2016). When studying the rate of substance use within the last month, the rates were 22% of 12th graders, 18% of 10th graders, and 6.6% of 8th graders (Monitoring the Future, 2019). In 12th grade, males used marijuana more frequently (26%) than females (17%). This trend plays out across younger grade levels, with a slightly higher daily use of marijuana for males (6.9%) than females (5.1%) (Monitoring the Future, 2019). In addition to marijuana, the rates of use of teens who smoked cigarettes within the last month were 5.7% of 12th graders, 3.4% of 10th graders, and 2.3% of 8th graders (Monitoring the Future, 2019). Daily cigarette smoking was also higher in males than females (Monitoring the Future, 2019). Associations have been found between cigarette smoking in the past month and experiencing TDV victimization (Temple & Freeman, 2011). Boys and girls exposed to TDV victimization were more associated with smoking behaviors than teens who were not exposed (Bonomi et al., 2013). This association is reportedly higher among females (Bonomi et al., 2013; Exner-Cortens et al., 2013).

Alcohol is used more often than illicit drugs, such as marijuana. Among a national study of over 27,000 high school students, 21% of teens reported marijuana use, and 33% of teen students reported current alcohol use (Parker et al., 2016). About 29% of 12th and 7.9% of 8th graders reported drinking last month (Monitoring the Future, 2019). Like marijuana, daily alcohol use is higher among 12th-grade males (2.4%) than females (0.9%).

A longitudinal study describes how alcohol use (combined with prescription drug use) increased the risk of physical and sexual TDV victimization (Espelage et al., 2018). Alcohol is a strong predictor of TDV victimization among 53% of Black 17 to 21 years old's (Rothman,

Stuart, et al., 2012). Teens were likelier to experience dating abuse victimization on a day they drank alcohol than on a sober day (Rothman, Stuart, et al., 2012). Older teens who reported using alcohol frequently had a higher likelihood of experiencing physical victimization than high school teens who used little to no alcohol (Parker et al., 2016). Additionally, in a national study of 14,190 high school teens, 33.4% of whom reported experiencing TDV victimization, the rate of TDV was highest amongst teens reporting binge drinking (Coker et al., 2014).

Teen substance use has been associated with sexual risk behaviors, including having sex, having multiple sex partners, and not using a condom (Clayton et al., 2016; Cavazos-Rehg et al., 2012). More frequent use of substances increased the likelihood of having sex and the number of sex partners (Cavazos-Rehg et al., 2011). Teens who used substances (e.g., marijuana, alcohol) had the highest sexual risk behaviors than teens who did not use substances (Lowry et al., 1994).

Substance abuse plays a considerable role in TDV. Focus groups with high school teens who had experienced TDV found that they used drugs and/or alcohol at the beginning of a dating relationship to feel comfortable and used it at the end to cope with a breakup (Baker, 2016). Studies revealed TDV occurrences, regardless of whether only one or both partners were under the influence (Baker, 2016).

Black teen girls had lower alcohol and cigarette use rates over their lifetime than White female teens (52.8% vs. 67.7% and 26.2% vs. 34.7%, respectively) (Sartor et al., 2020). Still, Black girls had higher lifetime prevalence rates of marijuana use than White girls (41.8% vs. 31.2%) (Sartor et al., 2020). While substance abuse impacts all races and genders, Black females are more at risk for TDV victimization due to substance use. Silverman et al. (2001) described an association between physical and sexual TDV and substance use behaviors in girls. Given that the identity of being female and Black is associated with higher rates of experiencing TDV

victimization, the use of substances increases the risk for impaired cognition or an environment around peers who also may exhibit risk or aggressive behaviors.

Risky Driving Behaviors

Impulsive behavior is common among adolescents and can correlate to other risky behaviors or the likelihood of being around peers who engage in risky behaviors (Romer, 2010; Chein et al., 2011). Young adults aged 18 to 24 who reported using their phones while driving are described as “acting without thinking” (Walshe et al., 2021). The “acting without thinking” mentality could be connected to not thinking when exposed to dangerous peers. Additional literature finds that individuals who reported being a victim of violence were more likely to drive under the influence of alcohol (Daday et al., 2005). Male teen drivers have reported engaging in more risky behaviors and distracted driving than females (Barr et al., 2015).

In a study on the distracted driving behaviors of newly licensed teen drivers, about 58% of the new drivers found teens involved in a potentially distracting secondary task (Gershon et al., 2017). Because of the youth’s prominent ability to adopt new technology quickly and easily, such skill makes them probable victims to participate in distracted driving compared to older drivers (Gershon et al., 2017).

About 5% of teens used a cell phone while driving (e.g., texting, calling, and internet browsing) (Gershon et al., 2017). While driving, about 92% of young drivers send text messages (Atchley et al., 2011). A naturalistic driving study of risky driving behaviors found that 6.4% of people used cell phones (e.g., calls, texting) while driving, and .08% operated under alcohol (Dingus et al., 2016). This study included a sample of people aged 16 to 98, and thus it is not limited to only teenage drivers. In a study of 8,500 teens aged 16 and older, nearly 45% reported emailing or texting while driving within the last 30 days (Olsen et al., 2013). Compared to teens

who did not text while driving, teens who texted while driving in the last 30 days were also more likely to drive under the influence of alcohol (Olsen et al., 2013). Around 25% of teens reported texting while driving nearly every day; among this group of daily texters, 40% were less likely to wear a seat belt than teens who texted a few times a month while driving in the past month (Olsen et al., 2013). Additionally, males and older teens were most likely to text while driving (Olsen et al., 2013).

Drinking alcohol can lead to impaired sensory processing and reduced inhibition due to its depressant properties, which can slow down reaction time and reduce attentiveness while driving (Lopez-Caneda et al., 2014; Oscar-Bermans & Marinkovic, 2007). As a result of these known consequences, driving under the influence of alcohol is illegal and considered poor decision making (Sloan et al., 2014). This was true, especially among drivers (ages 15 to 19), who account for 10% of distracted drivers and 13% of distracted drivers using a cell phone at the time of a car crash (NHTSA, 2016).

Amongst 75% of teens over 16 who drove within the last month, nearly 41% of teens did not consistently wear a seat belt, 47% texted while driving, 19% were a passenger in a car with a driver who was under the influence of alcohol, and 7% drove under the influence of liquor themselves (Shults et al., 2021).

The lowest reports of seat belt use were significantly more often among teens and young drivers than in other age groups (Bao et al., 2015). Among males of all age groups, have lower seat belt use rates and tend to put a seat belt on at the beginning of a driving trip less often than female drivers (Bao et al., 2015). Additionally, when examining driving risk, disparities in seat belt usage among different racial/ethnic groups and genders, with African American adults wearing seat belts less frequently than non-Hispanic White adults (Briggs et al., 2006).

Limited research examines the relationship between risky driving behaviors and TDV victimization among Black teens. However, one study found that Black teens are more likely to engage in risky driving behaviors, such as speeding, running red lights, and not wearing seatbelts than their White counterparts (Debnam & Beck, 2011). Eroding trust in institutions and norms, this increased risk-taking behavior may be due to various factors, including social and economic disadvantage, leading to greater exposure to environmental risk factors and negative interactions with law enforcement (Amaro et al., 2021; Lasley, 1994).

These rates of risky driving behaviors strongly suggest that teens engaging in risky behaviors are prominent and can be associated with other risk behaviors that lead to TDV victimization. In addition, some research suggests that there may be a link between aggressive driving and physical aggression in relationships more broadly, which could extend to TDV victimization (Lajunen & Parker, 2001).

Protective Factor

Positive School Environment

Substance use and risk behaviors among teens are associated with peers who use substances and experience low feelings of school connectedness (Kann et al., 2018). Thus, supportive school environment protects against TDV victimization (Jankowiak et al., 2020; Parker et al., 2016). The probability of experiencing physical and/or sexual TDV was reduced when school support increased (Jankowiak et al., 2020). Feeling safe at school can reduce the likelihood of negative experiences for adolescents, such as bullying, feeling unsafe or threatened while on the way to or at school, carrying weapons, getting into physical fights, or using illegal drugs on school property.

School support is a protective factor for TDV victimization, reducing the probability of experiencing physical and/or sexual TDV (Jankowiak et al., 2020; Parker et al., 2016). This highlights the importance of feeling safe at school and the potentially harmful experiences that can arise when adolescents do not feel a sense of belonging or safety. However, exposure to violence at school may influence the risk of victimization in dating relationships; even classmates of teens who experience violence may be at greater risk of experiencing or approving violence in their relationships (Vezina & Hebert, 2007).

As uncovered in a national study, youth exposed to multiple forms of violence (maltreatment by a caregiver, physical assault, sexual victimization) were susceptible to a higher risk of exposure to other types of violence (i.e., physical TDV) (Hamby et al., 2012). African American female teens exposed to violence (e.g., physical, sexual, childhood, adolescent, neighborhood, school violence, and violence by dating partners) had an increased risk of experiencing more than one type of victimization (Wilson et al., 2012). Black students across several middle schools had fewer feelings of safety than White students (Bradshaw et al., 2009). Exposure to violence at school could influence the risk of victimization in dating relationships. Therefore, even the classmates of teens who may have more exposure to violence were at greater odds of experiencing or approving violence in their relationships (Vezina & Hebert, 2007).

Ensuring a sense of safety within the school environment can decrease the probability of unfavorable encounters among adolescents, including instances of bullying, feelings of insecurity or danger during travel or while present at school, the carrying of weapons, involvement in physical altercations, or the use of illicit substances on school premises (Vivolo-Kantor et al., 2016). Compared to students not reporting experiencing TDV, teens who experienced physical and sexual TDV reported various unsafe events at school that included feeling unsafe, missing

school, weapon carrying, being bullied, physical fighting, being injured or threatened with a weapon at school (Vivolo-Kantor et al., 2016). In the last year, 20% of high school girls who experienced TDV victimization were more likely to miss school due to feeling unsafe at or on the way to or from school in the previous month. In comparison, 8% of girls who did not experience TDV reported missing school due to feeling unsafe (Davis, 2008). Among sexual minorities (i.e., lesbian, gay, bisexual, transgender, queer, and questioning [LGBTQ] sexual orientations), adolescent girls experiencing bullying victimization (e.g., physical fighting at school) was associated with binge drinking (Fish et al., 2019). Boys and girls exposed to school violence were associated with aggressive behaviors (O’Keefe, 1997). Additionally, among teens, school bullying has also been associated with suicidality and depression (Messias et al., 2014). Teens who felt they belonged at school have increased self-esteem, adjustment, happiness, self-identity, and psychological functioning (Jose et al., 2012; Law et al., 2013; Nutbrown & Clough, 2009; O’Rourke & Cooper, 2010). Moreover, when students feel unsafe or low belonging at school, it is associated with bullying, disruptive behaviors, fighting, emotional distress, substance use, and early sexual behaviors (Allen & Kern, 2017; Goodenow, 1993; Kann et al., 2018).

Many teens’ risk behaviors could occur at school, and teens need a school environment without a culture promoting violence and risky behaviors that could lead to the adverse outcomes of engaging in risky behaviors and experiencing TDV victimization. A safe school environment would include a network of students displaying healthy behaviors, thus encouraging teens to associate themselves with romantic partners within this positive network. A positive school climate can decrease victimization and risky behaviors like binge drinking and school violence and promote positive outcomes for youth. Hence, a positive school climate would result in youth with fewer risk behaviors (i.e., behaviors associated with TDV victimization). Students had a

decreased risk of fighting when they reported feeling they belonged in school (Allen & Kern, 2017). A healthy school climate among teens could help decrease future TDV incidences and reduce the behaviors associated with TDV (Couturiaux et al., 2021).

Mental Health Outcomes

It is important to consider the effects of TDV on mental health outcomes. TDV can lead to serious short- and long-term effects on the youth who experience it. Research has shown that TDV is associated with depression, anxiety, and post-traumatic stress disorder (Ackard et al., 2007; Exner-Cortens et al., 2013).

The use of alcohol and depression complicates the relationship between victimization and mental health outcomes. Teens who experienced depression, suicidal thoughts, and substance use had a complicated relationship with physical and sexual TDV victimization (Banyard & Cross, 2008). For example, Ackard and Neumark-Sztainer (2002a) and Coker et al. (2000) found associations between dating violence and higher rates of eating disorders, suicidal thoughts, decreased mental and physical health, and life satisfaction.

Many risk factors associated with poor mental health outcomes (e.g., risk of suicide) include being sexually assaulted, being bullied, not feeling safe at school, and becoming depressed after bouts of physical and or sexual dating violence (Ackard & Neumark-Sztainer, 2002a; Ackard & Neumark-Sztainer, 2002b; Banyard & Cross, 2008). People who feel marginalized from their community (e.g., school) are less likely to seek help and face an increased threat of suicide (Cover, 2016).

Females exposed to physical and sexual TDV victimization had an increased risk of smoking and symptoms of depression (e.g., feeling down/hopeless, loss of interest) (Bonomi et al., 2013) and suicidality (e.g., attempted suicide) (Silverman et al., 2001). Males who

experienced physical/sexual TDV did not have any differences in health outcomes compared to males who did not experience TDV victimization (Bonomi et al., 2013). Specifically, among girls, experiencing physical and sexual dating violence is associated with an increased risk for suicidality (i.e., considered or attempted suicide) (Silverman et al., 2001). Specific to race, one study found that Black female victims of TDV had significantly higher levels of depressive symptoms than non-victims, while the same was not valid for Black male victims (Exner-Cortens et al., 2013).

While research on this topic is limited, some studies suggest that Black adolescent girls who experience both risky behaviors and TDV victimization may be at a higher risk of developing depression and suicidal ideation compared to their non-Black peers (Exner-Cortens et al., 2013; Wilson et al., 2010). Several factors may contribute to this increased risk, such as the intersection of race, gender, and the experiences of discrimination Black adolescent girls face (Chapman et al., 2014; Galán et al., 2022).

Conceptual Frameworks

Lifestyle Theory. The lifestyle theory or lifestyle exposure theory of victimization was developed by Hindelang et al. (1978) to explain how engagement in risk behaviors (e.g., substance use) increases the risk of victimization (Hindelang et al., 1978). This theory explains that a lifestyle including risk behaviors can lead to environments where victimization is more likely to ensue (Pratt & Turanovic, 2016). Risk behaviors impair the ability to judge probable threats, diminish the physical ability to fight off attacks, and lead to a person being in an environment of potential offenders. When one engages in risky behaviors in the presence of others, it could increase the probability of victimization, given that it makes one more susceptible to assaults when they are presumed to be or appear to be impaired.

This theoretical framework, which often focused on criminal offenses and victimization against adults, was built upon the foundation of adult relationships but can also apply to adolescents. Adolescents' risk behaviors surround decision-making with peers in a developmental framework upon which they are still developing mentally. Adolescents are vulnerable to victimization because most risk behaviors occur around or with peers (Engstrom et al., 2018). The absence of adult supervision during risk behaviors, such as sexual activity or substance use, is a factor in victimization (Gover, 2004). The risk for victimization further increases when a teen has friends or peers that engage in deviant behaviors, given that the deviant peers may influence them to engage in risky behaviors or the peers serve as prospective perpetrators (Reppucci et al., 2013).

The nature of teen development displays a connection between peer and dating relationships where the risk behaviors or interactions with peers can spill over into dating relationships. This can be seen in the increased risk of dating violence among peers who have attitudes accepting of violence (Hunt et al., 2022). Peer relationships provide opportunities to acquire social skills, behaviors, and norms that tend to be generalized in a dating relationship (Ellis & Dumas, 2018).

In examining adolescents, their risky lifestyles, and their victimization in violent crime, the frequency of alcohol use was associated with a higher risk of being a victim. Being a victim of violence has a higher probability of occurrence when someone is under the influence of alcohol (Sontate et al., 2021).

Time spent in the city center at night has correlated with a higher risk of victimization, increasing the probability of peer pressure and unhealthy opportunities to engage in risky behavior (Engstrom et al., 2018). Unstructured activities provide more opportunities to not only

witness but also interact with people who are unsupervised in risky lifestyles. Risky lifestyles include but are not limited to, engaging in unsupervised activities with peers and drinking alcohol (Averdijk & Bernasco, 2015). A strong relationship exists between delinquency and victimization (Averdijk & Bernasco, 2015). Furthermore, lifestyle and risk behaviors could contribute to varying risk levels for experiencing TDV victimization.

Therefore, it is not just one's lifestyle or behavior that people act upon creates opportunities for victimization, but the exposure to the risk. The current study examines substance use, sexual behaviors, aggressive behavior, and distracted driving as critical risk behaviors for victimization. Research finds that when teens engage in high-risk behaviors during early adolescence, they have an increased probability of experiencing physical and sexual TDV victimization in late adolescence. The risky lifestyles theory of victimization helps us understand that early engagement in risks impairs youth's ability to recognize or react to potential threats, increasing their risk for victimization.

Nested Ecological Model of IPV. According to Dutton's (1995) nested ecological model of IPV, the incidence of IPV can be explained by various levels of influence, such as the interplay of the individual level (ontogenetic system) in an intimate relationship (microsystem), while considering external community factors (exosystem), and societal attitudes and beliefs (macrosystem). The model suggests that a complex interplay of these factors must be considered to comprehensively understand the contributions to IPV.

The nested ecological model of IPV can provide insight into the risk factors of TDV and the protective factors that can mitigate the negative effects of TDV victimization on mental health outcomes. Spencer et al. (2020) applied this model to investigate risk factors for TDV in

adolescents and found strong risk factors at the individual level (ontogenetic system) were substance use, risky sexual behaviors, and weapon carrying.

Exposure to violence in the community increased the lifetime experience with IPV for African American youth in urban communities (Kennedy, 2008). Previous literature has described that the protective effects of school support can buffer the negative impact of community violence exposure on IPV (Kennedy, 2008). At the individual level (ontogenetic system), factors such as their beliefs and behaviors, such as age, substance use, mental health, sexual behavior, and aggression, may increase the risk of dating violence. School support can help promote positive self-image and emotional regulation through an environment that feels safe, comforting, and less threatening since it contains less of weapons, drugs, and bullying.

At the relationship level (microsystem), including close relationships with family and intimate relationships, communication patterns, power imbalances, and social norms that condone or encourage violence may influence dating violence. Schools can help minimize TDV by promoting healthy relationship skills and behaviors, providing opportunities for positive social interactions, and creating a culture of respect and non-violence. At the community level (exosystem), such as the schools and social institutions they reside in, poverty, social isolation, and lack of access to resources may increase the risk of dating violence. Schools can help address these community-level risk factors by providing an environment free of negative environmental aspects (e.g., bullying, drugs) to one with a more positive, healthy environment and relationship interactions.

At the societal level (macrosystem), cultural norms and values may shape attitudes toward violence and gender roles, influencing the prevalence of dating violence. Schools can influence societal attitudes towards dating violence by promoting values of respect, equality, and

non-violence through education and awareness campaigns. Therefore, by addressing risk factors at multiple levels of influence, schools can help to reduce the risk of TDV and create a safer and more supportive environment for all students. The current study examines risk factors for TDV victimization in the adolescents' ontogenetic system, microsystem, exosystem, and macrosystem.

Dutton's nested ecological model of IPV provides a comprehensive framework for understanding the risk factors of TDV victimization and the role the school environment can play as a protective factor against TDV victimization. By addressing risk factors at multiple levels of influence, schools can help to reduce the risk of TDV and create a safe and more supportive environment for all students.

Research Limitations

The prevalence rates of TDV across different studies may be inconsistent for various reasons, such as using different measurement tools, study designs (i.e., variations in the conceptualization of dating violence), and data collection methods. This inconsistency makes it challenging to understand the extent of TDV victimization and how it influences different populations. Moreover, most current research on TDV has methodological limitations, such as using cross-sectional survey methods instead of longitudinal methods to examine TDV over time. Additionally, teens may not accurately report victimization experiences as a TDV event. While no limits exist to which gender or racial group could experience TDV in relationships, some groups may disproportionately experience it more often.

One of the significant limitations in the literature is the lack of recognition of the social impacts of race and culture on the experiences of TDV. The existing research tends to combine all teens in the analysis without including the social implications of race (Sheats et al., 2018). Black teens' experiences with TDV are unique and are influenced by various factors such as

race, gender, and cultural norms that impact their interactions with others (Sampson et al., 2005). For instance, Black males' experiences with TDV are rarely examined in the literature, and the available research tends to focus more on Black females.

Furthermore, the experiences of Black youth in the US are shaped by several challenges and risk factors, such as systemic racism, poverty, and exposure to community violence, which are not extensively studied in the context of TDV victimization (Roberts et al., 2018; Galán et al., 2022). While data describes the rates of these risk factors, the literature is limited in analyzing their implications for Black teens experiencing TDV victimization.

The current study aims to address the gap in the current research literature by examining the impact of TDV victimization on Black teens and their mental health outcomes, considering the unique social, cultural, and historical factors that shape their experiences with TDV.

Chapter III: Methods

Youth Risk Behavior Surveillance Survey

The Youth Risk Behavior Surveillance Survey (YRBSS) was developed in 1990 to monitor the health risk behaviors of middle and high school students in the United States. The survey focused on factors deemed influential in understanding the sources of experiencing violence, injuries, and social problems. Data collections for the YRBSS are conducted biennially, using a survey approach, usually during the spring semester. The YRBSS procedures were approved by the CDC Institutional Review Board (CDC, 2019c). Before survey administration, permission was obtained from guardians, and students took one class period to complete the self-administered questionnaire on a computer-scannable booklet. Data and documentation for the YRBSS (1991 to 2019) are available through public access (<https://www.cdc.gov/healthyyouth/data/yrbs/data.htm>).

Data collected in 2015, 2017, and 2019 from 9th through 12th-grade students attending public, Catholic, and other private schools in the United States and the District of Columbia were included in this investigation. The survey did not include students from the Virgin Islands, the Trust Territories, and Puerto Rico. Information on reasons for this exclusion are unavailable.

Sampling Method

The sampling frame for the YRBSS was based on data from the Common Core of Data from the National Center for Educational Statistics (US Department of Education, National Center for Education Statistics, 2013-2014) and the Market Data Retrieval (MDR) database (MDR National Education Database Master Extract, 2014). Sampling methods were similar across the three different years of data collection, as described in the following sections.

Data for the YRBSS were collected using a three-stage cluster sample design. In stage 1, whole counties, sub-areas of large-scale counties, and groups of smaller counties adjacent to the large counties were selected across the US (1,259 in 2015, 1,257 in 2017, and 1,257 in 2019) selected as primary sampling units (PSUs). These county areas were categorized into 16 sections based on the number of Hispanic and Black students in the selected PSU and the sections' metropolitan statistical area status (i.e., rural, suburban, urban city) (16 in 2015, 2017, and 2019). From the 16 sections, 54 PSUs of the areas were sampled based on metropolitan size and ensured the sample sizes were proportional to the overall school enrollment size for the PSU each year.

In stage 2, secondary sampling units (SSUs) were selected from physical schools selected from grades 9 to 12; or they improvised by creating a school by combining nearby schools to provide the sample school with grades 9 to 12. Of the 54 PSUs, 180, 162, and 177 SSUs (respective to each year 2015, 2017, and 2019) were sampled proportionately to school enrollment size. Within each SSU, high schools with grades 9 to 12 were randomly selected to be proportionate to school enrollment size (180 in 2015, 192 in 2017, 184 in 2019). Ultimately the schools sampled after the random selection of schools within the SSUs were 125 in 2015, 144 in 2017, and 136 in 2019.

In stage 3, classes from 9th to 12th grades were selected from each school using random probability sampling. All students were eligible to participate in selected classes. For each data collection year, two classes were selected from a required period (e.g., math or science) or a required subject (e.g., third period or homeroom).

Each year, Black and Hispanic student oversampling was conducted to match/adjust for nonresponse and the national proportional increases in Black and Hispanic populations. A weighted factor was applied to student records (based on race and ethnicity, grade, and sex) to

scale the proportions of students to match the population's projections for each survey year. This study's weighting factor was not considered in analyses because the sample was limited to Black participants in past and current dating relationships and between age 14 and 18 years.

Response Rates

Response rates are provided for the school, students, and overall. For each year (2015, 2017, and 2019), the overall response rate is calculated by multiplying the school response rate by the student response rate.

$$\text{Response Rate} = \frac{\text{number of participating schools}}{\text{number of eligible sampled schools}} \times \frac{\text{number of usable questionnaires}}{\text{number of eligible students sampled}} \quad (1)$$

In 2015, 125 of the 180 sampled schools participated, resulting in a 69% school response rate. Of the eligible students sampled (number not provided), 15,713 submitted questionnaires; 89 failed quality control, leaving 15,624 usable questionnaires after data editing resulting in an 86% student response rate. The overall response rate was 60%.

In 2017, 144 of the 192 sampled schools participated, resulting in a 75% school response rate. Of the eligible students sampled (number not provided), 14,956 submitted questionnaires; 191 failed quality control, leaving 14,765 usable questionnaires after data editing resulting in an 81% student response rate. The overall response rate was 60%.

In 2019, 136 of the 181 sampled schools participated, resulting in a 75% school response rate. Of the 17,025 sampled students, 13,872 submitted questionnaires: 195 failed quality control leaving 13,677 usable questionnaires after data editing resulting in an 81% student response rate. The overall response rate was 60%.

Data Cleaning

The data screening process of this national data set included a cleaning and editing process for inconsistencies and fidelity checks. A failed quality control for a questionnaire meant

the same response to 15 or more successive questions or if less than 20 responses remained after data editing. Questionnaires that failed quality control were removed from the sample. No statistical imputations were conducted on missing data (CDC, 2019c).

Questionnaire

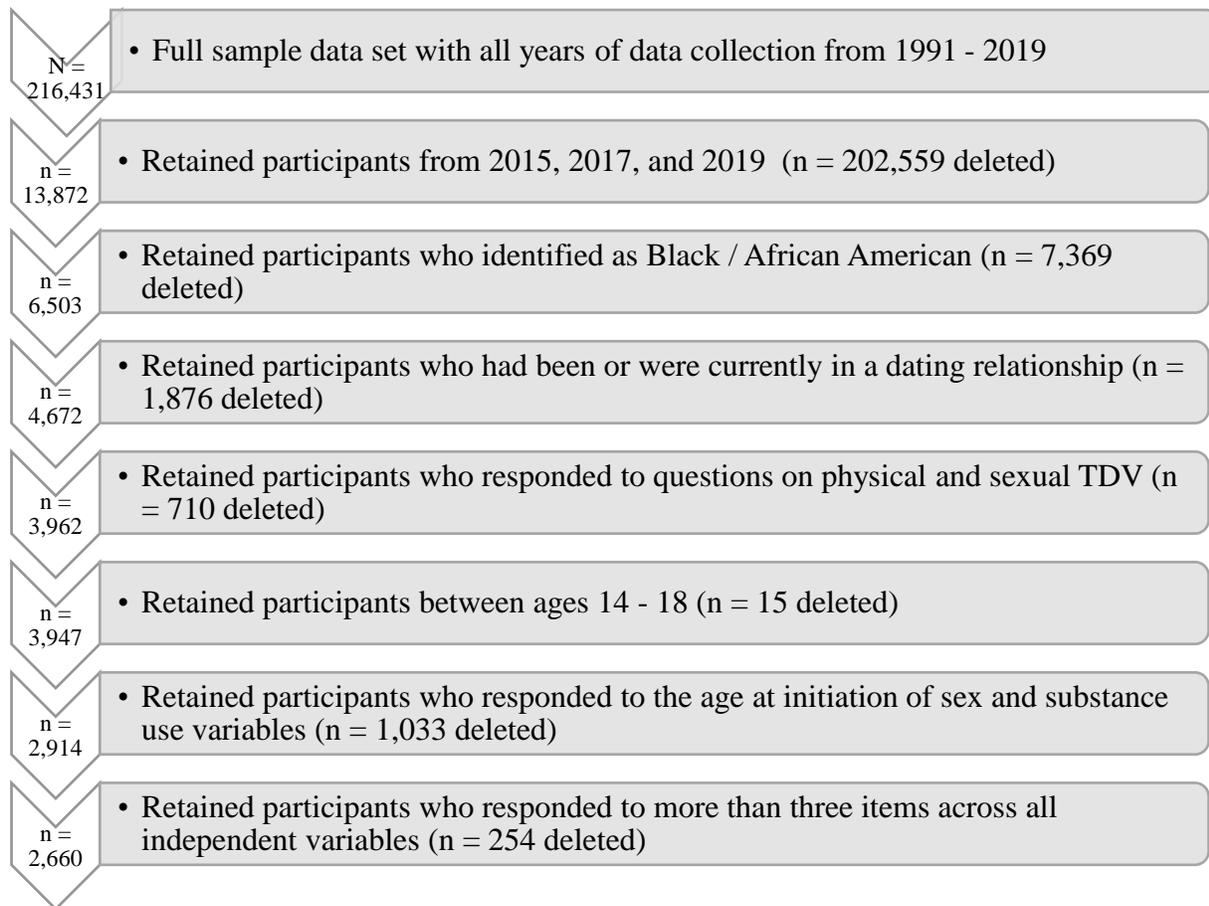
The national YRBSS questionnaires for 2015, 2017, and 2019 contained 99 questions. It was administered in English, written at the 6th-grade comprehension level, and took students about 45 minutes (one class period) to complete. The YRBSS questionnaire inquired about teens' substance use, violent-related behaviors, sexual behaviors, TDV victimization, driving behaviors, physical activity, and eating patterns.

Current Sample

Data for the current study included information on youth risk behaviors from teens who responded to the YRBSS in the survey years 2015, 2017, and 2019. There were 13,526 total respondents to the YRBSS across the three years. Combining data across three years allows for a more robust analysis of data. Additionally, as the most recent data available, these three years helped provide a more accurate and relevant account of teens' behaviors, conveying the historical moment this study was conducted. Selection criteria included those who (a) self-identified as Black/African American, (b) were between ages 14 and 18 years, and (c) had been or were currently in a dating relationship (see Figure 1 for final sample selection).

Figure 1

Decision Tree for Deciding on the Final Study Sample



Note. Description of the process for sample selection and data cleaning.

The resulting sample size included 2,660 Black teens (52.34% females and 47.66% males) and in grades 9 to 12 (23.40% of teens were in the 9th grade, 26.11% of teens were in the 10th of grade, 25.24% of teens were in the 11th grade, and 25.24% of teens were in the 12th grade). Less than a tenth of the participants (8.95%) were 14 years of age, 22.11% were 15 years of age, 26.88% were 16 years of age, 25.13% were 17 years of age, and 15.94% were 18 years and older. Most (85%) of teens identified as heterosexual, 3.73% as gay or lesbian, 9.09% as bisexual, and 2.17% were unsure. In 2015, there were 768 teens (49.22% males and 50.78% females). In 2017, there were 1,129 teens (45.62% males and 54.38% females). In 2019, there were 757 teens (49.14% males and 50.86% females). Table 1 provides a demographic breakdown of the total sample across the three years of data collection.

Table 1*Sample Demographic Characteristics*

	Total		2015		2017		2019	
	N	%	n	%	n	%	n	%
Total Sample	2,660		768		1,129		757	
Gender								
Male	1,265	52.34	378	49.22	515	45.62	385	49.14
Female	1,389	47.66	390	50.78	614	54.38	372	50.86
Grade								
9 th	621	23.40	178	23.15	269	23.85	174	22.99
10 th	693	26.11	175	22.76	290	25.71	228	30.12
11 th	670	25.24	214	27.83	278	24.65	178	23.51
12 th	670	25.24	202	26.27	291	25.80	177	23.38
Age								
14 years old	238	8.95	73	9.45	104	9.20	61	8.05
15 years old	588	22.11	163	21.11	252	22.30	173	22.83
16 years old	715	26.88	194	25.13	300	26.55	221	29.16
17 years old	695	25.13	216	27.98	281	24.87	198	26.12
18 years or older	424	15.94	12	16.32	193	17.08	105	13.85
Sexual Identity								
Heterosexual	2,235	85.01	677	88.27	933	83.45	625	84.01
Gay or Lesbian	98	3.73	22	2.85	43	3.85	33	4.44
Bisexual	239	9.09	56	7.30	115	10.29	68	9.14
Not Sure	31	2.17	12	1.56	27	2.42	18	2.42

Note. Values represent demographic data per each data collection year used in the study. Values incorporate the missing data among the sample.

Measures

The risk factors included in the study were early and current risk behaviors. The outcome variables included TDV victimization and teen mental health. A positive school environment

was included as a protective factor. The list of survey items, response options, and descriptions of how the survey items were recoded are presented in Table 2.

Table 2

Descriptions of Variables Used in the Study

Construct	Sub-Construct	Variable Name	New Label	Questionnaire Item	Original Scale	Recoded Scale
	Demographics	age	age	How old are you?	1 = 12 years old or younger 2 = 13 years old 3 = 14 years old 4 = 15 years old 5 = 16 years old. 6 = 17 years old 7 = 18 years old or older	1 = 14 years old 2 = 15 years old 3 = 16 years old. 4 = 17 years old 5 = 18 years old or older
		sex	gender	What is your sex?	1 = Female 2 = Male	1 = female 0 = male
		grade	grade	In what grade are you?	1 = 9th grade 2 = 10th grade 3 = 11th grade 4 = 12th grade	1 = 9th grade 2 = 10th grade 3 = 11th grade 4 = 12th grade
	Teen Dating Violence (TDV)	Q21	Sexual TDV Victimization	During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)	1 = Did not date 2 = 0 times 3 = 1 time 4 = 2 or 3 times 5 = 4 or 5 times 6 = 6 or more times	0 = no sexual TDV 1 = sexual TDV
		Q22	Physical TDV Victimization	During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.)	1 = Did not date 2 = 0 times 3 = 1 time 4 = 2 or 3 times 5 = 4 or 5 times 6 = 6 or more times	0 = no physical TDV 1 = physical TDV
Early Risk Behaviors (ERB)	Initiation into Sexual Activities	Q59	Initiation into sexual activities	How old were you when you had sexual intercourse for the first time?	1 = Never had sex 2 = 11 years old or younger 3 = 12 years old 4 = 13 years old 5 = 14 years old 6 = 15 years old 7 = 16 years old 8 = 17 years old or older	0 = later initiation into sexual activities 1 = early initiation into sexual activities

Initiation into Substance Use	Q31	Initiation into cigarette smoking	How old were you when you first tried cigarette smoking, even one or two puffs?	1 = Never tried cigarette smoking 2 = 8 years old or younger 3 = 9 or 10 years old 4 = 11 or 12 years old 5 = 13 or 14 years old 6 = 15 or 16 years old 7 = 17 years old or older	0 = later initiation into cigarette smoking 1 = early initiation into cigarette smoking	
	Q46	Initiation into marijuana use	How old were you when you tried marijuana for the first time?	1 = Never tried marijuana 2 = 8 years old or younger 3 = 9 or 10 years old 4 = 11 or 12 years old 5 = 13 or 14 years old 6 = 15 or 16 years old 7 = 17 years old or older	0 = later initiation into marijuana use 1 = early initiation into marijuana use	
	Q40	Initiation into alcohol use	How old were you when you had your first drink of alcohol other than a few sips?	1 = Never drank alcohol 2 = 8 years old or younger 3 = 9 or 10 years old 4 = 11 or 12 years old 5 = 13 or 14 years old 6 = 15 or 16 years old 7 = 17 years old or older	0 = later initiation into alcohol use 1 = early initiation into alcohol use	
Current Risk Behaviors (CRB)	Risky Sexual Behaviors	Q61	Multiple sex partners	During the past 3 months, with how many people did you have sexual intercourse?	1 = Never had sex 2 = None during past 3 months 3 = 1 person 4 = 2 people 5 = 3 people 6 = 4 people 7 = 5 people 8 = 6 or more people	0 = no multiple sex partners 1 = multiple sex partners
		Q64	Birth control use	The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? (Select only one response.)	1 = Never had sex 2 = No method was used 3 = Birth control pills 4 = Condoms 5 = IUD or implant 6 = A shot, patch, or birth control ring 7 = Withdrawal/some other method 8 = Not sure	0 = no birth control use 1 = birth control use
Violence Related Behaviors		Q14	Weapon carrying	During the past 12 months, on how many days did you carry a gun? (Do not count the days when you carried a gun only for hunting or for a sport, such as target shooting.)	1 = 0 days 2 = 1 day 3 = 2 or 3 days 4 = 4 or 5 days 5 = 6 or more days	0 = no weapon carrying 1 = weapon carrying
		Q17	Physical fighting	During the past 12 months, how many times were you in a physical fight?	1 = 0 times 2 = 1 time 3 = 2 or 3 times 4 = 4 or 5 times 5 = 6 or 7 times 6 = 8 or 9 times 7 = 10 or 11 times 8 = 12 or more times	0 = no physical fighting 1 = physical fighting
Substance Use		Q32	Cigarette smoking	During the past 30 days, on how many days did you smoke cigarettes?	1 = 0 days 2 = 1 or 2 days 3 = 3 to 5 days 4 = 6 to 9 days	0 = no cigarette smoking 1 = cigarette smoking

				5 = 10 to 19 days 6 = 20 to 29 days 7 = All 30 days	
				1 = 0 days 2 = 1 or 2 days 3 = 3 to 5 days 4 = 6 to 9 days 5 = 10 to 19 days 6 = 20 to 29 days 7 = All 30 days	0 = no electronic vape use 1 = electronic vape use
				1 = 0 times 2 = 1 or 2 times 3 = 3 to 9 times 4 = 10 to 19 times 5 = 20 to 39 times 6 = 40 or more times	0 = no marijuana use 1 = marijuana use
				1 = 0 days 2 = 1 or 2 days 3 = 3 to 5 days 4 = 6 to 9 days 5 = 10 to 19 days 6 = 20 to 29 days 7 = All 30 days	0 = no alcohol use 1 = alcohol use
Risky Driving Behaviors	Q8	No seat belt	How often do you wear a seat belt when riding in a car driven by someone else?	1 = Never 2 = Rarely 3 = Sometimes 4 = Most of the time 5 = Always	0 = no seat belt use 1 = seat belt use
	Q9	Riding with a drinking driver	During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?	1 = 0 times 2 = 1 time 3 = 2 or 3 times 4 = 4 or 5 times 5 = 6 or more times	0 = did not ride with a drinking driver 1 = rode with a drinking driver
	Q11	Texting while driving	During the past 30 days, on how many days did you text or e-mail while driving a car or other vehicle?	1 = I did not drive a car or other vehicle during the past 30 days 2 = 0 days 3 = 1 or 2 days 4 = 3 to 5 days 5 = 6 to 9 days 6 = 10 to 19 days 7 = 20 to 29 days 8 = All 30 days	0 = no texting while driving 1 = texting while driving
Positive School Environment (PSE)	Q23	Bullying at school	During the past 12 months, have you ever been bullied on school property?	1 = Yes 2 = No	0 = bullying at school 1 = no bullying at school
	Q16	Threatened at school	During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property?	1 = 0 times 2 = 1 time 3 = 2 or 3 times 4 = 4 or 5 times 5 = 6 or 7 times 6 = 8 or 9 times 7 = 10 or 11 times 8 = 12 or more times	0 = feeling threatened at school 1 = not feeling threatened at school
	Q57	Illegal drugs at school	During the past 12 months, has anyone offered, sold, or given	1 = Yes 2 = No	0 = illegal drugs at school 1 = no illegal drugs at school

	Q13	Weapon carrying at school	you an illegal drug on school property? During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?	1 = 0 days 2 = 1 day 3 = 2 or 3 days 4 = 4 or 5 days 5 = 6 or more days	0 = weapon carrying at school 1 = no weapon carrying at school
	Q18	Physical fighting at school	During the past 12 months, how many times were you in a physical fight on school property?	1 = 0 times 2 = 1 time 3 = 2 or 3 times 4 = 4 or 5 times 5 = 6 or 7 times 6 = 8 or 9 times 7 = 10 or 11 times 8 = 12 or more times	0 = physical fighting at school 1 = no physical fighting at school
Mental Health Outcomes (MHO)	Q25	Depressed mood	During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?	1 = Yes 2 = No	0 = no depressed mood 1 = depressed mood
	Q26	Considered suicide	During the past 12 months, did you ever seriously consider attempting suicide?	1 = Yes 2 = No	0 = did not consider suicide 1 = considered suicide
	Q27	Planned suicide	During the past 12 months, did you make a plan about how you would attempt suicide?	1 = Yes 2 = No	0 = no suicide plan 1 = suicide plan
	Q28	Attempted suicide	During the past 12 months, how many times did you actually attempt suicide?	1 = 0 times 2 = 1 time 3 = 2 or 3 times 4 = 4 or 5 times 5 = 6 or more times	0 = no suicide attempt 1 = made suicide attempt

Note. See Appendix A for the complete 2019 YRBSS Questionnaire.

Risk Factors

Early Risk Behaviors

Participants responded to items regarding their age at initiation into various risk behaviors (initiation into sexual activities, initiation into cigarette smoking, initiation into alcohol use, initiation into marijuana use). Information from studies (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014; Schofield et al., 2008) indicated that boys

aged 13 years and younger and girls 14 years and younger were at increased risk for early initiation into risky behaviors.

Initiation into Sexual Activities. Information from four items was used to assess the new construct “initiation into sexual activities” (0 = later initiation into sexual activities, 1 = early initiation into sexual activities). Participants responded to the question (Q59)², "How old were you when you had sexual intercourse for the first time?" on an 8-point Likert scale (1 = never had sex, 2 = 11 years old or younger, 3 = 12 years old, 4 = 13 years old, 5 = 14 years old, 6 = 15 years old, 7 = 16 years old, 8 = 17 years old or older). Participants who indicated 1 (never had sex) were given a score of 0 (later initiation into sexual activities). Participants who were older than 14 years (boys) or older than 15 years (girls) when they had sexual intercourse for the first time were given a score of 0 (later initiation into sexual activities). Participants who indicated that they were 13 years and younger (boys) or were 14 years and younger (girls) when they first had sexual intercourse were given a score of 1 (early initiation into sexual activities). There were 108 participants (4.06% with missing information on “initiation into sexual activities”).

Information from three other questions (Q60, Q58, and SEXPART) was used to inform the missing data on “initiation into sexual activities”. Participants responded to Q60, "During your life, with how many people have you had sexual intercourse?" on a 7-point scale (1 = I have never had sexual intercourse, 2 = 1 person, 3 = 2 people, 4 = 3 people, 5 = 4 people, 6 = 5 people, 7 = 6 or more people). Participants responded to Q58, "Have you ever had sexual intercourse?" on a 2-point scale (0 = No, 1 = Yes) and to SEXPART on a 4-point scale (1 = never had sex, 2 = opposite sex only, 3 = same sex only, 4 = both sexes).

² Question numbers indicated in the measures section are the numbers indicated in the survey questionnaire.

If there was missing information on “initiation into sexual activities”, and participants responded to Q60 between 2 and 7 on the Likert scale, were boys 14 years or older or were girls 15 years or older at the current time, were assigned a score of 0 on “initiation into sexual activities” (later initiation into sexual activities). Participants who had missing information on “initiation into sexual activities” and responded to Q60 as never having had sexual intercourse (1) were given a score of 0 (later initiation into sexual activities). Participants who responded to Q60 between 2 and 7 on the Likert scale and were boys aged 13 years or younger or girls 14 years or younger at the current time were assigned a score of 1 (early initiation into sexual activities).

If data were still missing on “initiation into sexual activities” and there was information on Q58, i.e., if participants indicated that they never had sexual intercourse (0), they were assigned a score of 0 (later initiation into sexual activities). Participants who responded with a score of 1 and were boys 14 years or older or were girls 15 years or older at the current time were assigned a score of 0 (later initiation into sexual activities). If participants responded with a score of 1 indicating that they had sexual intercourse, were boys 13 years or younger, or were girls 14 years or younger at the current time, they were assigned a score of 1 (early initiation into sexual activities).

If data was still missing on “initiation into sexual activities”, information from the variable SEXPART (sex of sexual contacts) was used to address missingness. If participants responded 1 (never had sex), they were given a score of 0 (later initiation of sexual activities). If participants responded between 2 and 4 on the Likert scale, were boys 14 years or older or girls 15 years or older at the current time, they were assigned a score of 0 (later initiation into sexual activities). If participants responded between 2 and 4 on the Likert scale, were 13 or younger

(boys), or were 14 or younger (girls) at the current time, they were assigned a score of 1 (early initiation into sexual activities).

In the final sample, 2,117 participants indicated no early initiation into sexual activities (0), and 543 participants indicated early age at initiation into sexual activities (1).

Initiation into Substance Use. Information from six items (Q31, Q30, Q33, Q40, Q45, Q46) was used to assess “initiation into substance use” (cigarette smoking, alcohol use, and marijuana use).

Initiation into Cigarette Smoking. Information from three items (Q31, Q30, Q33) was used to assess “initiation into cigarette smoking” (0 = later initiation into cigarette smoking, 1 = early initiation into cigarette smoking). Participants were asked (Q31), "How old were you when you first tried cigarette smoking, even one or two puffs?" and responded to this statement on a 7-point scale (1 = I have never tried cigarette smoking, 2 = 8 years old or younger, 3 = 9 or 10 years old, 4 = 11 or 12 years old, 5 = 13 or 14 years old, 6 = 15 or 16 years old, 7 = 17 years old or older). Participants were asked (Q30), "Have you ever tried cigarette smoking, even one or two puffs?" and responded to this statement on a dichotomous 2-point scale (0 = No, 1 = Yes). Participants were asked (Q33), "During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?" and responded to this statement on a 7-point scale (1 = Did not smoke cigarettes, 2 = Less than 1 cigarette per day, 3 = 1 cigarette per day, 4 = 2 to 5 cigarettes per day, 5 = 6 to 10 cigarettes per day, 6 = 11 to 20 cigarettes per day, 7 = More than 20 cigarettes).

Participants who indicated 1 (never tried cigarette smoking) on Q31 were given a score of 0 (later initiation into cigarette smoking). If participants indicated that they were older than 14 years (boys) or older than 15 years (girls) when they engaged in cigarette smoking for the first

time, they were given a score of 0 (later initiation into cigarette smoking). If participants indicated that they were 13 years and younger (boys) or were 14 years and younger (girls) when they first engaged in cigarette smoking, they were given a score of 1 (early initiation into cigarette smoking). Eight hundred and eight participants (30.38%) had missing information on “initiation into cigarette smoking.”

If there was missing data on “initiation into cigarette smoking”, participants who responded 0 (never tried smoking) to Q30 were assigned a score of 0 (later initiation into cigarette smoking). Participants who had missing information “initiation into cigarette smoking”, responded 1 (tried smoking) to Q30, and were boys 14 years or older or girls 15 years or older at the current time, were assigned a score of 0 (later initiation into cigarette smoking). Participants who had missing information on “initiation into cigarette smoking”, responded 1 (tried smoking) to Q30, and were boys 13 years or younger or girls 14 years or younger at the current time, were assigned a score of 1 (early initiation into cigarette smoking).

Additionally, if there was missing information on “initiation into cigarette smoking”, participants who responded with a score of 1 (did not smoke cigarettes) on Q33 were assigned a 0 (later initiation into cigarette use). Participants who responded between 2 and 7 on the Likert scale to question Q33, were boys 14 years or older or girls 15 years or older at the current time and were assigned a score of 0 (later initiation into cigarette use). If participants responded between 2 and 7 on the Likert scale, were 13 or younger (boys) or were 14 or younger (girls) at the current time were assigned a score of 1 (early initiation into cigarette use).

In the final sample, 2,395 participants indicated late initiation into cigarette use (0) and 265 participants indicated early initiation into cigarette use (1).

Initiation into Alcohol Use. Information from one question (Q40) was used to assess “initiation into alcohol use” (0 = later initiation into alcohol use, 1 = early initiation into alcohol use). Participants were asked, "How old were you when you had your first drink of alcohol other than a few sips?" on a 7-point scale (1 = never drank alcohol, 2 = 8 years old or younger, 3 = 9 or 10 years old, 4 = 11 or 12 years old, 5 = 13 or 14 years old, 6 = 15 or 16 years old, 7 = 17 years old or older, 7 = 17 years old or older).

Participants who indicated 1 (never tried alcohol use) on Q40 were given a score of 0 (later initiation into alcohol use). If participants indicated that they were 14 years or older (boys) or 15 years or older (girls) when they engaged in alcohol use for the first time, they were given a score of 0 (later initiation into alcohol use). If participants indicated that they were 13 years or younger (boys) or were 14 years or younger (girls) when they first had alcohol use, they were given a score of 1 (early initiation into alcohol use).

In the final sample, 1,798 participants later initiation into alcohol use (0) and 862 participants indicated early initiation into alcohol use (1).

Initiation into Marijuana Use. Information from two items (Q46, Q45) was used to assess “initiation into marijuana use” (0 = later initiation into marijuana use, 1 = early initiation into marijuana use). Participants were asked (Q46), "How old were you when you tried marijuana for the first time?" and responded to this statement on a 7-point scale (1 = I have never tried marijuana, 2 = 8 years old or younger, 3 = 9 or 10 years old, 4 = 11 or 12 years old, 5 = 13 or 14 years old, 6 = 15 or 16 years old, 7 = 17 years old or older, 7 = 17 years old or older). Participants were asked (Q45), "During your life, how many times have you used marijuana?" and responded on a 7-point scale (1 = 0 times, 2 = 1 or 2 times, 3 = 3 to 9 times, 4 = 10 to 19 times, 5 = 20 to 39 times, 6 = 40 to 99 times, 7 = 100 or more times).

Participants who indicated 1 (never tried marijuana) on Q46 were given a score of 0 (later initiation into marijuana use). If participants indicated that they were boys aged 14 years or older or girls 15 years or older at the current time when they engaged in marijuana use for the first time, they were given a score of 0 (later initiation into marijuana use). If participants indicated that they were 13 years or younger (boys) and 14 years or younger (girls) when they first engaged in marijuana use, they were given a score of 1 (early initiation into marijuana use). There were 0.08% of participants with missing information on “initiation into marijuana use”.

If there was missing data on “initiation into marijuana use”, information from Q45 was used to supplement the missing data. If participants indicated 0 on Q45, they were given a score of 0 (later initiation into marijuana use). If participants responded between 2 and 7 on the response scale, were boys 14 years or older or girls 15 years or older at the current time, they were given a score of 0 (later initiation into marijuana use). If participants responded between 2 and 7 on the Likert scale, were 13 years or younger (boys) or 14 years or younger (girls), they were given a score of 0 (early initiation into marijuana use).

In the final sample, 1,923 participants indicated late initiation into marijuana use (0), and 737 participants indicated early initiation into marijuana use (1).

Finally, the construct “early risk behaviors” was constructed by summing participants' scores on (a) initiation into sexual activities (1/0), (b) initiation into cigarette use (1/0), (c) initiation into alcohol use (1/0), and (d) initiation into marijuana use (1/0). Scores ranged between 0 and 4, with higher scores indicating greater engagement in early risk behaviors. Results indicated that 49.70% of participants did not engage in any early risk behaviors, 22.89% engaged in one early risk behavior, 16.39% engaged in two early risk behaviors, 9.25% engaged in three early risk behaviors, and 1.77% engaged in four early risk behaviors.

Current Risk Behaviors

Four variables were used to construct the construct of current risk behaviors:

Risky Sexual Behaviors. Information from three items (Q61, Q64, Q63) was used to assess the new construct “risky sexual behaviors” (multiple sex partners and birth control use).

Multiple Sex Partners. Information from one item (Q61) was used to assess the new construct for “multiple sex partners” (0 = no multiple sex partners, 1 = multiple sex partners). Participants responded to the question (Q61), "During the past 3 months, with how many people did you have sexual intercourse?". Students responded to this item on an 8-point scale (1 = Never had sex, 2 = None during past 3 months, 3 = 1 person, 4 = 2 people, 5 = 3 people, 6 = 4 people, 7 = 5 people, 8 = 6 or more people). Participants who indicated 1 or fewer sex partners were given a score of 0 (no multiple sex partners). If participants indicated having 2 or more sex partners, they were given a score of 1 (multiple sex partners). One hundred and eighteen participants (4.44%) had missing information on “multiple sex partners”. In the final sample, 2,245 participants indicated they did not have multiple sex partners (0) and 297 participants indicated having multiple sex partners (1).

Birth Control Use. Information from two items (Q64, Q63) was used to assess “birth control use” (0 = no birth control use, 1 = birth control use). Participants were asked (Q64), "The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? (Select only one response.)" and responded to this statement on an 8-point categorical scale (1 = I have never had sexual intercourse, 2 = No method was used to prevent pregnancy, 3 = Birth control pills, 4 = Condoms, 5 = An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon), 6 = A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing), 7 = Withdrawal or some other method, 8

= Not sure). Participants who indicated 1 (I have never had sexual intercourse), 3 (Birth control pills), 4 (Condoms), 5 (An IUD [such as Mirena or ParaGard] or implant [such as Implanon or Nexplanon]), or 6 (A shot [such as Depo-Provera], patch [such as Ortho Evra], or birth control ring [such as NuvaRing]) on Q64 were given a score of 0 (no birth control use). Participants were asked (Q63), "The last time you had sexual intercourse, did you or your partner use a condom?" and responded to this item on a 3-point scale (1 = I have never had sexual intercourse, 2 = Yes, 3 = No).

If participants indicated 2 (No method was used to prevent pregnancy), 7 (Withdrawal or some other method), or 8 (Not sure), they were given a score of 1 (birth control use). Two hundred and two participants (7.59%) had missing information on "birth control use".

If there was missing data on "birth control use", information from Q63 was used to supplement the data. If participants indicated a 1 or 2 on Q63, they were assigned a score of 0 (no birth control). If participants indicated a 3 on Q63, they were assigned a score of 1 (birth control use).

This additional calculation added 54 participants to the sample and reduced the missing data to 144 people who did not respond to Q46. In the final sample, 2,004 participants indicated using birth control (0), and 512 participants indicated no birth control use (1).

Violence-Related Behaviors. Information from three items (Q14, Q12, Q17) was used to assess "violence-related behaviors" (weapon carrying and physical fighting).

Weapon Carrying. Information from two items (Q14 and Q12) was used to assess "weapon carrying" (0 = no weapon carrying, 1 = weapon carrying). Participants were asked (Q14), "During the past 12 months, how many days did you carry a gun? (Do not count the days when you carried a gun only for hunting or for a sport, such as target shooting.)" and responded

to this statement on a 5-point Likert scale (1 = 0 days, 2 = 1 day, 3 = 2 or 3 days, 4 = 4 or 5 days, 5 = 6 or more days). Participants were asked (Q12), "During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club?" was included to get additional data on age at initiation into weapon carrying. Participants responded to a 5-point scale (1 = 0 days, 2 = 1 day, 3 = 2 or 3 days, 4 = 4 or 5 days, 5 = 6 or more days).

Participants who indicated 1 on Q14 were given a score of 0 (no weapon carrying). If participants indicated between 2 and 5 on Q14, they were given a score of 1 (weapon carrying). There were 954 participants (35.86) with missing information on "weapon carrying".

If there was missing data on "weapon carrying", and participants who responded 1 on Q12, they were assigned a score of 0 (no weapon carrying). Participants who responded between 2 and 5 on the Likert scale question Q12 were assigned a score of 1 (weapon carrying). This additional calculation added 785 participants to the sample and reduced the missing data to 169 people with missing data on "weapon carrying."

In the final sample, 2,369 participants indicated no weapon carrying (0), and 512 participants indicated weapon carrying (1).

Physical Fighting. Information from one item (Q17) was used to assess "physical fighting" behaviors (0 = no physical fighting, 1 = physical fighting). Participants were asked (Q17), "During the past 12 months, how many times were you in a physical fight?" and responded to this statement on an 8-point Likert scale (1 = 0 times, 2 = 1 time, 3 = 2 or 3 times, 4 = 4 or 5 times, 5 = 6 or 7 times, 6 = 8 or 9 times, 7 = 10 or 11 times, 8 = 12 or more times). There were 106 participants with missing data on "physical fighting." In the final sample, 1,692 participants indicated no physical fighting (0), and 862 participants indicated physical fighting (1).

Substance Use. Information from ten items (Q32, Q30, Q33, Q35, Q34, Q47, Q45, Q48, Q41, Q42) was used to assess current substance use behaviors (cigarette smoking, electronic vape use, marijuana use, and alcohol use).

Cigarette Smoking. Information from three items (Q32, Q30, Q33) was used to assess *cigarette smoking* (0 = no cigarette smoking, 1 = cigarette smoking). Participants were asked (Q32), "During the past 30 days, on how many days did you smoke cigarettes?" and responded to this statement on a 7-point scale (1 = 0 days, 2 = 1 or 2 days, 3 = 3 to 5 days, 4 = 6 to 9 days, 5 = 10 to 19 days, 6 = 20 to 29 days, 7 = All 30 days). Participants were also asked (Q30), "Have you ever tried cigarette smoking, even one or two puffs?" and responded to this statement on a 2-point scale (1 = Yes, 2 = No). Additionally, participants were asked (Q33), "During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?" and responded to this statement on a 7-point scale (1 = I did not smoke cigarettes during the past 30 days, 2 = Less than 1 cigarette per day, 3 = 1 cigarette per day, 4 = 2 to 5 cigarettes per day, 5 = 6 to 10 cigarettes per day, 6 = 11 to 20 cigarettes per day, 7 = More than 20 cigarettes per day).

Participants who indicated 1 (I did not smoke cigarettes during the past 30 days) were given a score of 0 (no cigarette smoking). If participants indicated between 2 and 7 on the scale to Q32, they were assigned a score of 1 (cigarette smoking). There were 154 participants (5.79%) who had missing information on "cigarette smoking."

If there was missing data on "cigarette smoking," and participants responded with a score of 2 on question Q30, they were assigned a score of 0 (no cigarette smoking). This additional calculation added three participants to the sample and reduced the missing data to 151 on "cigarette smoking."

Additionally, if there was missing information on “cigarette smoking”, participants who responded with a score of 1 (did not smoke cigarettes) on Q33 were assigned a score of 0 (no cigarette smoking). Participants who responded between 2 and 7 on question Q33 were assigned a score of 1 (cigarette smoking). This additional calculation added 132 participants to the sample and reduced the missing data to 19 people.

In the final sample, 2,527 participants indicated no cigarette smoking (0), and 114 participants indicated cigarette smoking (1).

Electronic Vape Use. Information from two items (Q35, Q34) was used to assess “electronic vape use.” Participants were asked (Q35), “During the past 30 days, on how many days did you use an electronic vapor product?” and responded to this statement on a 7-point scale (1 = 0 days, 2 = 1 or 2 days, 3 = 3 to 5 days, 4 = 6 to 9 days, 5 = 10 to 19 days, 6 = 20 to 29 days, 7 = All 30 days). Participants were also asked (Q34), “Have you ever used an electronic vapor product?” and responded to this item on a 2-point scale (0 = No, 1 = Yes).

Participants who indicated 1 (0 days) were assigned a score of 0 (no electronic vape use). If participants indicated between 2 and 7 on the Likert scale, they were given a score of 1 (electronic vape use). One hundred and eighty-two participants (6.84%) had missing information on “electronic vape use.”

If there was missing data on “electronic vape use”, participants who responded 1 (No) to question Q34 were given a score of 0 (no electronic vape use). This additional calculation added 4 participants to the sample and reduced the missing data on “electronic vape use” to 178 people.

In the final sample, 2,111 participants indicated no electronic vape use (0), and 371 participants indicated electronic vape use (1).

Marijuana Use. Information from three items (Q47, Q45, Q48) was used to assess “marijuana use” (0 = no marijuana use, 1 = marijuana use). Participants were asked (Q47), “During the past 30 days, how many times did you use marijuana?” and responded to this statement on a 6-point scale (1 = 0 times, 2 = 1 or 2 times, 3 = 3 to 9 times, 4 = 10 to 19 times, 5 = 20 to 39 times, 6 = 40 or more times). Participants were also asked (Q45), “During your life, how many times have you used marijuana?” and responded to this statement on a 7-point scale (1 = 0 times, 2 = 1 or 2 times, 3 = 3 to 9 times, 4 = 10 to 19 times, 5 = 20 to 39 times, 6 = 40 to 99 times, 7 = 100 or more times). Additionally, participants were asked (Q48), “During your life, how many times have you used synthetic marijuana?” and responded to this statement on a 6-point scale (1 = 0 times, 2 = 1 or 2 times, 3 = 3 to 9 times, 4 = 10 to 19 times, 5 = 20 to 39 times, 6 = 40 or more times).

Participants who indicated 1 (0 times) on Q47 were given a score of 0 (no marijuana use). If participants indicated a response between 2 and 6 on Q47 they were given a score of 1 (marijuana use). Eighteen participants (0.68%) had missing information on “marijuana use”.

If there was missing data on “marijuana use,” participants who indicated 1 to Q45 were assigned a score of 0 (no marijuana use).

Additionally, if there was missing information on “marijuana use”, participants who responded with a score of 1 on Q48 were assigned a 0 (no marijuana use). This additional calculation added 15 participants to the sample and reduced the missing data to 3 people on “marijuana use.”

In the final sample for this item, 1,884 participants indicated no marijuana use (0), and 773 participants indicated marijuana use (1).

Alcohol Use. Information from two items (Q41, Q42) was used to assess “alcohol use” (0 = no alcohol use, 1 = alcohol use). Participants were asked (Q41), "During the past 30 days, on how many days did you have at least one drink of alcohol?" and responded to this statement on a 7-point scale (1 = 0 days, 2 = 1 or 2 days, 3 = 3 to 5 days, 4 = 6 to 9 days, 5 = 10 to 19 days, 6 = 20 to 29 days, 7 = All 30 days). Participants were also asked (Q42), " During the past 30 days, on how many days did you have 4 or more drinks of alcohol in a row, that is, within a couple of hours (if you are female) or 5 or more drinks of alcohol in a row, that is, within a couple of hours (if you are male)?" and responded to this statement on a 7-point scale (1 = 0 days, 2 = 1 day, 3 = 2 days, 4 = 3 to 5 days, 5 = 6 to 9 days, 6 = 10 to 19 days, 7 = 20 or more days).

Participants who indicated 1 (0 days) to Q41 were assigned a score of 0 (no alcohol use). If participants indicated between 2 and 7 on the Likert scale were assigned a score of 1 (alcohol use). There were 893 participants (33.57%) with missing information on “alcohol use.”

If there was missing data on “alcohol use” and participants responded with a score of 1 (0 days), 2 (1 day), or 3 (2 days) on Q42³, they were assigned a score of 0 (no alcohol use). If participants indicated between 4 and 7 on the Likert scale to Q42, they were given a score of 1 (alcohol use). This additional calculation added 782 participants to the sample and reduced the missing data on “alcohol use” to 111 people.

In the final sample for this item, 2,453 participants indicated no alcohol use (0), and 96 participants indicated alcohol use (1).

Risky Driving Behaviors. Information from three items (Q8, Q9, Q11) was used to assess “risky diving behaviors” (no seat belt use, riding with a drunk driver, and texting while driving).

³ SAMHSA defines heavy alcohol use as binge drinking on 5 or more days in the past month (SAMHSA, n.d.).

No Seat Belt. Information from one item (Q8) was used to assess seat belt use (0 = no seat belt use, 1 = seat belt use). Participants were asked (Q8), "How often do you wear a seat belt when riding in a car driven by someone else?" and responded to this statement on a 5-point scale (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, 5 = Always).

Participants who indicated 5 (Always) on Q8 were assigned a score of 0 (seat belt use). If participants indicated between 1 and 4 on the Likert scale, they were given a score of 1 (no seat belt use). Sixty-four participants (2.41%) had missing information on "no seat belt".

In the final sample, 1,016 participants indicated seat belt use (0), and 1,580 participants indicated no seat belt use (1).

Riding with a Drinking Driver. Information from one item (Q9) was used to assess riding in a car with a drinking driver (0 = did not ride with a drinking driver, 1 = rode with a drinking driver). Participants were asked (Q9), "During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?" and responded to this statement on a 5-point scale (1 = 0 times, 2 = 1 time, 3 = 2 or 3 times, 4 = 4 or 5 times, 5 = 6 or more times).

Participants who indicated 1 (0 times) on Q9 were given a score of 0 (did not ride with a drinking driver). If participants indicated a response between 2 and 5 on the Likert scale, they were given a score of 1 (rode with a drinking driver). Fifteen participants (0.56%) had missing information on "riding with a drinking driver".

In the final sample, 2,162 participants indicated not riding with a drinking driver (0) and 483 participants indicated riding with a drinking driver (1).

Texting while Driving. Information from one item (Q11) was used to assess "texting while driving" (0 = no texting while driving, 1 = texting while driving). Participants were asked

(Q11), "During the past 30 days, on how many days did you text or e-mail while driving a car or other vehicle?" and responded to this item on an 8-point scale (1 = I did not drive a car or other vehicle during the past 30 days, 2 = 0 days, 3 = 1 or 2 days, 4 = 3 to 5 days, 5 = 6 to 9 days, 6 = 10 to 19 days, 7 = 20 to 29 days, 8 = All 30 days).

Participants who indicated 1 (I did not drive a car or other vehicle during the past 30 days) or 2 (0 days) on Q11 were given a score of 0 (no texting while driving). If participants indicated a response between 3 and 8 on the Likert scale, they were assigned a score of 1 (texting while driving). One hundred and seventy-five (6.58%) had missing information on "texting while driving."

In the final sample, 1,954 participants indicated no texting while driving (0), and 531 participants indicated texting while driving (1).

Finally, the construct "current risk behaviors" was constructed by summing scores on (a) multiple sex partners (0/1), (b) birth control (0/1), (c) weapon carrying (0/1), (d) physical fighting (0/1), (e) cigarette smoking (0/1), (f) electronic vape use (0/1), (g) marijuana use (0/1), (h) alcohol use (0/1), (i) no seat belt use (0/1), (j) riding with a drinking driver (0/1), and (k) texting while driving (0/1). Scores ranged between 0 and 11, with higher scores indicating greater engagement in current risk behaviors. Results indicated that 15.83% of participants did not engage in any current risk behavior, 26.65% engagement in one current risk behavior, 22.22% engaged in two current risk behaviors, 15.56% engaged in three current risk behaviors, 8.98% engaged in four current risk behaviors, 5.90% engaged in five current risk behaviors, 2.97% engaged in six current risk behaviors, 0.94% engaged in seven current risk behaviors, 0.49% engaged in eight current risk behaviors, 0.30% engaged in nine current risk behaviors, 0.09% engaged in ten current risk behaviors, and 0.8% engaged in eleven current risk behaviors.

Protective Factor

Positive School Environment. Participants responded to five items regarding their school environment (bullying at school, threatened at school, drugs at school, weapon carrying at school, physical fighting at school).

Bullying at School. Information from one item (Q23) was used to assess “bullying at school” (0 = bullying at school, 1 = no bullying at school). Participants were asked (Q23), "During the past 12 months, have you ever been bullied on school property?" and responded to this item on a 2-point scale (0 = No, 1 = Yes).

Participants who indicated a 1 (*Yes*) on Q23 were assigned a score of 0 (bullying at school). If participants indicated 0 (*No*) were given a score of 1 (no bullying at school). Ten participants (0.38%) had missing responses to “bullying at school.”

In the final sample, 323 participants indicated bullying at school (0), and 2,327 participants indicated no bullying at school (1).

Threatened at School. Information on one item (Q16) was used to assess feeling “threatened at school” (0 = feeling threatened at school, 1 = not feeling threatened at school). Participants were asked (Q16), "During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property?" and responded to this statement with an 8-point scale (1 = 0 times, 2 = 1 time, 3 = 2 or 3 times, 4 = 4 or 5 times, 5 = 6 or 7 times, 6 = 8 or 9 times, 7 = 10 or 11 times, 8 = 12 or more times).

Participants who indicated a response between 2 and 8 on the Likert scale of Q16 were given a score of 0 (threatened at school). If participants indicated a 1 (0 times), they were assigned a score of 1 (not threatened at school).

In the final sample, 177 participants indicated feeling threatened at school (1), and 2,483 participants indicated not feeling threatened at school (0).

Illegal Drugs at School. Information on one item (Q57) was used to assess the use of “illegal drugs at school” (0 = illegal drugs at school, 1 = no illegal drugs at school). Participants were asked (Q57), "During the past 12 months, has anyone offered, sold, or given you an illegal drug on school property?" and responded to this item on a 2-point scale (0 = No, 1 = Yes).

Participants who indicated 1 (Yes) were assigned a score of 0 (illegal drugs at school). If participants indicated a 1 (No), they were given a score of 1 (no illegal drugs at school). Twenty participants (0.75%) had missing responses on “illegal drugs at school.”

In the final sample, 485 participants indicated the use of illegal drugs at school (1), and 2,155 participants indicated no use of illegal drugs at school (0).

Weapon Carrying at School. Information from one item (Q13) was used to assess “weapon carrying at school” (0 = weapon carrying at school, 1 = no weapon carrying at school). Participants were asked (Q13), "During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?" and responded to this item on a 5-point Likert scale (1 = 0 days, 2 = 1 day, 3 = 2 or 3 days, 4 = 4 or 5 days, 5 = 6 or more days).

Participants who indicated a response between 2 and 5 on the Likert scale of Q13 were given a score of 0 (weapon carrying at school). If participants indicated a 1 (0 days), they were given a score of 1 (no weapon carrying at school). Fifteen participants (0.56%) had missing responses on “weapon carrying at school.”

In the final sample, 162 participants indicated weapons carrying at school (0), and 2,483 participants indicated no weapon carrying at school (1).

Physical Fighting at School. Information from one item (Q18) was used to assess “physical fighting at school” (0 = physical fighting at school, 1 = no physical fighting at school). Participants were asked (Q18), "During the past 12 months, how many times were you in a physical fight on school property? and responded to this statement on an 8-point scale (1 = 0 times, 2 = 1 time, 3 = 2 or 3 times, 4 = 4 or 5 times, 5 = 6 or 7 times, 6 = 8 or 9 times, 7 = 10 or 11 times, 8 = 12 or more times).

Participants who indicated between 2 and 8 were assigned a score of 0 (physical fighting at school). If participants indicated a 1 (0 times), they were given a score of (1 = no physical fighting at school).

In the final sample for this item, 177 participants indicated physical fighting at school (0), and 2,483 participants indicated no physical fighting at school (1).

Finally, the construct “positive school environment” was constructed by summing scores on (a) bullying at school (0/1), (b) threatened at school (0/1), (c) illegal drugs at school, (d) weapon carrying at school, and (f) physical fighting at school. Scores ranged between 0 and 5, and higher scores indicated a more positive school environment. Results indicated that 0.71% of participants did not experience any positive school environment, 2.78% experienced one aspect positive school environment, 3.16% experienced two aspects of positive school environment, 2.89% experienced three aspects of positive school environment, 21.50% experienced four aspects of positive school environment, and 68.95% experienced five aspects of positive school environment.

Teen Dating Violence

Participants responded to two items regarding their experience with TDV victimization (sexual TDV victimization and physical TDV victimization).

Physical Teen Dating Violence Victimization. Information from one item (Q22) was used to assess “physical TDV victimization” (0 = no physical TDV victimization, 1 = physical TDV victimization). Participants were asked (Q22), "During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.)" and responded to this statement on a 6-point scale (1 = Did not date, 2 = 0 times, 3 = 1 time, 4 = 2 or 3 times, 5 = 4 or 5 times, 6 = 6 or more times).

Participants who indicated 1 (Did not date) on Q22 were removed from the sample. If participants indicated 2 (0 times) on Q22, they were given a score of 0 (no physical TDV victimization). If participants indicated between 3 and 6 on Q22, they were given a score of 1 (physical TDV victimization).

In the final sample for this item, 2,405 participants indicated no physical TDV victimization (0), and 255 participants indicated physical TDV victimization (1).

Sexual Teen Dating Violence Victimization. Information from one item (Q21) was used to assess “sexual TDV victimization” (0 = no sexual TDV victimization, 1 = sexual TDV victimization). Participants were asked (Q21), "During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)" and responded to this item on a 6-point scale (1 = Did not date, 2 = 0 times, 3 = 1 time, 4 = 2 or 3 times, 5 = 4 or 5 times, 6 = 6 or more times).

Participants who indicated 1 (Did not date) on Q21 were removed from the sample. If participants indicated 2 (0 times) on Q21, they were given a score of 0 (no sexual TDV

victimization). If participants indicated between 3 and 6 on Q21, they were given a score of 1 (sexual TDV victimization).

In the final sample for this item, 2,520 participants indicated no sexual TDV victimization (0), and 140 participants indicated sexual TDV victimization (1).

Finally, the construct “teen dating violence” (TDV) was constructed by summing scores on (a) physical TDV victimization (0/1), (b) and physical TDV victimization (0/1). Scores ranged between 0 and 2, with higher scores indicating more experiences with TDV victimization (0 = no TDV, 1 = either physical or sexual TDV, 2 = both physical and sexual TDV). Results indicated that 87.52% of participants did not experience any TDV victimization, 10.11% experienced either physical or sexual TDV victimization, and 2.37% experienced both physical and sexual TDV victimization. (See Table 3 for a breakdown of TDV victimization frequency by data collection year).

Table 3

Frequency of TDV Victimization

	Physical TDV Victimization			Sexual TDV Victimization		
	2015	2017	2019	2015	2017	2019
0 times	90.41%	89.91%	91.16%	92.62%	95.40%	95.91%
1 time	4.27%	4.98%	4.49%	2.72%	2.92%	1.32%
2 or 3 times	2.98%	3.19%	2.11%	2.59%	1.06%	1.98%
4 or 5 times	0.52%	0.71%	0.26%	0.78%	0.18%	0.13%
6 or more times	1.81%	1.24%	1.98%	1.30%	0.44%	0.66%

Note. N = 2,660. Values represent TDV victimization per each data collection year used in the study.

Mental Health Outcomes

Participants responded to four items to assess the new construct “mental health outcomes” (depressed mood, considered suicide, planned suicide, attempted suicide).

Depressed Mood. Information from one item (Q25) was used to assess “depressed mood” (0 = no depressed mood, 1 = depressed mood). Participants were asked (Q25), "During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?" and responded to this item on a 2-point scale (0 = No, 1 = Yes).

Participants who indicated 0 (No) on Q25 were assigned a score of 0 (no depressed mood). If participants indicated 1 (Yes), they were given a score of 1 (depressed mood). Fourteen participants (0.53%) had missing information on “depressed mood.”

In the final sample, 1,883 participants indicated no depressed mood (0), and 763 participants indicated having a depressed mood (1).

Considered Suicide. Information from one item (Q26) was used to assess if participants “considered suicide” (0 = did not consider suicide, 1 = considered suicide). Participants were asked (Q26), "During the past 12 months, did you ever seriously consider attempting suicide?" and responded to this statement on a 2-point scale (0 = No, 1 = Yes).

Participants who indicated 0 (No) on Q26 were given a score of 0 (did not consider suicide). If participants indicated 1 (Yes), they were given a score of 1 (considered suicide). Nine participants (0.34%) had missing information on “considered suicide.”

In the final sample, 2,245 participants indicated not considering suicide (0), and 406 participants indicated considering suicide (1).

Planned Suicide. Information from one item (Q27) was used to assess if participants made planned suicide (0 = no suicide plan, 1 = suicide plan). Participants were asked (Q27), "During the past 12 months, did you make a plan about how you would attempt suicide?" and responded to this item on a 2-point scale (0 = No, 1 = Yes).

Participants who indicated 0 (No) on Q27 were given a score of 0 (no suicide plan). If participants indicated 1 (Yes), they were given a score of 1 (suicide plan). Twenty-eight participants (1.05%) had missing information on "planned suicide."

In the final sample, 2,283 participants indicated planning a suicide attempt (0), and 349 participants indicated planning suicide (1).

Attempted Suicide. Information from one item (Q28) was used to assess suicide attempts (0 = no suicide attempt, 1 = made suicide attempt). Participants were asked (Q28), "During the past 12 months, how many times did you attempt suicide?" and responded to this item on a 5-point scale (1 = 0 times, 2 = 1 time, 3 = 2 or 3 times, 4 = 4 or 5 times, 5 = 6 or more times).

Participants who indicated 0 (No) on Q28 were given a score of 0 (no suicide attempt). If participants indicated between 1 and 5 on the Likert scale, they were given a score of 1 (made suicide attempt). Five hundred and eighty-eight participants (22.11%) had missing information on "attempted suicide."

In the final sample, 1,844 participants indicated planning a suicide attempt (0), and 228 participants indicated planning suicide (1).

Finally, the construct "mental health outcomes" was constructed by summing participants' scores on (a) depressed mood, (b) considered suicide, (c) planned suicide, and (d) attempted suicide. Scores ranged between 0 and 4, with higher scores indicating greater adverse

mental health outcomes. Results indicated that 65.29% of participants did not engage in any adverse mental health outcomes, 18.45% experienced one adverse mental health outcome, 6.44% experienced two adverse mental health outcomes, 4.89% experienced three adverse mental health outcomes, and 4.93% experienced four adverse mental health outcomes. The means, standard deviations, and frequency distributions for each item are presented in Table 6.

Table 4

Results of Descriptive Statistics for Variables

Constructs	Mean	Standard Deviation	Range	Minimum	Maximum
Early Risk Behaviors (ERB)	0.90	1.09	4	0	4
Current Risk Behaviors (CRB)	2.16	1.75	11	0	11
Positive School Environment (PSE)	4.49	0.99	5	0	5
Teen Dating Violence (TDV)	0.15	0.42	2	0	2
Mental Health Outcomes (MHO)	0.66	1.11	4	0	4

Note. N = 2,660 Summarizes the measurement items of the research variables together with the constructs. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), positive school environment (PSE).

Missing Values Data Preparation

Missing data occurs when no information exists for one or more cases about a variable. In preparation for the path analysis, we examined missing values through both respondent and variable to determine the level of missingness in the data. Little's MCAR (missing completely at random) test was conducted to determine the level of missingness and to check the level of randomness of the missingness. The results of this test showed that the data was, not missing completely at random (NMCAR), and there is a pattern to the type of missingness in the study.

The Littles MCAR test was conducted again with the final sample to prepare to compose the variables and the subsequent path analysis, $\chi^2 (2,262, N = 2,660) = 3,100.02, p < .001$, with the finding that the data is not missing completely at random (NMICAR). However, the data screening indicates that the number of missing values for all items was less than the threshold of 20%. According to Cohen and Cohen (1983), missing data up to 20% missing is not significant and unlikely to be problematic in interpreting the result of the studies. Table 2 shows the missing data of each variable for the remaining sample size of 2,660.

Since no missing values are acceptable in SEM techniques, these missing data were replaced (imputed) with each variable's mean responses. Multiple imputation analyses can still be conducted for data that is NMICAR (Enders, 2010; Schenker & Raghunathan, 2007). Therefore, imputations on the missing data were conducted in the AMOS statistical package. Descriptive statistics for each item were calculated based on the original dataset of N = 2,660 participants, with missing values excluded.

Table 5

Risk and Protective Factors Items Descriptives and Missing Values

Variable Item	No (0)		Yes (1)		Missing	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
ERB						
Initiation into sexual activities	2,117	79.59	543	20.41	0	0
Initiation into cigarette smoking	2,395	90.04	265	9.96	0	0
Initiation into marijuana use	1,923	72.29	737	27.71	0	0
Initiation into alcohol use	1,798	67.59	862	32.41	0	0
CRB						
Multiple sex partners	2,245	84.40	297	11.17	118	4.44
Birth control	2,004	75.34	512	19.25	144	5.41
Weapon carrying	2,369	89.06	122	4.59	169	6.35

Physical fighting	1,692	63.61	862	32.41	106	3.98
Cigarette smoking	2,527	95.00	114	4.29	19	0.71
Electronic vape use	2,111	79.36	371	13.95	178	6.69
Marijuana use	1,884	70.83	773	29.06	3	0.11
Alcohol use	2,453	92.22	96	3.61	111	4.17
No seat belt	1,016	38.20	1,580	59.40	64	2.41
Riding with a drinking driver	2,162	81.28	483	18.16	15	0.56
Texting while driving	1,954	73.46	531	19.96	175	6.58
PSE						
Bullying at school	323	12.14	2,327	87.48	10	0.38
Threatened at school	177	6.65	2,483	93.35	0	0
Illegal drugs at school	485	18.23	2,155	81.02	20	0.75
Weapon carrying at school	162	6.09	2,483	93.35	15	0.56
Physical fighting at school	177	6.65	2,483	93.35	0	0
MHO						
Depressed mood	1,883	70.79	763	28.68	14	0.53
Considered suicide	2,245	84.40	448	15.26	9	0.34
Planned suicide	2,283	85.83	349	13.12	28	1.05
Attempted suicide	1,844	69.32	228	8.57	588	22.11
TDV						
Sexual TDV	2,520	94.74	140	5.26	0	0
Physical TDV	2,405	90.41	255	9.56	0	0

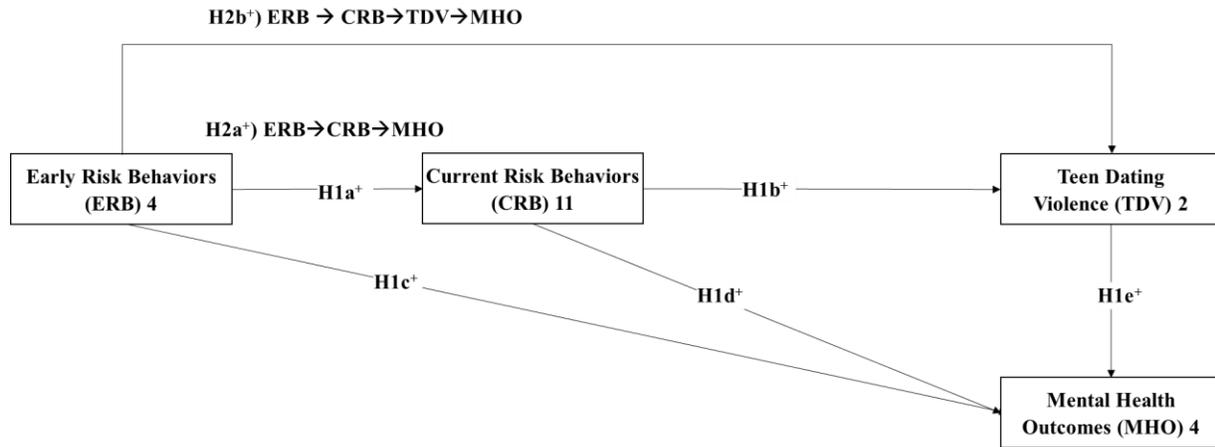
Note. N = 2,660. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), mental health outcomes (MHO), positive school environment (PSE).

Conceptual Model

The conceptual model examined the pathways and the mediators of the link between early risk behaviors, current risk behaviors, TDV victimization, and mental health outcomes (see Figure 2a). A positive school environment is proposed as a moderator between current risk behaviors and TDV victimization, as well as early risk behaviors and TDV victimization (see Figure 2b).

Figure 2a

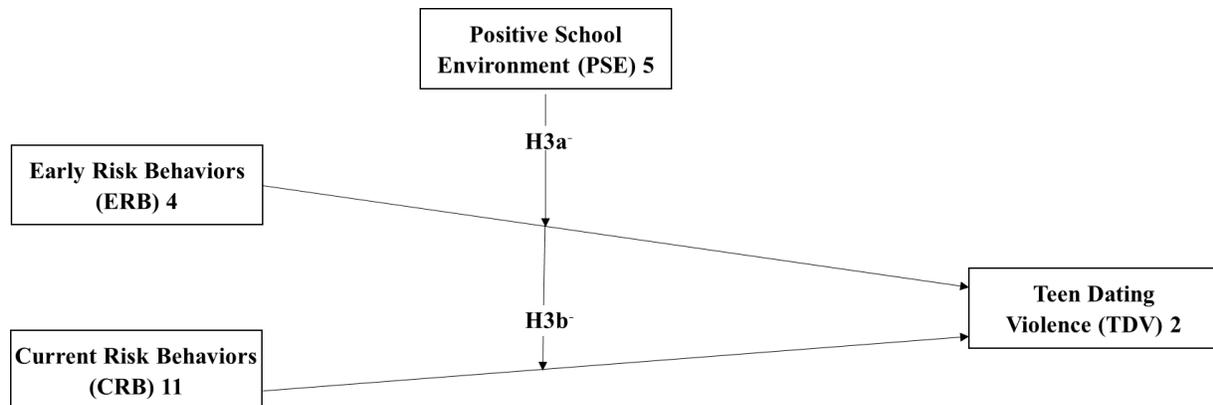
Conceptual Full and Mediation Model



Note. Mediation Model. + / - signs denote the direction of the expected associations. Numerical values indicate the number of items used for the construct. The overall model was tested for boys and girls. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), mental health outcomes (MHO).

Figure 2b

Conceptual Moderation Model



Note. Moderation Model. + / - signs denote the direction of the expected associations. Numerical values indicate the number of items used for the construct. Acronyms: early risk behaviors

(ERB), current risk behaviors (CRB), teen dating violence (TDV), positive school environment (PSE).

The conceptual model incorporates lifestyle exposure theory and Dutton's nested ecological model of IPV to determine the risk and protective factors associated with TDV victimization. Lifestyle exposure theory describes how behaviors and exposure to behaviors can lead to environments where risk events may occur. The conceptual model describes the paths of early and current risk behaviors related to adverse outcomes. Similarly, early initiation of risk behaviors would increase exposure to the risk environment; therefore, early initiation would lead to more risk behaviors, leading to TDV.

Lifestyle exposure theory, developed by Hindelang et al. (1978), can be applied to explain the mediating factors in the relationship between early risk behaviors, current risk behaviors, TDV, and mental health outcomes. According to lifestyle exposure theory, individuals with particular lifestyles are more likely to be exposed to risk factors, engage in risky behaviors, and subsequently experience adverse outcomes.

In the context of the conceptual models, lifestyle exposure theory suggests that early risk behaviors, such as early initiation of substance use, risky sexual behaviors, risky driving behaviors, and violence-related behaviors, can shape an individual's lifestyle and increase their exposure to risk environments. Early initiation of these risk behaviors can lead to ongoing engagement in risky activities throughout adolescence.

As individuals progress into adolescence, their early risk behaviors can be precursors to current risk behaviors, including continued substance use, risky sexual behaviors, aggressive behaviors, and other risky activities. These current risk behaviors, in turn, increase the likelihood of experiencing TDV.

TDV serves as a mediating factor between current risk behaviors and mental health outcomes. Experiencing TDV victimization can have detrimental effects on an individual's mental health, leading to increased anxiety, depression, post-traumatic stress symptoms, and other psychological distress. The experience of TDV victimization acts as a mediator, transmitting the adverse effects of current risk behaviors to mental health outcomes.

Lifestyle theory posits that individuals who engage in risky behaviors are more likely to be exposed to environments where risk events, such as TDV, are more prevalent. By engaging in current risk behaviors, individuals may enter relationships characterized by violence, control, and aggression, increasing their vulnerability to TDV victimization. The experience of TDV victimization can further contribute to developing mental health concerns.

Furthermore, Dutton's (1995) nested ecological model of IPV emphasizes the multiple levels of influence on TDV, including individual, relationship, community, and societal factors. In the conceptual model, current risk behaviors and TDV victimization mediate the relationship between early risk behaviors and mental health outcomes, aligning with the nested ecological model's focus on the interplay of various factors.

According to the conceptual model, a positive school environment can serve as a moderator in the relationship between current risk behaviors and TDV victimization, as well as between early risk behaviors and TDV victimization. This aligns with the principles of both lifestyle theory and the nested ecological model. A positive school environment provides support, resources, and protective factors that can mitigate the influence of current risk behaviors on TDV victimization. It can also buffer the impact of early risk behaviors by creating a nurturing and supportive context that reduces the likelihood of TDV victimization.

Drawing from lifestyle theory, the conceptual model suggests that a positive school environment can alter exposure to risk environments. By fostering a supportive and inclusive atmosphere, schools can promote healthy behaviors, positive peer relationships, and less risky behaviors leading to conflict, reducing the likelihood of engaging in risky behaviors and experiencing TDV victimization. The positive school environment acts as a protective factor that helps individuals navigate the challenges and pressures associated with risk behaviors and TDV.

The conceptual model incorporating lifestyle theory and Dutton's nested ecological model of IPV explains the relationships between early risk behaviors, current risk behaviors, TDV victimization, and mental health outcomes. The conceptual models highlights the mediating role of current risk behaviors and TDV victimization in linking early risk behaviors to mental health outcomes. Additionally, the conceptual models help emphasize the moderating role of a positive school environment in mitigating the impact of current and early risk behaviors on TDV victimization. Considering these theoretical frameworks, the conceptual model provides a comprehensive understanding of the complex dynamics and potential pathways involved in the relationship between risk behaviors, TDV, and mental health outcomes.

The research model is intended to test the direct effects between the constructs (i.e., H1a, H1b, H1c, H1d, and H1e), mediation effects (i.e., H2a and H2b), and the moderation effects of positive school environment (i.e., H3a and H3b) and gender (i.e., H2a.1, H2b.1).

Research Questions and Hypothesis

1. What is the association between early and current risk behaviors and physical and sexual TDV victimization for boys and girls?
2. Does TDV victimization mediate the relationship between early and current risk behaviors and mental health outcomes?

H_{2a}: The relationship between early risk behaviors and mental health outcomes will be mediated by TDV victimization, such that the association will be stronger when teens also engage in current risk behaviors.

H_{2a.1}: This association will be stronger for girls than boys.

H_{2b}: The association between early risk behaviors and mental health outcomes will be further mediated by TDV victimization when teens participate in current risk behaviors and experience some form of TDV victimization.

H_{2b.1}: This association will be stronger for girls than boys.

3. Does a positive school environment reduce the relationship between early/current risk behaviors and physical/sexual TDV victimization?

H_{3a}: Teens who report a higher positive school environment will report fewer experiences of TDV victimization than teens who report a less positive school environment.

H_{3b}: Teens who report a higher positive school environment will report fewer experiences of TDV victimization than teens who report a less positive school environment.

The codes and descriptions of the research hypotheses are represented in Table 6.

Table 6

Research Hypotheses Codes and Descriptions

Code	Description	Path
Direct Path Hypotheses (Research Question 1)		
H1a ⁺	ERB is associated with CRB	ERB→CRB
H1b ⁺	CRB is associated with TDV	CRB→TDV
H1c ⁺	ERB is associated with MHO	ERB→MHO

H1d ⁺	CRB is associated with MHO	CRB→MHO
H1e ⁺	TDV is associated with MHO	TDV→MHO
Mediation Association Hypotheses (Research Question 2)		
H2a ⁺	CRB mediates the association of ERB with MHO	ERB→CRB→MHO
H2a.1	Gender differences	ERB→CRB→MHO
H2b ⁺	CRB and TDV mediate the association of ERB with MHO	ERB→CRB→TDV→MHO
H2b.1	Gender differences	ERB→CRB→TDV→MHO
Moderation Association Hypothesis of PSE (Research Question 3)		
H3a ⁻	PSE moderates the association of ERB on TDV so that the association is stronger (weaker) at the lower (higher) level of PSE	ERB ^x PSE→TDV
H3b ⁻	PSE moderated the association of CRB on TDV so that the association is stronger (weaker) at the lower (higher) level of PSE	CRB ^x PSE→TDV

Note. + / - signs denote the direction of the expected associations. Numerical values in hypothesis code corresponds with research question number. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), mental health outcomes (MHO), positive school environment (PSE).

Analysis Plan

Research Question 1

Structural equation modeling (SEM) path analysis will be conducted using AMOS statistical software (early risk factors → current risk factors → sexual/physical TDV) to determine the risk factors for TDV (See again, Figure 2a). Three models will be conducted: for all teens, girls, and boys.

Step one: SEM path analysis with standardized estimates, squared multiple correlations, and modification indices will be used to conduct moderation analysis for the whole sample to test the model efficacy linking the risk factors associated with TDV victimization.

Step two: The Chi-Square test will need to be to be nonsignificant for a good model fit. For each SEM path analysis, multiple indices of model fit will be conducted that include: the Normed Fit Index (NFI), Root Mean Squared Error of Approximation (RMSEA), and Comparative Fit Index (CFI) to test the path model. A good fit to the model will have RMSEA lower than .08 and CFI and NFI greater than 0.90. Additionally, a few other indices useful to the determination of good model fit is that the Goodness-of-Fit statistic (GFI), adjusted GFI (AGFI), Tucker-Lewis Index (TLI), and the Incremental Fit Index (IFI) values should be close to one (e.g., above 0.90). The relative chi-square (CMIN) divided by degrees of freedom (df) (Relative CMIN/df) should have a value below three to be indicative of an acceptable fit.

Step three: SEM with standardized estimates, squared multiple correlations, and modification indices to conduct a multigroup analysis for boys and girls.

Research Question 2

Mediation analysis will be conducted with SEM path analysis using AMOS to determine if TDV mediates current risk behaviors and depressed mood/suicidal ideation.

Step one: SEM paths with standardized estimates, squared multiple correlations, and modification indices will be used to conduct moderation analysis for the whole sample to test the model efficacy.

Step two: The Chi-Square test must be nonsignificant for a good model fit. Multiple model fit indices will be conducted for each SEM path analysis to test the path model, including NFI, RMSEA, and CFI. A good model fit will have an RMSEA lower than .08 and a CFI and NFI greater than 0.90. Additionally, a few other indices useful to the determination of good model fit is the Goodness-of-Fit statistic (GFI), adjusted GFI (AGFI), Tucker-Lewis Index (TLI), and the Incremental Fit Index (IFI) values should be close to one (e.g., above 0.90). The relative chi-

square (CMIN) divided by degrees of freedom (df) (Relative CMIN/df) should have a value below three to be indicative of an acceptable fit.

Step three: Check in the model that risk behaviors are correlated with depressed mood/suicidal ideation and which risk behaviors are correlated with TDV.

Step four: Structural equation modeling will be used to establish that TDV mediates the relationship between risk behaviors and depressed mood/suicidal ideation.

Research Question 3

Moderation analysis will be conducted through SEM path analysis to determine if a positive school environment is a protective factor (See Figure 2b).

Step one: Interaction variables are computed in SPSS for the moderation analysis (1) positive school ^x early risk factors; (2) positive school ^x current risk factors.

Step two: SEM path with standardized estimates, squared multiple correlations, and modification indices will be used to conduct moderation analysis for the whole sample to test the model efficacy linking the risk factors associated with TDV victimization.

Step three: The Chi-Square test must be nonsignificant for a good model fit. Multiple model fit indices will be conducted for each SEM path analysis to test the path model, including the NFI, RMSEA, and CFI. A good model fit will have an RMSEA lower than 0.08 and a CFI and NFI greater than 0.90. Additionally, a few other indices useful to the determination of a good model fit is the Goodness-of-Fit statistic (GFI), adjusted GFI (AGFI), Tucker-Lewis Index (TLI), and the Incremental Fit Index (IFI) values should be close to one (e.g., above 0.90). The relative chi-square (CMIN) divided by degrees of freedom (df) (Relative CMIN/df) should have a value below three to be indicative of an acceptable fit.

Step six: Standardized parameter estimates will be reported and presented in a Figure. Figures will be created to plot significant interaction effects.

Chapter IV: Results

Descriptive Analysis

The present study uses the composite scores of the constructs were computed by the sum of the original measurement item scores. Further, the frequency percentage of each item and single variables are displayed in Table 7.

Table 7

Prevalence of Risk Behaviors Overall and by Gender

	Overall n (%)	Boys n (%)	Girls n (%)
Early Risk Behaviors			
Initiation into sexual activities	543 (20.41)	289 (22.74)	254 (18.29)
Initiation into cigarette smoking	265 (9.96)	114 (8.97)	151 (10.87)
Initiation into alcohol use	862 (32.41)	397 (31.24)	465 (33.48)
Initiation into marijuana use	737 (27.71)	382 (30.06)	355 (25.56)
Current Risk Behaviors			
Risky Sexual Behaviors			
Multiple sex partners	297 (11.17)	216 (18.02)	81 (6.03)
Birth control	512 (19.25)	237 (20.00)	275 (20.66)
Violence related behaviors			
Weapon Carrying	122 (4.59)	100 (8.64)	22 (1.65)
Physical Fighting	862 (32.51)	457 (37.83)	405 (30.09)
Substance use			
Cigarette smoking	114 (4.29)	76 (6.01)	38 (2.76)
Electronic vape use	371 (13.95)	194 (16.40)	177 (13.63)
Marijuana use	773 (29.06)	382 (30.06)	391 (28.21)
Alcohol use	96 (3.61)	48 (3.94)	48 (3.61)
Risk Driving Behaviors			
No seat belt	1,580 (59.40)	746 (60.26)	834 (61.41)
Riding with a drinking driver	483 (18.16)	191 (15.10)	292 (21.16)
Texting while driving	531 (19.96)	276 (23.21)	255 (19.68)
Positive School Environment			
Bullying at school	2,327 (87.48)	1,150 (90.77)	1,177 (85.10)
Threatened at school	2,483 (93.35)	1,177 (92.60)	1,306 (94.02)
Illegal drugs at school	2,155 (81.02)	1,012 (80.25)	1,143 (82.89)
Weapon carrying at school	2,483 (93.35)	1,259 (93.49)	1,306 (94.23)
Physical fighting at school	2,483 (93.35)	1,177 (92.60)	1,306 (94.02)
Mental Health Outcomes			
Depressed Mood	763 (28.68)	211 (16.71)	552 (39.91)
Considered suicide	406 (15.26)	100 (7.90)	306 (22.09)

Planned suicide	349 (13.12)	83 (6.60)	266 (19.35)
Attempted suicide	228 (8.57)	51 (5.31)	177 (15.93)

Note. N = 2,660, boys n = 1,265, girls n = 1,389. Imputation with FIML data was conducted in

AMOS to manage the missing data.

Table 8

Prevalence of Sexual and Physical TDV by Demographics

	Overall TDV			Sexual TDV		Physical TDV	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
	No	Yes-one	Yes-both	Yes	No	Yes	No
Gender							
Male	1,181 (50.73)	74 (27.51)	16 (25.40)	35 (25.00)	1,236 (49.05)	71 (27.84)	1,200 (49.50)
Female	1,147 (49.27)	195 (72.49)	47 (74.60)	105 (75.00)	1284 (50.95)	184 (72.16)	1,205 (50.10)
Grade							
9 th	557 (23.96)	55 (20.52)	9 (14.75)	22 (16.06)	599 (23.80)	51 (20.16)	570 (23.74)
10 th	624 (26.84)	56 (20.90)	13 (21.31)	31 (22.63)	662 (26.30)	51 (20.16)	642 (26.74)
11 th	576 (24.84)	78 (29.10)	16 (26.23)	44 (32.12)	626 (24.87)	66 (26.09)	604 (25.16)
12 th	568 (24.43)	79 (29.48)	23 (37.70)	40 (29.20)	630 (25.03)	85 (33.60)	585 (24.36)
Age							
14 years old	218 (9.36)	18 (6.69)	2 (3.17)	3 (2.14)	235 (9.33)	19 (7.45)	219 (9.11)
15 years old	525 (22.55)	55 (20.45)	8 (12.70)	29 (20.71)	559 (22.18)	42 (16.47)	546 (22.70)
16 years old	628 (26.95)	70 (26.02)	17 (26.98)	42 (30.00)	673 (26.71)	62 (24.31)	653 (27.15)
17 years old	604 (25.95)	70 (26.02)	21 (33.33)	37 (26.43)	658 (26.11)	75 (29.41)	620 (25.78)

18 years or older	353 (15.16)	56 (20.82)	15 (23.81)	29 (20.71)	395 (15.67)	57 (22.35)	367 (15.26)
Sexual Identity							
Heterosexual	1,986 (85.39)	199 (74.53)	50 (79.37)	109 (77.86)	2126 (85.42)	190 (75.10)	2,045 (86.07)
Gay or lesbian	84 (3.65)	14 (5.24)	0	3 (2.14)	95 (3.82)	11 (4.35)	87 (3.66)
Bisexual	183 (7.96)	45 (16.85)	11 (17.46)	23 (16.43)	216 (8.68)	44 (17.39)	195 (8.21)
Not Sure	46 (2.00)	9 (3.37)	2 (3.17)	5 (3.57)	52 (2.09)	8 (3.16)	49 (2.06)

Note. N = 2,660

Bivariate Correlations Among Key Constructs

Bivariate correlations were conducted between the variables used in the conceptual model and are presented in Table 9. Many of the expected correlation coefficients related to the key variables were statistically significant and in the expected direction.

Table 9

Correlations among the Variables

	Early Risk Behavior	Risky Sexual Behavior	Violence Related Behavior	Substance Use	Risk Driving Behavior	Positive School Environment	Mental Health Outcomes
Early Risk Behavior							
Risky Sexual Behavior	.30***						
Violence Related Behavior	.30***	.17***					
Substance Use	.41***	.26***	.30***				
Risk Driving Behavior	.21***	.17***	.16***	.24***			
Positive School Environment	-.20***	-.07***	-.23***	-.20***	-.07***		
Mental Health Outcomes	.17***	.09***	.08**	.12**	.07***	-.21***	
Teen Dating Violence	.11***	.11***	.12***	.15***	.13***	-.17***	.29***

Note. N = 2,660 * $p < .05$, ** $p < .01$, *** $p < .001$.

Bivariate correlations were conducted between the variables for both genders used in the conceptual model and are presented in Table 10. Many of the expected correlation coefficients

related to key variables were statistically significant. Risky sexual behaviors were the only items not significantly associated with mental health outcomes for boys only.

Table 10

Risk Factors and Outcomes Scale Correlations

	Early Risk Behavior	Risky Sexual Behavior	Violence Related Behavior	Substance Use	Risk Driving Behavior	Positive School Environment	Mental Health Outcomes	Teen Dating Violence
Early Risk Behavior		.26***	.25***	.35***	.15***	-.17***	.21***	.13***
Risky Sexual Behavior	.33***		.09***	.23***	.13***	-.08**	.19***	.16***
Violence Related Behavior	.33***	.22***		.25***	.13***	-.17***	.14***	.14***
Substance Use	.46***	.27***	.32***		.22***	-.13***	.16***	.16***
Risk Driving Behavior	.27***	.20***	.20***	.28***		-.06*	.07*	.14***
Positive School Environment	-.22***	-.29*	-.29***	-.25***	-.09**		-.22***	-.20***
Mental Health Outcomes	.14***	.03	.09**	.08**	.06*	-.21***		.28***
Teen Dating Violence	.10**	.09***	.15***	.14***	.13***	-.13***	.20***	

Note. Girls (n = 1,369) on the top diagonal, boys (n = 1,265) on the bottom diagonal. * $p < .05$,

** $p < .01$, *** $p < .001$.

Path Analysis - Structural Equation Modeling

Path analysis is the primary process of SEM path analysis. After calculating the sum values of each latent construct based on the total values of their items, a structural path model can be made by specifying the relationships among the latent constructs.

The structural model provides details on the links between the variables. It shows the specific details of the relationship between the independent or exogenous variables and dependent or endogenous variables (Hair et al., 2006; Ho, 2006). Evaluation of the structural path model focuses firstly on the overall model fit, followed by the size, direction, and significance of the hypothesized parameter estimates, as shown by the one-headed arrows in the path diagrams (Hair et al., 2006). The final part involves the confirmation of the structural path

model of the study, which was based on the proposed relationship between the variables identified and assessed.

This study estimated the structural model to examine the research hypotheses using AMOS and maximum likelihood estimate (MLE) as the extraction technique. This is one of the most widely used estimation methods that allow testing of individual direct effects and error term correlations. The following sub-sections discuss the development of the structural models to test the direct, mediation, and moderation associations hypotheses described in Table 7.

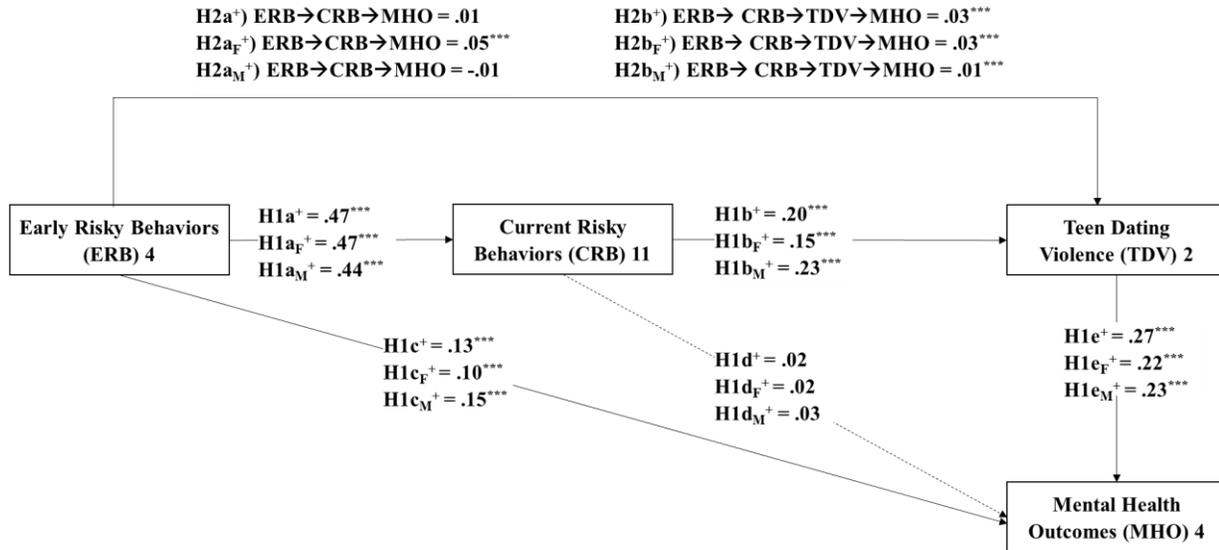
Direct and Mediation Associations of the Constructs

The structural model examined the direct effects of early risk behaviors on current risk behaviors (i.e., H1a) and on TDV (i.e., H1b). Further, the effects of early risk behaviors and current risk behaviors on mental health outcomes were examined (i.e., H1c and H1d, respectively). The impact of TDV on mental health outcomes was also examined (i.e., H1e).

The mediation of current risk behaviors on the relationship between early risk behaviors and TDV was examined (i.e., H2a). Moreover, the mediation of TDV on the relationship between current risk behaviors and mental health outcomes was also examined (i.e., H2b). The results AMOS graph of the structural model for direct and mediation of the constructs, together with the standardized regression weights, is depicted in Figure 3.

Figure 3

Direct and Mediation Association Analysis Results



Note. * $p < .05$, ** $p < .01$, *** $p < .001$. + / - signs denote the direction of the expected associations. Dotted lines denote nonsignificant standardized estimates. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), mental health outcomes (MHO).

Overall Model Fit. An examination of goodness-of-fit indices indicated that the conceptual model indicated good model fit, $\chi^2 (1, N = 2,660) = 1.32, p = ns$. This means that the proposed model can be interpreted as acceptable. The Goodness-of-Fit statistic (GFI) was 1.00, above the cut-off of 0.90, as recommended by Hoyle (1995). After adjusting the degrees of freedom relative to the number of variables, the adjusted GFI (AGFI) was 1.00, above the cut-off point of 0.80, as Chau and Hu (2001) recommended. It indicated that the model predicts 99.80% of the variances and covariance in the survey data. The values of the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Incremental Fit Index (IFI) were 1.00, 1.00, and 1.00, respectively. All values were above the threshold of 0.90, indicating a good fit between the model and the data (Bagozzi & Yi., 1988; Byrne, 2013; Hair et al., 2006; Ho, 2006). Further, the RMSEA was 0.01, below the threshold of 0.10, as Schumacker and Lomax (2010) recommended. Additionally, the Relative CMIN/df was 1.32, less than five, showing a good

model fit (Bagozzi & Yi., 1988). The R^2 values for current risk behaviors explained 11% of the variance among the values explained by early risk behaviors as its predictor, which satisfied the requirement for the 0.10 cut-off value (Quaddus & Hofmeyer 2007).

Examining Direct Path Hypotheses. The coefficient parameters estimates were examined to test the hypothesized direct effects of the constructs. The path coefficients and the results of examining hypothesized direct effects are displayed in Table 11. The following section discusses the results of path analysis to examine the research's direct path hypotheses.

H1a) Early Risk Behaviors Are Associated With Current Risk Behaviors. Early risk behaviors were associated with current risk behaviors ($\beta = .47, p < .001$). H1a was supported.

H1b) Current Risk Behaviors Are Associated With TDV. Current risk behaviors were associated with TDV ($\beta = .20, p < .001$). H1b was supported.

H1c) Early Risk Behaviors Are Associated With Mental Health Outcomes. Early risk behaviors significantly predicted mental health outcomes ($\beta = .13, p < .001$). H1c was supported.

H1d) Current Risk Behaviors are Associated With Mental Health Outcomes. The association between current risk behaviors on mental health outcomes was nonsignificant ($\beta = -0.01, p = ns$). H1d was rejected.

H1e) TDV is Associated With Mental Health Outcomes. TDV was associated with mental health outcomes ($\beta = .27, p < .001$). H1e was supported.

Table 11*Results of Examining Direct Path Hypotheses*

Path	Unstandardized		Standardized	Critical Ratio	Hypothesis Result
	Estimate	S.E.	Beta		
ERB→CRB	.75	.03	.47***	27.21	H1a) Supported
CRB→TDV	.05	.01	.20***	10.31	H1b) Supported
ERB→MHO	.13	.02	.13***	6.27	H1c) Supported
CRB→MHO	.01	.01	.02	0.94	H1d) Rejected
TDV→MHO	.72	.05	.27***	14.49	H1e) Supported

Note. N = 2,656; * $p < .05$, ** $p < .01$, *** $p < .001$. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), mental health outcomes (MHO).

Examining Mediation Effect Hypotheses. Mallinckrodt et al. (2006) describe an alternative to the Normal Theory method of mediation analysis developed by Shrout and Bolger (2002) based on bootstrap resampling methods. The initial popularized work of Baron and Kenny (1986) with Normal Theory describes mediation analysis with an independent variable (IV), a potential mediating variable (M), and a dependent variable (DV) and suggests an analysis framework to test the covariance of relationships among three variables. Based on this framework, the most important precondition for significant mediation results is that all three correlations among the three variables (paths a, b, & c) must be statistically significant. If one of these three correlations is not significant, then there would be no possibility of finding significant mediation (Baron & Kenny, 1986). Upon significant relations among the three variables (paths a, b, & c), once the causal effect of IV on DV in the multiple regression (path a') is not statistically significant, then the mediating variable acts as a full mediator. Otherwise, the mediation can be

considered partial mediation. Without full or partial mediation, the relationships between IV and DV comprise direct, indirect, or no relationship.

Independent variables have a nonsignificant indirect effect on dependent variables through mediating variables in the absence of significant effects in path "a" and the presence of significant effects in path "b" and "c". On the other side, the independent variable has only a direct effect on the dependent variable in the presence of a significant effect in path "a" and a nonsignificant effect in path "b" or "c". There would not be any relationship between the independent variable and dependent variable in the absence of a significant relationship in paths "a" and then the absence of a significant relationship in paths "b" or "c".

With the initial Normal Theory mediation framework in mind, Shrout and Bolger (2002) proposed the inclusion of bootstrapping procedures for assessing mediation, offering a comprehensive statistical analysis for hypothesis testing, enhanced statistical power, and more precise confidence interval estimation (Baron & Kenny, 1986; Mallinckrodt et al., 2006). The process of conducting bootstrapping for mediation involves a series of steps. Initially, the original dataset is regarded as a "population reservoir," and a bootstrap sample is generated by randomly sampling cases from this reservoir with replacement. This sampling approach ensures that each case has an equal chance of being selected in each draw. Repeating this sampling process creates multiple bootstrap samples (e.g., 500, 1,000, or 10,000). An increased number of iterations allows for a more precise estimation of the parameter distribution while conducting the bootstrapping procedure.

Each bootstrap sample's desired parameters (e.g., a, b, and $a \times b$) relevant to the mediation analysis are calculated and saved as estimates of interest. This process is iterated J times, resulting in a distribution of J estimates for each parameter. The variability observed in

these estimates across the bootstrap samples reflects the variability present in the original sample. The distribution of J estimates is examined to estimate the confidence interval of a specific population parameter. Upon achieving the desired confidence level (e.g., 95%), the 2.50 and 97.50 percentile values are determined, representing the lower and upper bounds of the confidence interval, respectively.

Mediation Effect Hypotheses. User-defined estimands were used in the AMOS analysis to estimate the indirect pathways and determine the effects of the mediation analysis. Specifically, the user-defined estimands were created to estimate the indirect effects of the mediator variable on the outcome variable while controlling for the effects of the independent variable on the mediator variable. Using user-defined estimands allowed for a more precise estimation of the indirect effects and provided a robust approach to test the mediation hypotheses.

Bootstrapping was used in the AMOS analysis to address potential issues related to the normality of the data and sampling distribution. Specifically, bootstrapping was employed to estimate the paths in the model along with the standard errors and confidence intervals of the model parameters based on 5,000 bootstrap samples drawn with replacement from the original dataset. This approach allows for a more accurate estimation of the parameters and the associated uncertainty, even when the assumptions of normality and large sample size are not met.

H2a) Current Risk Behaviors Mediates Early Risk Behaviors on Mental Health Outcomes. Hypothesis 2a (H2a) proposed that current risk behaviors mediate the relationship between early risk behaviors and mental health outcomes. Bootstrapping with 5,000 resamples was used to estimate the indirect effects in the mediation model. The bias-corrected (BC) 95% confidence interval (CI) was obtained. The bootstrap analysis indicated a significant positive

indirect effect of early risk behaviors on mental health outcomes through current risk behaviors, with a point estimate of $\beta = .05$, $p = .001$, (95% BC CI = [.02, .05]). This finding supports the hypothesis (H6) that current risk behaviors mediate the relationship between early risk behaviors and mental health outcomes. However, the direct association between current risk behaviors and mental health outcomes was nonsignificant ($\beta = .01$, $p = ns$). Current risk behaviors partially mediated the relationship between early risk behaviors and mental health outcomes.

H2a.1) Gender Differences. Hypothesis 2a.1 (H2a.1) proposed that there was a difference between boys and girls in the relationship between early risk behaviors and mental health outcomes as mediated by current risk behaviors. In AMOS, A comparison of the chi-square values between females, $\chi^2(1, N = 1,389) = .001$, $p < .001$ (CFI = 1, TLI = 0.99, RMSEA = .03) and males, $\chi^2(1, N = 1,265) = 1.87$, $p = .39$, (CFI = 1, TLI = 1.01, RMSEA = .00) was conducted to assess whether there were gender differences in the hypothesized pathways. The results indicated no significant differences in the chi-square between the two models $\Delta\chi^2(0) = 1.86$, $p = ns$. The findings indicated no significant differences between boys and girls in the association between current risk behaviors and mental health outcomes through early risk behaviors.

H2b) Current Risk Behaviors and TDV Mediates Early Risk Behaviors on Mental Health Outcomes. Hypothesis 2b (H2b) proposed that current risk behaviors and TDV mediate the association between early risk behaviors and mental health outcomes. Bootstrapping with 5,000 resamples was used to estimate the indirect effects in the mediation model. The results also indicated that the indirect effect of early risk behaviors on TDV through current risk behaviors was significant, with an estimate of $\beta = .09$, $p = .001$, (95% BC CI = [.07, .12]). Additionally, the direct effect of current risk behaviors on mental health outcomes was significant, with an

estimate of $\beta = .05$, $p = .001$, (95% BC CI = [.04, .07]). The bootstrap analysis indicated that the indirect effect of early risk behaviors on mental health outcomes through current risk behaviors was significant, with an estimate of $\beta = .04$, $p = .001$, (95% BC CI = [.02, .06]). Furthermore, the direct effect of current risk behaviors on TDV in the presence of the mediator was not significant ($\beta = .01$, $p = ns$).

This finding supports the hypothesis that TDV mediates the relationship between current risk behaviors and mental health outcomes. This finding also supports the hypothesis (H2b) that current risk behaviors mediated the relationship between early risk behaviors and mental health outcomes through TDV.

H2b.1) Gender Differences. Hypothesis 2b.1 (H2b.1) proposed differences between boys and girls in the association between early risk behaviors and mental health outcomes as mediated by current risk behaviors and TDV. In AMOS, A comparison of the chi-square values between females, $\chi^2(1, N = 1,389) = .001$, $p < .001$ (CFI = 1.00, TLI = 0.99, RMSEA = .03) and males, $\chi^2(1, N = 1,265) = 1.87$, $p = ns$, (CFI = 1.00, TLI = 1.01, RMSEA = .00) was conducted to assess whether there were gender differences in the hypothesized pathways. The results indicated no significant differences in the chi-square between the two models $\Delta\chi^2(0) = 1.86$, $p = ns$. The findings indicated no significant mediation analysis differences between boys and girls in the association between early risk behaviors and mental health outcomes through TDV and current risk behaviors. Since there were no significant differences between the two chi-squares amid the two models of the two genders, no further analysis could be completed.

Moderation Effects of Positive School Environment

The moderation effects of a positive school environment on the effects of early risk behaviors and current risk behaviors as independent variables on TDV victimization as a dependent variable were examined.

To confirm a variable making a moderation effect on the relationship between the independent and dependent variables, the nature of this relationship should be changed as the values of the moderating variable change. This is done by including an interaction effect in the model and checking whether such an interaction is significant. In applying this analysis, all predictors must be standardized to make interpretations easier afterward and avoid multicollinearity (Aiken & West, 1991). This was done by subtracting a measured variable from its respective mean, and the result was then divided by the standard deviation of that measured variable. As a result, the product of the centered indicator was then calculated and used as an indicator of the latent interaction term. To determine whether the moderator effect is significant, the effect of the interaction term on the DV should be significant.

In the case where a significant moderating effect is present, a technique suggested by Aiken and West (1991) to generate plots for each interaction was applied to show the effect of the moderator in the relationship between the predictor and outcome variable. Based on Aiken and West's suggestions, the four-cell means must be generated to graph the interaction between the variables. One dichotomizes the independent variable (low and high) and moderating variable (low and high) and crosses these levels to obtain four cell means. "Low" is one standard deviation below the mean, and "high" is one above the mean.

An examination of goodness-of-fit indices indicates that the structural model for examining the moderation effects of positive school environment inadequately fit the data: $\chi^2 (9, N = 2,600) = 223.69, p < .001, CFI = 0.99, TLI = 0.77, IFI = 0.96, \text{ and } RMSEA = .07$. The

coefficient parameters estimates were examined for the moderation impact hypotheses H3a and H3b. Given that the moderation model was not significant, this suggests that a positive school environment does not moderate the relationship between early and current risk factors and TDV victimization and is the same for boys and girls. Therefore, since the model inadequately fit the data, further analysis of gender differences could not be completed. The path coefficients and the results of examining hypothesized moderation effects are displayed in Table 12.

Table 12

Results of Examining Moderation Path Hypotheses

Path	Unstandardized Estimate		Standardized Estimate	Critical Ratio	Hypothesis Result
	Estimate	S.E.	Beta		
ERB*PSE→TDV	-.00	.008	-.01	-0.76	H3a) Rejected
CRB*PSE→TDV	-.01	.008	-.03	-1.97	H3b) Rejected
PSE→TDV	-.05	.009	-.12***	-5.61	

Note. N = 2,660; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), positive school support (PSE).

H3a) Positive School Environment Moderates Early Risk Behaviors on TDV. As shown in Table 12, the impact of the interaction of positive school environment * early risk behaviors on TDV was not statistically significant, $p = ns$. Therefore, a positive school environment does not moderate the relationship between early risk behaviors and TDV, rejecting hypothesis H3a; $\beta = -0.00$, $p = ns$. It means the relationship between early risk behaviors and TDV is not significantly changed between the low and high levels of a positive school environment. The phenomenon does not provide support for H3a.

H3b) Positive School Environment Moderates Current Risk Behaviors on TDV. As shown in Table 12, the influence of the interaction of positive school environment * current risk behaviors on TDV was not statistically significant. These results demonstrated that H3b is unsupported; $\beta = -0.01$, $p = ns$. Hence, it could not be concluded that the positive school environment dampens the positive relationship between current risk behaviors and TDV. The phenomenon does not provide support for H3b.

Table 13

Final Hypothesis Results

Hypothesis	Path	Hypothesis Result
Direct Impact		
H1a ⁺	ERB→CRB	Supported
H1b ⁺	CRB→TDV	Supported
H1c ⁺	ERB→MHO	Supported
H1d ⁺	CRB→MHO	Rejected
H1e ⁺	TDV→MHO	Supported
Mediation Impact		
H2a ⁺	ERB→CRB→MHO	Supported
H2a.1	Gender: ERB→CRB→MHO	Rejected
H2b ⁺	ERB→CRB→TDV→MHO	Supported
H2b.1	Gender: ERB→CRB→TDV→MHO	Rejected
Two-Way Interaction Moderation Impact of Positive School Environment (PSE)		
H3a ⁻	ERB*PSE→TDV	Rejected
H3b ⁻	CRB*PSE→TDV	Rejected

Note. + / - signs denote the direction of the expected associations. Acronyms: early risk behaviors (ERB), current risk behaviors (CRB), teen dating violence (TDV), mental health outcomes (MHO), positive school support (PSE).

Chapter V: Discussion

The present study aimed to assess the associations between early and current risk behaviors on TDV and mental health outcomes for Black adolescents in the United States. The study also examined whether experiencing a positive school environment is a protective factor in the relationship between early and current risk behaviors on TDV victimization. There were six main findings from this study: (a) 27.51% of boys and 72.49 % of girls experienced TDV victimization; (b) all the early and current risk factors were associated with TDV victimization; (c) early risk behaviors were directly related to mental health outcomes; (d) current risk behaviors partially mediated the association between early risk behaviors and mental health outcomes; (e) TDV victimization is directly related with mental health outcomes; (f) current risk behaviors and TDV victimization mediated the relationship between early risk behaviors and mental health outcomes. This study's findings could aid in developing TDV intervention programs for Black adolescents.

Risk Behaviors and TDV Victimization

The current study's findings are equivalent to extant research that has indicated that Black teens' experiences of TDV victimization are related to substance use, risky sexual behavior (Lormand et al., 2013), and violent-related behaviors (Black et al., 2015). These risk behaviors have been associated with increased susceptibility to TDV victimization among Black adolescents (Lormand et al., 2013).

Consistent with prior research on TDV victimization (Exner-Cortens et al., 2013; Rothman, McNaughton Reyes, et al., 2012), findings from the present study support the association between early risk behaviors and TDV victimization. The association between early risk behaviors and subsequent engagement in risk behaviors aligns with explanations based on

social learning theory suggesting that early experiences shape later behaviors (Nelson et al., 2009; Tucker et al., 2005). Individuals learn behaviors by observing and imitating significant others in their environment (Bandura, 1978). Black adolescents may experience environmental factors, such as community aggression, unhealthy relationship dynamics, and systemic racism, contributing to TDV victimization. Teens' understanding of relationships could be shaped by these experiences, influencing their behavioral choices and contributing to an increased likelihood of experiencing TDV or engaging in risk behaviors (Giordano et al., 2015). The strain of witnessing and experiencing these adverse experiences could increase unhealthy coping risk behaviors (Coker et al., 2000; Exner-Cortens et al., 2013; Hicks et al., 2021).

Findings challenge research highlighting that boys and girls have different experiences of TDV victimization (Vagi et al., 2013). One possible explanation for the results showing a lack of gender differences is the potential of a greater influence of contextual factors beyond genders, such as socioeconomic disparities, exposure to community violence, and racial discrimination (Brook, Lee, et al., 2010; CDC, 2019a; Coker et al., 2000; Exner-Cortens et al., 2013; Galán et al., 2022). The social development model (Catalano et al., 1996) suggests that similar risk factors may affect the relationship between risk behaviors and mental health outcomes for boys and girls. In the context of TDV victimization, Black girls and boys may face similar risk behavior experiences and rates of TDV due to shared influences such as exposure to violence, community norms, family dynamics, and individual characteristics. These factors may contribute to the development of risk behaviors and increase vulnerability to TDV victimization for different genders, leading to similar rates and experiences of TDV among Black girls and boys.

Risk Behaviors and Mental Health Outcomes

Consistent with prior research, the results demonstrated a significant link between early-risk behaviors and adverse adolescent mental health outcomes (Brook et al., 2010; Kilpatrick et al., 2003; Singer et al., 1995). However, the observed lack of significant association between current risk behaviors and mental health outcomes is inconsistent with some previous studies (Elgar et al., 2015; Patton et al., 2016).

Mediation: Early Risk Behaviors and Mental Health through Current Risk Behaviors

The study findings on the relationship between early experiences of risk factors and adverse health outcomes are like those found in other studies (Nelson et al., 2009; Tucker et al., 2005). The relationship between early risk behaviors and mental health outcomes via current risk behaviors was similar for boys and girls and is supported by propositions from different theoretical frameworks, such as the Problem Behavior Theory (Jessor, 1991) and the social development model (Catalano et al., 1996). These models propose that early risk behaviors may contribute to adverse mental health outcomes through ongoing engagement in risk behaviors.

From the theories used in the current study, the nested ecological model suggests that individuals' experiences are influenced by multiple connected systems, including individual, relational, community, and societal factors. The findings underscore the intricate relationship between early experiences, risk behaviors, and mental health outcomes in Black teens, emphasizing the need to consider cultural and environmental factors within the nested ecological model and exposure theory of intimate partner violence. Black teens' experiences of culture and theory would be embedded within these systems, shaping their risk behaviors and mental health outcomes. This suggests that witnessing or experiencing violence in one's environment may increase the likelihood of engaging in or being a victim of intimate partner violence.

Culture plays a significant role in shaping individuals' beliefs, values, and behaviors. Within the Black community, historical maltreatment, disparities in reproductive healthcare, and experiences of systemic racism and discrimination have engendered a unique cultural context. These experiences have led to mistrust and skepticism towards contraceptive methods and healthcare institutions, impacting attitudes, beliefs, and practices surrounding risk behaviors and mental health outcomes.

Additionally, gender norms and expectations within the Black community may influence the experiences of risk behaviors and mental health outcomes. Traditional gender roles and expectations can shape how boys and girls socialize and navigate relationships. For example, societal pressures on boys to exhibit masculinity and dominance may contribute to engagement in risk behaviors, while girls may face unique challenges related to gender-based violence and victimization. These gender dynamics can influence the pathways through which early risk behaviors contribute to subsequent engagement in risk behaviors and mental health outcomes. In this context, exposure theory of intimate partner violence, early exposure to risk factors, such as violence in the family or community, may contribute to the subsequent engagement in risk behaviors and the experience of adverse health outcomes among Black teens.

By acknowledging the influence of culture and gender within the nested ecological model and exposure theory of intimate partner violence, we can better understand how cultural beliefs, values, and norms, as well as gender dynamics, shape the experiences and outcomes of Black teens. Additionally, for Black teens, the experiences of culture hold a value of strength and resilience in that some teens may face social pressures that impact the engagement of risky behaviors and adverse mental health outcomes. Early risk behaviors were associated with mental health outcomes, given that they also engaged in more current risk behaviors. The impact of

culture maintains that if teens did not have early experiences of risk behaviors, there would be less impact on current risk behaviors and, therefore, fewer adverse mental health outcomes.

Early Risk Behaviors and Mental Health Outcomes through Current Risk Behaviors and TDV

Findings revealed that TDV victimization partially mediated the relationship between early risk behaviors, current risk behaviors, and mental health outcomes. TDV victimization accounted for some association between engaging in risk behaviors during adolescence and experiencing negative mental health outcomes. The findings suggest that the experience of TDV victimization acts as a pathway through which the effects of early and current risk behaviors impact mental health.

These findings support the nested ecological model, which emphasizes the influence of multiple levels of the social environment (e.g., individual, family, community) on adolescent development. Present results also align with the exposure theory of intimate partner violence, which suggests that exposure to violence in relationships can have long-term consequences for individuals' mental health.

By considering the nested ecological model and exposure theory of intimate partner violence, this study sheds light on the complex dynamics between risk behaviors, TDV victimization, and adverse mental health outcomes in the context of Black teens' experiences.

Culture significantly shapes individuals' beliefs, norms, and behaviors, including their attitudes toward risk behaviors, TDV, and mental health. Cultural factors such as community norms, social expectations, and traditional gender roles can influence the prevalence and acceptance of risk behaviors and TDV within a particular cultural context. In the context of Black adolescents, cultural factors such as community values, racial identity, and experiences of discrimination may interact with risk behaviors, TDV victimization, and mental health outcomes.

Understanding the cultural context is crucial for interpreting the findings and tailoring interventions to address Black teens' unique challenges.

The finding that there were no significant differences in the models for boys and girls contradicts previous studies suggesting that gender may moderate the association between risk behaviors and TDV victimization (Taylor et al., 2009). Gender norms and expectations can also shape the experiences of Black teens regarding risk behaviors, TDV victimization, and mental health. Traditional gender roles may influence the types of risk behaviors that boys and girls engage in and their experiences of TDV victimization. For instance, societal expectations of masculinity may pressure boys to engage in certain risk behaviors or exhibit aggressive behaviors, while girls may face unique challenges related to power dynamics and control within intimate relationships. Exploring the role of gender allows for a nuanced understanding of how societal expectations and gendered power dynamics may intersect with risk behaviors, TDV victimization, and mental health outcomes among Black teens.

Considering culture and gender in the analysis and interpretation of the findings helps illuminate the unique experiences and challenges Black teens face. The findings help acknowledge that cultural beliefs, values, and gender norms shape the context in which risk behaviors, TDV victimization, and mental health outcomes occur. Understanding these factors is essential for developing culturally appropriate interventions, support systems, and policies that address the specific needs of Black adolescents and promote their overall well-being.

Positive School Environment and TDV Victimization

The findings of this study indicated a direct negative association between a positive school environment and TDV victimization. However, the association between early risk behaviors and TDV and between current risk factors and TDV was not altered by the presence or

absence of a positive school environment. This suggests that, based on the current data from this study, a positive school environment does not consistently apply a protective influence against TDV, regardless of one's level of risk behaviors. The concept of lifestyle exposure theory was that by considering the environment, a positive school environment could lead to environments with less exposure to risks. Therefore, the teens would be less likely to be in an environment where TDV and other unhealthy behavioral events may occur.

However, results could be attributed to cultural factors influencing how Black teens perceive and respond to TDV. Cultural norms, values, and expectations within the Black community may differ from those within the school environment, leading to varying levels of influence on TDV prevention. Additionally, cultural factors may interact with other risk factors and contribute to the persistence of TDV, despite a positive school environment.

Implications for Prevention and Intervention

The national trends revealed in this study emphasize the critical need for targeted prevention and intervention efforts to address the disparities in TDV victimization among Black teens. These efforts should be tailored to meet their unique needs and experiences. To effectively tackle these disparities, it is essential to comprehensively understand the complex and multifaceted factors such as racism, discrimination, poverty, and cultural and societal norms so that strategies can be developed to prevent and respond to TDV among Black teens (Singer et al., 1995).

Programs specific to targeting TDV should include the aspects of mitigating and preventing risk behaviors and associated adverse mental health outcomes. The findings of this study emphasize the significance of targeting the early initiation of risk behaviors among Black teens, highlighting the need for intervention and prevention programs during early adolescence

as a crucial period for mitigating risky behaviors and TDV victimization. These findings highlight the importance of promoting culturally competent healthcare in interventions and prevention strategies to reduce risk behaviors and improve mental health outcomes among Black adolescents. Interventions focused on risk behaviors should integrate various aspects of risk behaviors such as substance use prevention, comprehensive sex education programs can assist with this preventing sexual risk behaviors, and behavior modification such as mindfulness-based practices may help with violent-related behaviors. Assisting with risk behaviors would reduce the likelihood of TDV and mental health concerns. However, mitigating mental health outcomes could also influence engagement in risk behaviors.

The present study's findings regarding the mediating role of TDV between risk behaviors and mental health outcomes have important implications for understanding the impact of TDV victimization on mental health. Integrated prevention and treatment approaches are needed to address TDV and mental health concerns among Black teens. These findings highlight the significance of addressing multiple risk behaviors in interventions to improve adolescent mental health outcomes (Exner-Cortens et al., 2013). High-risk behaviors, such as alcohol use, risky sexual behaviors, violence, and smoking may require a more holistic approach in interventions to improve mental health that could include substance abuse treatment, behavioral modification, psychoeducation, and mental health services (Das et al., 2016).

While the present study did not find significant evidence for the effectiveness of a positive school environment in protecting against TDV victimization, it is crucial to consider how Black teens are treated in the school, such as differential treatment and punishment disparities, when examining the school environment's influence. Family and neighborhood factors may hold a more significant influence than the school environment on the behavioral

choices of Black teens. Therefore, prevention and intervention programs should extend beyond schools to incorporate the broader social and environmental contexts that shape adolescents' experiences (Piolanti & Foran, 2022; Wolfe et al., 2009).

Current TDV prevention programs often focus on attitudes regarding violence, gender stereotypes, conflict resolution, and problem-solving abilities. Since prevention programs aim to stop TDV before it begins, it is important that, given the current study results help describe risk behaviors that can happen early on, potentially before the current risk behaviors and before the TDV occurs, it would be important to implement education on sexual risk behaviors and substance use. Some programs address sexual risk behaviors and substance use among 9th graders (e.g., The 4th R program; Wolfe et al., 2009) impacting violence among men. While other prevention programs affect TDV (e.g., Shifting Boundaries, The Youth Relationships Projects, The Safe Dates Project, and Break the Cycles Ending Violence Curriculum), these programs include a focus on relationships, attitudes toward violence and behaviors (Jaycox et al., 2006; Foshee et al., 2005; Pittman, Wolfe & Wekerle, 2000; Taylor, Stein, Woods, & Mumford, 2011). Current prevention programs are shown to be useful in reducing subsequent TDV in various subpopulations, and it is also important to include sexual risk behaviors and substance use education in the prevention of subsequent behaviors; as for Black teens, this information is based on the current study has shown to be of value and can be integrated into the aspects of the programmatic materials.

Current prevention programs could benefit from the current study's findings through the newly acquired knowledge that school may not have as big an influence on behavior for Black teens as previously suggested. Prevention programs may need to be more involved and may also need to include factors such as family and neighborhood community implementation. In this

instance, parental influences may have a stronger impact on substance use initiation among African American teenagers than White and Hispanic youth, highlighting the varying effects of peer influence and is a practical consideration for prevention and intervention programs (Resnicow et al., 2000). Since the current state of cultural implications is that Black youth are more affected by events outside of the school. Specifically given that most of the teens in the sample had positive school environments.

Race-related factors, such as increased pressure, frustration, and societal challenges faced by Black individuals and people of color, are associated with their initiation into early multiple-risk behaviors, particularly substance initiation (Neblett et al., 2010). Several factors may contribute to the early initiation of substances among Black teens. Cultural norms and social influences within the Black community significantly shape attitudes and behaviors related to substance use (Resnicow et al., 2000). For instance, historical and contemporary experiences of racism, discrimination, and socioeconomic disparities may contribute to stressors and coping mechanisms that increase the likelihood of substance initiation at an earlier age (Coker et al., 2000; Exner-Cortens et al., 2013; Hicks, Kernsmith, & Smith-Darden, 2021). These findings highlight the need for culturally tailored prevention and intervention strategies that address the unique challenges that Black teens face in substance use initiation (Brook et al., 2010; Kilpatrick et al., 2003).

Engaging in sexual activity among Black teens compared to their counterparts has significant cultural and race-related implications. Cultural norms, beliefs, and societal expectations regarding sexuality within the Black community may influence the timing of sexual initiation (Belle & Doucet, 2003; French, 2013; Kinsman et al., 1998). Historical experiences, family dynamics, community values, and peer influences can shape attitudes and behaviors

related to early sexual activity. The implications of early sexual activity may include increased vulnerability to sexual health risks, such as sexually transmitted infections and unplanned pregnancies. Moreover, early sexual activity may intersect with other risky behaviors and contribute to adverse psychosocial outcomes, including mental health concerns (Donahue et al., 2013). Addressing these implications requires comprehensive and culturally sensitive sexual health education, access to healthcare services, and supportive social environments that promote healthy sexual development and decision-making among Black teens (Evans et al., 2020; Lacey, 2017; Patton et al., 2016).

Individuals who experience physical or sexual dating violence are twice as likely to report an STI diagnosis (Decker et al., 2005). This shows the importance of sexual protection, such as condoms, and the negotiation process in abusive relationships. Adolescent girls in physically abusive relationships are three times more likely to become pregnant than non-abused girls (Roberts et al., 2005). Thus, the importance of contraceptive use. The cultural implications of contraceptive use among Black teens compared to other racial counterparts are significant, particularly in the context of maltreatment and disparities in reproductive healthcare. The institutional mistreatment of contraceptive use among Black communities, including coerced sterilizations and unethical research practices, has engendered mistrust and skepticism towards contraceptive methods and healthcare institutions. These experiences have had lasting effects on attitudes, beliefs, and practices surrounding contraceptive use within the Black community. As a result, Black teens may face unique barriers and challenges in accessing and utilizing contraception effectively.

These cultural implications contribute to disparities in contraceptive use and, in turn, impact sexual and reproductive health outcomes among Black teens. Addressing these

implications requires culturally competent healthcare providers, community engagement and education, and policies that promote equitable access to contraception and reproductive healthcare services. Efforts could also be made to rebuild trust and restore agency within the Black community by acknowledging and rectifying past injustices (Elgar et al., 2015).

By understanding and addressing Black teens' unique challenges and experiences, particularly concerning TDV victimization, we can develop more effective interventions and policies that prioritize positive health outcomes and work towards reducing disparities in risk behaviors within this population. Black teens may face specific contextual factors that contribute to TDV, including historical maltreatment, systemic racism, and disparities in access to healthcare and resources. Additionally, cultural norms and gender expectations within Black communities can impact relationship dynamics and influence the acceptance or normalization of certain forms of violence. Racial disparities can influence the dynamics of TDV among Black teens, as experiences of discrimination, marginalization, and intergenerational trauma may contribute to elevated stress levels, lower self-esteem, and reduced help-seeking behaviors.

Intervention and prevention programs targeting TDV among Black teens should consider these unique needs and experiences. Culturally sensitive and inclusive approaches are crucial for engaging and empowering Black adolescents, providing them with a safe space to express their concerns and experiences. Education on healthy relationships, consent, communication skills, and conflict resolution strategies can help equip Black teens with the knowledge and tools necessary to navigate relationships safely and respectfully.

Collaboration between schools, community organizations, healthcare providers, and families is essential for implementing comprehensive prevention efforts. These initiatives should address TDV and underlying risk factors such as substance use, childhood trauma, and mental

health issues. Providing accessible and affordable mental health services, promoting positive youth development, and fostering supportive environments within schools and communities are vital components of effective prevention programs.

Additionally, efforts to address systemic issues such as structural racism, poverty, and inequality are essential for creating an environment that supports healthy relationships and reduces the prevalence of TDV among Black teens. This can involve advocating for policy changes, promoting social justice, and implementing initiatives addressing health's social determinants. This may also include the importance of incorporating trauma-informed components of the interventions. Given that the cultural experiences of Black youth may be different from their peers of other racial/ethnic groups and that the experiences of TDV victimization can involve a certain level of trauma, it would be essential to incorporate components of trauma-informed interventions because the experiences of interpersonal trauma have an impact on participant receptivity (Petit et al., 2021). Universal TDV interventions may not be specific enough for multiethnic and Black teens to benefit.

By understanding the complex interplay of factors contributing to TDV and considering the broader social and environmental contexts, we can develop effective strategies that prevent and respond to TDV, improve mental health outcomes, and promote healthier relationships among Black adolescents. Through a comprehensive and culturally sensitive approach, we can strive to reduce TDV victimization and empower Black teens to thrive in safe and supportive relationships.

Study Limitations

The current study contains several limitations to consider when interpreting the findings. These limitations span various dimensions of the research design, methodology, and available

data, encompassing sample size, data collection methods, measurement tools, generalizability, and the availability of key variables.

The operationalization of risk behaviors constitutes an essential aspect of the study's limitations. Early risk behaviors encompassed engagement in early adolescent substance use and sexual behaviors. Similarly, the present study characterizes current risk behaviors as a constellation of diverse behaviors, including substance use, sexual behaviors, violence-related behaviors, and risky driving behaviors. While this operationalization strategy aligns with prior literature and the study's statistical path model, it necessitates incorporating responses across these behaviors. An alternative approach, wherein each risk behavior is individually examined and analyzed in isolation, could provide a more nuanced understanding of their distinct contributions to the outcomes.

Despite the alignment with prior literature, the study's adoption of a combined approach for operationalizing risk behaviors introduces limitations concerning the capacity to discern the distinct impact of each risk behavior on mental health outcomes and TDV victimization. Consequently, the study's scope may be constrained by its inability to interpret the nuanced effects of each category of risk behaviors. This limitation underscores the potential for differential influences among distinct risk behaviors. Specifically, the granularity required to ascertain the intricate relationships linking whether particular risk behaviors exert a more pronounced influence on TDV victimization or mental health outcomes than others remains beyond the study's reach due to the aggregation of risk behaviors.

Considering the potential influence of school type (e.g., public, Catholic, private) on adolescents' engagement in risk behaviors and experiences of TDV, a noteworthy consideration arises. Schools play a pivotal role in shaping the support systems and available resources for

teens, and variations in school type could contribute to disparities in risk behaviors and TDV experiences. However, a limitation arises from the absence of school-type data within the existing dataset. This data gap impedes the exploration of potential distinctions among students, as the unique characteristics of each school environment could impact the observed relationships between risk behaviors, TDV, and other variables. Furthermore, the varying socioeconomic backgrounds of different school types could offer insights into disparities in risk behaviors and TDV experiences. For instance, private schools, often associated with higher socioeconomic status due to higher tuition costs, may offer distinct opportunities and resources compared to government-funded public schools, whose resource allocation is influenced by the local neighborhood tax bracket. Furthermore, the varying socioeconomic backgrounds of different school types could offer insights into disparities in risk behaviors and TDV experiences.

Another demographic variation among participants, including age, cultural background, and socioeconomic status, constitutes an additional limitation. The study's focus primarily on information related to the survivors' race and limited demographic characteristics, with a lack of corresponding data on the perpetrator's race, impedes a comprehensive understanding of the contextual factors shaping risk behaviors and TDV experiences. Furthermore, comprehensive sociodemographic data about the participants and their backgrounds, including school location, are absent from the dataset, further constraining the ability to account for potential influences on risk behaviors and TDV outcomes.

The acknowledgment of interpreting the survey items from the YRBSS necessitates careful consideration. Certain inequalities within the school environment could be intertwined with other aspects of the school climate, affecting the interpretation of YRBSS survey responses. The potential influence of social desirability biases and the positive school environment context

on survey responses should be considered. The highly positive school environment responses among participants, with 93% indicating positivity, raise concerns about potential skewness in the data distribution and its implications for statistical analysis. While a positive school environment is desirable, the skewed distribution may preclude achieving the normal distribution necessary for rigorous statistical analysis.

Additionally, the scope of the study is hindered by the omission of data concerning the presence and nature of sex education programs within the participants' schools. Given the incorporation of risk behaviors involving sexual activities and contraceptive use, the lack of comprehensive sex education data is a notable limitation. A more detailed assessment of sex education programs, encompassing components such as education about AIDS/HIV, STDs, condom use, and birth control methods, could provide valuable insights into the contextual factors influencing risk behaviors and TDV experiences among Black adolescents.

Furthermore, the absence of information about sex education programs is compounded by the lack of data regarding the number of Black classmates or the representation of Black teens within the study sample's schools. The racial composition of schools can substantially impact adolescents' social interactions, identity development, and experiences of discrimination, all of which can influence their engagement in risk behaviors and their vulnerability to TDV. The absence of data on racial diversity within schools hinders the study's ability to explore how racial composition may interact with risk behaviors and TDV experiences among Black adolescents.

In addition, methodological differences in assessing and operationalizing risk behaviors and mental health outcomes contribute to the observed inconsistencies. Variations in measures, scales, or diagnostic criteria across different studies can lead to discrepancies in identifying and categorizing risk behaviors and mental health outcomes. Furthermore, the diversity of specific

risk behaviors examined (e.g., substance use, self-harm, risky sexual behaviors) and the breadth of mental health outcomes considered (e.g., depression, anxiety, conduct disorders) contribute to the heterogeneity of findings across research endeavors.

Survey question formatting poses yet another limitation. Notably, survey questions related to drug use lack specificity regarding the timing of engagement. The study's inability to identify temporal patterns represents a constraint without information about when such behaviors occurred. Despite its exclusion from the study, this item exemplifies the presence of survey questions lacking essential information, necessitating adaptations to ensure methodological coherence.

The design of the TDV victimization survey items introduces further limitations. With only one item for physical TDV and one for sexual TDV, both written as multiple-barreled questions asking about different types of TDV in a single query, participant responses may be influenced. Moreover, the scope of TDV in this study is confined not only to two items encompassing sexual and physical TDV but also excludes information on coercive control and psychological violence, which are prevalent forms of TDV.

Additionally, the absence of gender differences in the analysis may be attributed to the survey question design. Missing data compounds the study's limitations, particularly concerning sensitive topics like sexual experiences and sexual violence. This absence impacts the accuracy of prevalence rates, results, and the implications of risk behaviors on TDV. It is imperative to explore the reasons behind missing data and its potential influence on the findings, acknowledging that incomplete responses are commonplace in large-scale surveys, which may introduce bias into population disparities estimation.

Notably, the missingness within the sample exhibits a non-random pattern, as determined through Little's MCAR test. Despite this pattern, imputations were carried out on the missing data using the AMOS statistical package, allowing for a more comprehensive analysis. Missingness and nonresponse limited the data to question items, and incorporating items with alternative phrasing to gather supplementary information represents a strategy to mitigate the impact of missing data.

While this study contributes valuable insights into the intricate relationships between risk behaviors, TDV, and associated determinants among Black teens, the limitations underscore the need for caution in interpreting and generalizing the findings. Addressing these limitations in future research endeavors is essential to facilitate a more comprehensive understanding of the complex dynamics under investigation.

Future Directions

This research study provides valuable insights into the relationship between risk behaviors, TDV victimization, and mental health outcomes among Black adolescents. To focus on the research questions, this project was constrained in particular ways; however, several directions outside this project's scope could be pursued in future work.

Future research should consider using multiple items to assess different types of TDV separately to ensure a more accurate measurement, such as including separate question items for each specific action of TDV victimization. Including more items for both sexual and physical TDV would be useful to add more variability in understanding what types of TDV and the intensity to which TDV is taking place. Future studies could also include both perpetration and victimization in TDV better to understand the co-occurrence and dynamics of these experiences.

Enhancing the comprehensiveness of TDV assessment is essential for a more thorough understanding. Future data collection efforts should incorporate additional dimensions of violence, particularly coercive control and psychological violence, which frequently co-occur with physical and sexual forms of TDV (Whitton et al., 2019). Including these dimensions in assessment, protocols is imperative to provide a comprehensive understanding of the multifaceted nature of TDV victimization.

The value of grasping the implications of TDV victimization extends beyond individual forms of violence, compelling the consideration of their co-occurrence and bidirectional nature. Future research should account for the intricate interplay between various forms of TDV, acknowledging that individuals may encounter diverse types of violence with varying frequencies and levels of severity. Moreover, recognizing the concurrent occurrence of victimization and perpetration experiences adds a layer of complexity to the understanding of TDV dynamics. Investigating the bidirectional nature of violence is essential to disentangle the intricate relationships between victimization and perpetration experiences, enabling a comprehensive assessment of TDV's multifaceted nature.

The present study employed a unidirectional path model to examine the relationships among risk behaviors, mental health outcomes, and TDV in one specific direction: from risk behaviors to mental health, risk behaviors to TDV, and TDV to mental health. However, considering the complex interplay of these variables, bidirectional path models would not only encompass the hypothesized directions, indicating that risk behaviors contribute to TDV and adverse mental health outcomes, but also acknowledge the plausible existence of reverse relationships among these variables. This bidirectional perspective posits that mental health outcomes could potentially influence engagement in risk behaviors, and conversely, experiences

of mental health challenges may impact risk behaviors and contribute to vulnerability for experiencing TDV.

Future research endeavors should consider an alternative approach to operationalizing risk behaviors, specifically by analyzing them individually rather than aggregating them. This methodological enhancement recognizes the bidirectional associations and promises to unveil distinct and multifaceted effects, enhancing the comprehension of the intricate interplay between risk behaviors, mental health outcomes, and TDV. For instance, the differential impact of substance use, sexual behaviors, violence-related behaviors, and risky driving behaviors on TDV and mental health outcomes could be more comprehensively explored.

Furthermore, an analysis of risk behaviors in isolation could facilitate a clearer identification of potential mediating or moderating mechanisms underlying their relationships with TDV and mental health outcomes. This specificity in the analysis would enable the identification of unique risk profiles and trajectories that could inform the development of targeted interventions and preventive strategies tailored to address specific risk behaviors and their intersections with TDV and mental health.

To further explore the reasons for the absence of gender difference in TDV victimization, future research could delve into separating the risk behavior and TDV variable items to show a more nuanced difference. Given that literature shows sexual and physical TDV are experienced by teens of different gender differently (Exner-Cortens et al., 2013; Vagi et al., 2015). These factors may provide valuable insights into the complex interplay between risk behaviors, gender dynamics, and TDV experiences among Black teens (Smith et al., 2003).

Regarding risky driving behaviors, future research could benefit from a qualitative approach to understand their implications more deeply and connect them to risk behaviors in

general. Exploring how risky driving behaviors relate to unintentional injuries on the road and whether they reflect a sense of helplessness or choice in teens' circumstances would provide valuable insights. Additionally, carefully framing survey questions can uncover different motivations for risky driving behaviors.

The lack of significant association between current risk behaviors and mental health outcomes warrants further research. Future studies could explore the underlying mechanisms that may account for the observed lack of associations. This could involve investigating the inclusion of factors such as coping strategies, social support, or contextual influences (e.g., family environment and peer relationships) and socialization processes that may impact boys and girls differently regarding risk behaviors and mental health outcomes.

Understanding the role of schools in supporting Black teens is essential. While the present study did not support the effectiveness of a positive school environment in protecting against TDV victimization, further research is needed to understand the specific role of schools, and it is imperative to explore alternative moderators. Specifically, additional moderators, such as comprehensive sex education programs in schools, familial dynamics, community and neighborhood influences, cultural aspects, and birth control utilization, could provide better understanding of the factors shaping adolescents' development.

To enhance the efficacy of assessing the school environment, it is recommended to augment the survey questions with additional items to delve deeper into the personal experiences of adolescents. More details about the school environment and context (e.g., zip codes, rural vs. urban) would benefit future research. The present dataset offers a sample of Black adolescents, albeit with an oversampling of Black students, to gain insights into their representation within the school population. However, the absence of demographic information on the prevalence of

Black students in individual schools restricts the comprehension of racial dynamics in students' educational settings. Acquiring school enrollment and representation knowledge would reveal the racial context of the adolescents' school environment. Subsequently, this provides contextual insights into the school's diversity, social dynamics, and potential power structures, shaping TDV experiences, influencing interpersonal relationships, and impacting dating dynamics and risk factors.

To enhance the efficacy of assessing the school environment, it is recommended to augment the survey questions with additional items to delve deeper into the personal experiences of adolescents. Acknowledging the diverse experiences of TDV among Black teens requires an understanding of the historical and social contexts that have shaped their lives, including the impact of racism, discrimination, and poverty. It is also essential to recognize the unique strengths and protective factors contributing to their resilience, such as cultural strengths and societal norms promoting healthy relationships and behaviors. To further understand Black teens and their experiences, additional data on racial experiences, socioeconomic status, school, and family environment are needed in future research. Building upon the theoretical framework of critical race theory and its emphasis on the multifaceted influences of various identities on experiences and behaviors, forthcoming investigations should focus on incorporating a more comprehensive array of racial experiences to unravel the nuanced social context and diverse identities which these among Black teens navigate and encounter TDV. Specifically, future studies could explore how different racial identities intersect with cultural strengths, norms, and community factors to foster healthy relationships and behaviors, ultimately acting as potential protective factors against TDV.

While all participants in the study identified as Black, further investigation is needed to understand their cultural backgrounds and impact on TDV victimization. Exploring culture as a protective factor is crucial. In-depth inquiries can reveal how Black adolescents engage with their cultural heritage and how cultural identity buffers against TDV. Incorporating cultural dimensions can provide insights into how cultural norms mitigate or exacerbate risk behaviors and TDV experiences. Investigating culture's role as a protective mechanism could examine its influence on relationships between risk behaviors, mental health outcomes, and TDV victimization.

Future research should incorporate more comprehensive measures to capture the racial implications of TDV. This includes exploring the role of the perpetrator's race and its interaction with the victim's sexual identity and the sex of their sexual contacts or dating partner. Qualitative research can also provide valuable insights into experiences with race and perceptions of interactions in dating relationships. Incorporating information about the perpetrator's race can help understand the role of race in the dynamics of violence in relationships.

Societal factors such as systemic racism, discrimination, poverty, and lack of access to healthcare and mental health services contribute to the increased risk of mental health consequences among Black teens who experience TDV victimization (Eisman et al., 2015; Cook et al., 2009). Black individuals, who face increased pressure, frustration, and societal challenges, may contribute to the perpetration or experience victimization of abuse due to race-related factors. This may also foster a risk for TDV, such as if teens take their frustration out on those closest to them.

The lack of significant findings on school environment as a protective factor from the present study may indicate that factors such as family and neighborhood conditions may

substantially influence Black adolescents' behavioral choices. Understanding factors such as rural versus urban location and family socioeconomic status could provide further insights into the generalizability and specific implications of the findings among Black teens.

Future research endeavors should further extend the scope of inquiry by integrating socioeconomic status and family environments as critical dimensions in understanding the intricate interplay of TDV, risk behaviors, and mental health outcomes among Black adolescents. A comprehensive examination of socioeconomic factors, such as income levels, access to resources, and neighborhood conditions, can provide valuable insights into the broader systemic influences that shape TDV experiences. Furthermore, a nuanced exploration of family environments, including familial dynamics, parental support, and communication patterns, can show how these factors interact with risk behaviors and TDV experiences. Investigating how family cohesion and resilience serve as potential protective factors can contribute to a more holistic understanding of the influences that contribute to the well-being of Black teens in the context of TDV. Insight into their home environments holds substantial significance in the context of adolescent learning and growth.

In future investigations focusing on risk behaviors, it is recommended that a more comprehensive examination be conducted to elucidate the nuanced impact of birth control on both risk behaviors and experiences of TDV victimization. While the present study acknowledged the lack of birth control use as a risk behavior, its potential dual role as a protective factor warrants deeper exploration. Birth control access could reflect the supportive nature of home, school, or community environments. Moreover, it could indicate the empowerment and agency exhibited by individuals within their relationships. This potentially nuanced influence may be particularly relevant for female adolescents, considering their higher

susceptibility to sexual violence and their often pivotal role in decisions related to birth control usage for safeguarding against sexually transmitted diseases and unintended pregnancies. Additionally, for females, the age at which one reaches menarche, an indicator of adolescence, has declined over the past century (Singh and Darroch, 2000). While menarche has been declining, there has been a younger age at which one first had sexual intercourse (Singh & Darroch, 2000)—understanding the age at which teens hit puberty and their subsequent engagement in risky behaviors remains important.

In pursuing further inquiry, it is recommended that forthcoming research endeavors integrate a comprehensive examination of the school environment's inherent characteristics, such as if the school was public, private, or catholic, subsequently discerning the variances within path models for adolescents attending different school types. An avenue for such exploration could include pertinent survey items and analytical considerations, specifically delving into the nature of the school environment.

Incorporating information on the sex education component helps comprehend the role of school type as a potential source of support for adolescents. Notably, distinct educational institutions may provide context for socioeconomic status and impart sex education dissimilarly, engendering variations in available resources and instructional time. Delving into the specifics of the sex education experience becomes pivotal, encompassing aspects such as the timing of its introduction and the corresponding grade level at which adolescents receive this instruction. This discernment augments our understanding of its implications on risk behaviors and its potential influence over the occurrence of TDV. Furthermore, it is imperative to consider this aspect as a prospective protective factor inherent within the school environment, potentially mitigating sexual risk behaviors and conceivably addressing the interrelatedness between substance use and

risky sexual behaviors. Incorporating such an inquiry would significantly contribute to a more thorough comprehension of the intricate dynamics prevailing within the school context and their multifaceted ramifications on adolescent risk behaviors and TDV outcomes.

As digital communication platforms increasingly pervade adolescents' lives, there is a need for future research to delve into the nuanced role of social media in TDV victimization. While existing studies have addressed traditional risk factors for TDV victimization, the potential impact of social media remains understudied. This gap prompts the need to scrutinize how social media operates as a dual-edged phenomenon, potentially acting as both a source of support and a medium for targeted victimization among adolescents. This entails delineating the multifaceted functions of social media in the context of TDV victimization, including its potential to facilitate communication and connection among peers and expose teens to cyberbullying and digital harassment. This calls for a comprehensive approach, including a qualitative exploration of how social media influences relationship perceptions and vulnerability and a quantitative analysis of associations between specific online behaviors and the likelihood of TDV. Moreover, the interplay between social media, cultural, and demographic factors such as race and gender requires examination to understand how digital interactions amplify power dynamics and stereotypes, affecting TDV experiences across diverse contexts and highlighting the intricate interplay between technological influences and risk and protective factors.

To address issues of missingness in survey items, additional research could also investigate reasons for missing data and potential bias in responses and consider alternative ways of formatting survey questions for more accurate measurement. Future studies can also address limitations by refining survey questions to provide more accurate and specific measurements of risk behaviors. The present study maintained justification for continuing analysis by combining

similar items and deletion methods to maintain a complete sample. A large pattern of nonresponse in the sample was from participants and nonresponse to sensitive items such as sexual and violent behaviors. While social desirability bias may come into play, there may be items that teens may not be comfortable responding to in such a survey method. Therefore, future research may determine better measurements and assessment methods to increase response rates of risk behavior information among teens.

By addressing the research gaps and limitations highlighted in the previous sections, future studies can contribute to a more nuanced understanding of the complex interplay between these variables and inform the development of targeted interventions and preventive strategies to promote the well-being of Black teens. By incorporating various methodological approaches, considering cultural and contextual factors, and exploring new dimensions, such as the roles of school, family, and social media, researchers can advance the field's knowledge and ultimately positively impact Black adolescents' lives.

Conclusions

The findings of this study, situated within the framework of the nested ecological model of intimate partner violence and the exposure theory, have significant implications for future research and practice. The results confirm the prevalence of risk behaviors, TDV victimization, and subsequent mental health outcomes among Black teens. The interrelated nature of risk factors, their association with TDV, and the impact of TDV on mental health outcomes highlight the complex dynamics interrelating in the lives of Black youth.

The rates of TDV victimization presented in this study (5.26% sexual TDV and 9.56% physical TDV) were consistent with current literature, with the rates of physical and/or sexual TDV victimization in a dating relationship ranging from (12.4% of boys and 11.8% of girls)

(CDC, 2011) among Black youth. These rates underscore the urgent need for targeted prevention and intervention efforts to address TDV within this population. Understanding the early and current risk factors associated with TDV is essential for developing effective prevention strategies. Addressing these risk factors during early adolescence is crucial, as they directly and indirectly, influence mental health outcomes.

Furthermore, the study identified the mediating role of current risk behaviors in the association between early risk behaviors and mental health outcomes. This finding emphasizes the need for comprehensive interventions that target multiple risk behaviors to improve mental health outcomes among Black teens. Additionally, the study found that TDV victimization mediates the relationship between early risk behaviors and mental health outcomes, indicating the detrimental influence of TDV victimization on mental health. These results highlight the importance of integrating TDV prevention and intervention programs into broader efforts to promote adolescent mental health.

The study also examined the role of positive school support in TDV victimization. While a significant association between a positive school environment on TDV was observed, no moderating effects were found. This suggests that, although a positive school environment is important, it may not be a consistent protective factor against TDV for Black teens, regardless of their risk behaviors. This finding calls for further exploration of the underlying mechanisms and the need for targeted interventions beyond the school environment such as culture, sex education, family, and neighborhood environment, to address the diverse social and environmental factors influencing Black teens' behavior.

This research highlights the significance of creating safe and inclusive learning environments for Black teens, free from racial and gender prejudices. The implications of

negative experiences within the school setting can extend to other areas of their lives, including dating relationships and peer interactions. Understanding the historical and contemporary racial contexts and recent disadvantages Black individuals face is crucial for interpreting and addressing the research findings.

As teens develop emotionally and physically and involve themselves with intimate partners, they create "scripts" for romantic relationships and practice relationships for adulthood. These "scripts" could become the initial point for the experiences of violence in adult relationships (Holmberg & MacKenzie, 2002). Learning about factors contributing to and preventing TDV will be helpful for everyone's healthy social and emotional well-being.

Using the insights from this study, it is possible to take appropriate steps toward enacting positive change in TDV and mental health outcomes for Black youth. This research underscores the importance of ongoing efforts to combat racial disparities and promote societal equity. Through an optimistic outlook and applying these research findings, actionable changes can be made to support Black teens' well-being and future success in the United States. It is crucial for Black teens to feel safe and free from racial and gender prejudices in their learning environment, as the repercussions can influence other areas of their lives, such as their dating relationships and behaviors with peers.

Appendix A

2019 Questionnaire Variable Specifications

Table A1. National High School YRBS Questions and Dichotomous Variables

Standard High School Questions (QNs)	
Note:	Questions that have one or more response options greater than 40 characters in length will include “Short Response” versions of the response options. The short responses are used as value labels in SAS and SPSS YRBS datasets and programs to maintain clarity.
Q1.	<p>How old are you?</p> <ul style="list-style-type: none"> A. 12 years old or younger B. 13 years old C. 14 years old D. 15 years old E. 16 years old F. 17 years old G. 18 years old or older <p style="margin-left: 40px;">Variable label: How old are you</p> <p>Dependence: Required by QNOWT, QNOBESE, and QN36</p>
Q2.	<p>What is your sex?</p> <ul style="list-style-type: none"> A. Female B. Male <p style="margin-left: 40px;">Variable label: What is your sex</p> <p>Dependence: Required by QNOWT and QNOBESE</p>
Q3.	<p>In what grade are you?</p> <ul style="list-style-type: none"> A. 9th grade B. 10th grade C. 11th grade D. 12th grade E. Ungraded or other grade <p style="margin-left: 40px;">Variable label: In what grade are you</p>
Q4.	<p>Are you Hispanic or Latino?</p> <ul style="list-style-type: none"> A. Yes B. No <p style="margin-left: 40px;">Variable label: Are you Hispanic/Latino</p>
Q5.	<p>What is your race? (Select one or more responses.)</p> <ul style="list-style-type: none"> A. American Indian or Alaska Native B. Asian C. Black or African American D. Native Hawaiian or Other Pacific Islander E. White <p style="margin-left: 40px;">Variable label: What is your race</p>
Q6.	<p>How tall are you without your shoes on?</p> <p style="margin-left: 40px;">Variable label: How tall are you</p> <p>Dependence: Required by QNOWT and QNOBESE</p>
Q7.	<p>How much do you weigh without your shoes on?</p> <p style="margin-left: 40px;">Variable label: How much do you weigh</p> <p>Dependence: Required by QNOWT and QNOBESE</p>

Q8.	How often do you wear a seat belt when riding in a car driven by someone else?
	<p>A. Never</p> <p>B. Rarely</p> <p>C. Sometimes</p> <p>D. Most of the time</p> <p>E. Always</p>
	Variable label: Seat belt use
QN8:	<p>Numerator: Students who answered A or B for Q8</p> <p>Denominator: Students who answered A, B, C, D, or E for Q8</p> <p>Summary text: Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)</p>
	Variable label: Rarely or never wore a seat belt
Q9.	During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol ?
	<p>A. 0 times</p> <p>B. 1 time</p> <p>C. 2 or 3 times</p> <p>D. 4 or 5 times</p> <p>E. 6 or more times</p>
	Variable label: Riding with a drinking driver
QN9:	<p>Numerator: Students who answered B, C, D, or E for Q9</p> <p>Denominator: Students who answered A, B, C, D, or E for Q9</p> <p>Summary text: Percentage of students who rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)</p>
	Variable label: Rode with a driver who had been drinking alcohol
Q10.	During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol ?
	<p>A. I did not drive a car or other vehicle during the past 30 days</p> <p>B. 0 times</p> <p>C. 1 time</p> <p>D. 2 or 3 times</p> <p>E. 4 or 5 times</p> <p>F. 6 or more times</p>
	Variable label: Drinking and driving
	Short response:
	<p>A. Did not drive</p> <p>B. 0 times</p> <p>C. 1 time</p> <p>D. 2 or 3 times</p> <p>E. 4 or 5 times</p> <p>F. 6 or more times</p>
QN10*:	<p>Numerator: Students who answered C, D, E, or F for Q10</p> <p>Denominator: Students who answered B, C, D, E, or F for Q10</p> <p>Summary text: Percentage of students who drove a car or other vehicle when they had been drinking alcohol (one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)</p>
	Variable label: Drove a car or other vehicle when they had been drinking alcohol

<p>Q11. During the past 30 days, on how many days did you text or e-mail while driving a car or other vehicle?</p> <p>A. I did not drive a car or other vehicle during the past 30 days</p> <p>B. 0 days</p> <p>C. 1 or 2 days</p> <p>D. 3 to 5 days</p> <p>E. 6 to 9 days</p> <p>F. 10 to 19 days</p> <p>G. 20 to 29 days</p> <p>H. All 30 days</p> <p>Variable label: Texting and driving</p> <p>Short response:</p> <p>A. Did not drive</p> <p>B. 0 days</p> <p>C. 1 or 2 days</p> <p>D. 3 to 5 days</p> <p>E. 6 to 9 days</p> <p>F. 10 to 19 days</p> <p>G. 20 to 29 days</p> <p>H. All 30 days</p> <p>QN11*: Numerator: Students who answered C, D, E, F, G, or H for Q11</p> <p>Denominator: Students who answered B, C, D, E, F, G, or H for Q11</p> <p>Summary text: Percentage of students who texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)</p> <p>Variable label: Texted or e-mailed while driving a car or other vehicle</p>
<p>Q12. During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club?</p> <p>A. 0 days</p> <p>B. 1 day</p> <p>C. 2 or 3 days</p> <p>D. 4 or 5 days</p> <p>E. 6 or more days</p> <p>Variable label: Weapon carrying</p> <p>QN12: Numerator: Students who answered B, C, D, or E for Q12</p> <p>Denominator: Students who answered A, B, C, D, or E for Q12</p> <p>Summary text: Percentage of students who carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)</p> <p>Variable label: Carried a weapon</p>
<p>Q13. During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?</p> <p>A. 0 days</p> <p>B. 1 day</p> <p>C. 2 or 3 days</p> <p>D. 4 or 5 days</p> <p>E. 6 or more days</p> <p>Variable label: Weapon carrying at school</p> <p>QN13: Numerator: Students who answered B, C, D, or E for Q13</p> <p>Denominator: Students who answered A, B, C, D, or E for Q13</p> <p>Summary text: Percentage of students who carried a weapon on school property (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)</p> <p>Variable label: Carried a weapon on school property</p>

Q14.	During the past 12 months, on how many days did you carry a gun? (Do not count the days when you carried a gun only for hunting or for a sport, such as target shooting.)
	A. 0 days
	B. 1 day
	C. 2 or 3 days
	D. 4 or 5 days
	E. 6 or more days
	Variable label: Gun carrying past 12 mos
QN14:	Numerator: Students who answered B, C, D, or E for Q14
	Denominator: Students who answered A, B, C, D, or E for Q14
	Summary text: Percentage of students who carried a gun (not counting the days when they carried a gun only for hunting or for a sport such as target shooting, on at least 1 day during the 12 months before the survey)
	Variable label: Carried a gun
Q15.	During the past 30 days, on how many days did you not go to school because you felt you would be unsafe at school or on your way to or from school?
	A. 0 days
	B. 1 day
	C. 2 or 3 days
	D. 4 or 5 days
	E. 6 or more days
	Variable label: Safety concerns at school
QN15:	Numerator: Students who answered B, C, D, or E for Q15
	Denominator: Students who answered A, B, C, D, or E for Q15
	Summary text: Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)
	Variable label: Did not go to school because they felt unsafe at school or on their way to or from school
Q16.	During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property ?
	A. 0 times
	B. 1 time
	C. 2 or 3 times
	D. 4 or 5 times
	E. 6 or 7 times
	F. 8 or 9 times
	G. 10 or 11 times
	H. 12 or more times
	Variable label: Threatened at school
QN16:	Numerator: Students who answered B, C, D, E, F, G, or H for Q16
	Denominator: Students who answered A, B, C, D, E, F, G, or H for Q16
	Summary text: Percentage of students who were threatened or injured with a weapon on school property (such as a gun, knife, or club, one or more times during the 12 months before the survey)
	Variable label: Were threatened or injured with a weapon on school property

Q17.	During the past 12 months, how many times were you in a physical fight ?
	A. 0 times B. 1 time C. 2 or 3 times D. 4 or 5 times E. 6 or 7 times F. 8 or 9 times G. 10 or 11 times H. 12 or more times
	Variable label: Physical fighting
QN17:	Numerator: Students who answered B, C, D, E, F, G, or H for Q17 Denominator: Students who answered A, B, C, D, E, F, G, or H for Q17 Summary text: Percentage of students who were in a physical fight (one or more times during the 12 months before the survey)
	Variable label: Were in a physical fight
Q18.	During the past 12 months, how many times were you in a physical fight on school property ?
	A. 0 times B. 1 time C. 2 or 3 times D. 4 or 5 times E. 6 or 7 times F. 8 or 9 times G. 10 or 11 times H. 12 or more times
	Variable label: Physical fighting at school
QN18:	Numerator: Students who answered B, C, D, E, F, G, or H for Q18 Denominator: Students who answered A, B, C, D, E, F, G, or H for Q18 Summary text: Percentage of students who were in a physical fight on school property (one or more times during the 12 months before the survey)
	Variable label: Were in a physical fight on school property
Q19.	Have you ever been physically forced to have sexual intercourse when you did not want to?
	A. Yes B. No
	Variable label: Forced sexual intercourse
QN19:	Numerator: Students who answered A for Q19 Denominator: Students who answered A or B for Q19 Summary text: Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)
	Variable label: Were ever physically forced to have sexual intercourse
Q20.	During the past 12 months, how many times did anyone force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)
	A. 0 times B. 1 time C. 2 or 3 times D. 4 or 5 times E. 6 or more times
	Variable label: Sexual violence
QN20:	Numerator: Students who answered B, C, D, or E for Q20 Denominator: Students who answered A, B, C, D, or E for Q20 Summary text: Percentage of students who experienced sexual violence (being forced by anyone to do sexual things [counting such things as kissing, touching, or being physically forced to have sexual intercourse] that they did not want to, one or more times during the 12 months before the survey)
	Variable label: Experienced sexual violence

Q21. During the past 12 months, how many times did **someone you were dating or going out with** force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)

- A. I did not date or go out with anyone during the past 12 months
- B. 0 times
- C. **1 time**
- D. **2 or 3 times**
- E. **4 or 5 times**
- F. **6 or more times**

Variable label: Sexual dating violence

Short response:

- A. Did not date
- B. 0 times
- C. **1 time**
- D. **2 or 3 times**
- E. **4 or 5 times**
- F. **6 or more times**

QN21*: Numerator: Students who answered C, D, E, or F for Q21
Denominator: Students who answered B, C, D, E, or F for Q21
Summary text: Percentage of students who experienced sexual dating violence (being forced by someone they were dating or going out with to do sexual things [counting such things as kissing, touching, or being physically forced to have sexual intercourse] that they did not want to, one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)

Variable label: Experienced sexual dating violence

Q22. During the past 12 months, how many times did **someone you were dating or going out with** physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.)

- A. I did not date or go out with anyone during the past 12 months
- B. 0 times
- C. **1 time**
- D. **2 or 3 times**
- E. **4 or 5 times**
- F. **6 or more times**

Variable label: Physical dating violence

Short response:

- A. Did not date
- B. 0 times
- C. **1 time**
- D. **2 or 3 times**
- E. **4 or 5 times**
- F. **6 or more times**

QN22*: Numerator: Students who answered C, D, E, or F for Q22
Denominator: Students who answered B, C, D, E, or F for Q22
Summary text: Percentage of students who experienced physical dating violence (being physically hurt on purpose by someone they were dating or going out with [counting such things as being hit, slammed into something, or injured with an object or weapon] one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)

Variable label: Experienced physical dating violence

Q23.	During the past 12 months, have you ever been bullied on school property ?
	A. Yes B. No
	Variable label: Bullying at school
QN23:	Numerator: Students who answered A for Q23 Denominator: Students who answered A or B for Q23 Summary text: Percentage of students who were bullied on school property (ever during the 12 months before the survey)
	Variable label: Were bullied on school property
Q24.	During the past 12 months, have you ever been electronically bullied? (Count being bullied through texting, Instagram, Facebook, or other social media.)
	A. Yes B. No
	Variable label: Electronic bullying
QN24:	Numerator: Students who answered A for Q24 Denominator: Students who answered A or B for Q24 Summary text: Percentage of students who were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, ever during the 12 months before the survey)
	Variable label: Were electronically bullied
Q25.	During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?
	A. Yes B. No
	Variable label: Sad or hopeless
QN25:	Numerator: Students who answered A for Q25 Denominator: Students who answered A or B for Q25 Summary text: Percentage of students who felt sad or hopeless (almost every day for ≥ 2 weeks in a row so that they stopped doing some usual activities, ever during the 12 months before the survey)
	Variable label: Felt sad or hopeless
Q26.	During the past 12 months, did you ever seriously consider attempting suicide?
	A. Yes B. No
	Variable label: Considered suicide
QN26:	Numerator: Students who answered A for Q26 Denominator: Students who answered A or B for Q26 Summary text: Percentage of students who seriously considered attempting suicide (ever during the 12 months before the survey)
	Variable label: Seriously considered attempting suicide
Q27.	During the past 12 months, did you make a plan about how you would attempt suicide?
	A. Yes B. No
	Variable label: Made a suicide plan
QN27:	Numerator: Students who answered A for Q27 Denominator: Students who answered A or B for Q27 Summary text: Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)
	Variable label: Made a plan about how they would attempt suicide

Q28.	During the past 12 months, how many times did you actually attempt suicide?
A.	0 times
B.	1 time
C.	2 or 3 times
D.	4 or 5 times
E.	6 or more times
	Variable label: Attempted suicide
QN28:	Numerator: Students who answered B, C, D, or E for Q28
	Denominator: Students who answered A, B, C, D, or E for Q28
	Summary text: Percentage of students who attempted suicide (one or more times during the 12 months before the survey)
	Variable label: Attempted suicide
Q29.	If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?
A.	I did not attempt suicide during the past 12 months
B.	Yes
C.	No
	Variable label: Injurious suicide attempt
QN29:	Numerator: Students who answered B for Q29
	Denominator: Students who answered A, B, or C for Q29
	Summary text: Percentage of students who had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)
	Variable label: Had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse
Q30.	Have you ever tried cigarette smoking, even one or two puffs?
A.	Yes
B.	No
	Variable label: Ever cigarette use
QN30:	Numerator: Students who answered A for Q30
	Denominator: Students who answered A or B for Q30
	Summary text: Percentage of students who ever tried cigarette smoking (even one or two puffs)
	Variable label: Ever tried cigarette smoking

<p>Q31.</p> <p>A.</p> <p>B.</p> <p>C.</p> <p>D.</p> <p>E.</p> <p>F.</p> <p>G.</p>	<p>How old were you when you first tried cigarette smoking, even one or two puffs?</p> <p>I have never tried cigarette smoking, not even one or two puffs</p> <p>8 years old or younger</p> <p>9 or 10 years old</p> <p>11 or 12 years old</p> <p>13 or 14 years old</p> <p>15 or 16 years old</p> <p>17 years old or older</p>
<p>Variable label: Initiation of cigarette smoking</p>	
<p>Short response:</p>	
<p>A.</p> <p>B.</p> <p>C.</p> <p>D.</p> <p>E.</p> <p>F.</p> <p>G.</p>	<p>Never tried cigarette smoking</p> <p>8 years old or younger</p> <p>9 or 10 years old</p> <p>11 or 12 years old</p> <p>13 or 14 years old</p> <p>15 or 16 years old</p> <p>17 years old or older</p>
<p>QN31:</p> <p>Numerator:</p> <p>Denominator:</p> <p>Summary text:</p>	<p>Students who answered B, C, or D for Q31</p> <p>Students who answered A, B, C, D, E, F, or G for Q31</p> <p>Percentage of students who first tried cigarette smoking before age 13 years (even one or two puffs)</p>
<p>Variable label: First tried cigarette smoking before age 13 years</p>	
<p>Q32.</p> <p>A.</p> <p>B.</p> <p>C.</p> <p>D.</p> <p>E.</p> <p>F.</p> <p>G.</p>	<p>During the past 30 days, on how many days did you smoke cigarettes?</p> <p>0 days</p> <p>1 or 2 days</p> <p>3 to 5 days</p> <p>6 to 9 days</p> <p>10 to 19 days</p> <p>20 to 29 days</p> <p>All 30 days</p>
<p>Variable label: Current cigarette use</p>	
<p>QN32:</p> <p>Numerator:</p> <p>Denominator:</p> <p>Summary text:</p>	<p>Students who answered B, C, D, E, F, or G for Q32</p> <p>Students who answered A, B, C, D, E, F, or G for Q32</p> <p>Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)</p>
<p>Variable label: Currently smoked cigarettes</p> <p>Dependence: Required by QN33, QNFRCIG, QNDAYCIG, QNTB2, QNTB3, and QNTB4</p>	

<p>Q33. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?</p> <p>A. I did not smoke cigarettes during the past 30 days</p> <p>B. Less than 1 cigarette per day</p> <p>C. 1 cigarette per day</p> <p>D. 2 to 5 cigarettes per day</p> <p>E. 6 to 10 cigarettes per day</p> <p>F. 11 to 20 cigarettes per day</p> <p>G. More than 20 cigarettes per day</p> <p>Variable label: Smoked > 10 cigarettes</p> <p>Short response:</p> <p>A. Did not smoke cigarettes</p> <p>B. Less than 1 cigarette</p> <p>C. 1 cigarette</p> <p>D. 2 to 5 cigarettes</p> <p>E. 6 to 10 cigarettes</p> <p>F. 11 to 20 cigarettes</p> <p>G. More than 20 cigarettes</p> <p>QN33*: Numerator: Students who answered F or G for Q33</p> <p>Denominator: Students who answered B, C, D, E, F, or G for Q32 and answered B, C, D, E, F, or G for Q33</p> <p>Summary text: Percentage of students who smoked more than 10 cigarettes per day (on the days they smoked during the 30 days before the survey, among students who currently smoked cigarettes)</p> <p>Variable label: Smoked more than 10 cigarettes per day</p> <p>Dependence: Depends on Q32</p>
<p>Q34. Have you ever used an electronic vapor product?</p> <p>A. Yes</p> <p>B. No</p> <p>Variable label: Electronic vapor product use</p> <p>QN34: Numerator: Students who answered A for Q34</p> <p>Denominator: Students who answered A or B for Q34</p> <p>Summary text: Percentage of students who ever used an electronic vapor product</p> <p>Variable label: Ever used an electronic vapor product</p>
<p>Q35. During the past 30 days, on how many days did you use an electronic vapor product?</p> <p>A. 0 days</p> <p>B. 1 or 2 days</p> <p>C. 3 to 5 days</p> <p>D. 6 to 9 days</p> <p>E. 10 to 19 days</p> <p>F. 20 to 29 days</p> <p>G. All 30 days</p> <p>Variable label: Current electronic vapor use</p> <p>QN35: Numerator: Students who answered B, C, D, E, F, or G for Q35</p> <p>Denominator: Students who answered A, B, C, D, E, F, or G for Q35</p> <p>Summary text: Percentage of students who currently used an electronic vapor product (on at least 1 day during the 30 days before the survey)</p> <p>Variable label: Currently used an electronic vapor product</p> <p>Dependence: Required by QN36, QNTB4, QNTB5, QNFREVP, and QNDAYEVP</p>

- Q36. During the past 30 days, how did you **usually** get your own electronic vapor products? (Select only **one** response.)
- A. I did not use any electronic vapor products during the past 30 days
 - B. I bought them in a store such as a convenience store, supermarket, discount store, gas station, or vape store**
 - C. I got them on the Internet
 - D. I gave someone else money to buy them for me
 - E. I borrowed them from someone else
 - F. A person who can legally buy these products gave them to me
 - G. I took them from a store or another person
 - H. I got them some other way

Variable label: EVP from store

Short response:

- A. Did not use EVP
- B. Store or gas station**
- C. I got them on the Internet
- D. Someone else bought them
- E. Borrowed them
- F. Legal person gave them to me
- G. Took them from a store/family
- H. Some other way

QN36*: Numerator: Students who answered B for Q36
 Denominator: Students who answered A, B, C, D, E, or F for Q1 and answered B, C, D, E, F, or G for Q35 and answered B, C, D, E, F, G, or H for Q36
 Summary text: Percentage of students who usually got their own electronic vapor products by buying them in a store (such as a convenience store, supermarket, discount store, gas station, or vape store, during the 30 days before the survey, among students who currently used electronic vapor products and who were aged <18 years)
 Variable label: Usually got their own electronic vapor products by buying them in a store
 Dependence: Depends on Q1 and Q35

- Q37. During the past 30 days, on how many days did you use **chewing tobacco, snuff, dip, snus, or dissolvable tobacco products**, such as Copenhagen, Grizzly, Skoal, or Camel Snus? (Do not count any electronic vapor products.)
- A. 0 days
 - B. 1 or 2 days**
 - C. 3 to 5 days**
 - D. 6 to 9 days**
 - E. 10 to 19 days**
 - F. 20 to 29 days**
 - G. All 30 days**

Variable label: Current smokeless tobacco use

QN37: Numerator: Students who answered B, C, D, E, F, or G for Q37
 Denominator: Students who answered A, B, C, D, E, F, or G for Q37
 Summary text: Percentage of students who currently used smokeless tobacco (chewing tobacco, snuff, dip, snus, or dissolvable tobacco products [such as Copenhagen, Grizzly, Skoal, or Camel Snus], not counting any electronic vapor products, on at least 1 day during the 30 days before the survey)
 Variable label: Currently used smokeless tobacco
 Dependence: Required by QNTB3 and QNTB4

Q38.	During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?
	A. 0 days
	B. 1 or 2 days
	C. 3 to 5 days
	D. 6 to 9 days
	E. 10 to 19 days
	F. 20 to 29 days
	G. All 30 days
	Variable label: Current cigar use
QN38	Numerator: Students who answered B, C, D, E, F, or G for Q38
	Denominator: Students who answered A, B, C, D, E, F, or G for Q38
	Summary text: Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars, on at least 1 day during the 30 days before the survey)
	Variable label: Currently smoked cigars
	Dependence: Required by QNTB2, QNTB3, and QNTB4
Q39.	During the past 12 months, did you ever try to quit using all tobacco products, including cigarettes, cigars, smokeless tobacco, shisha or hookah tobacco, and electronic vapor products?
	A. I did not use any tobacco products during the past 12 months
	B. Yes
	C. No
	Variable label: All tobacco product cessation
	Short response:
	A. Did not use tobacco products
	B. Yes
	C. No
QN39*:	Numerator: Students who answered B for Q39
	Denominator: Students who answered B or C for Q39
	Summary text: Percentage of students who tried to quit using all tobacco products (including cigarettes, cigars, smokeless tobacco, shisha or hookah tobacco, and electronic vapor products, ever during the 12 months before the survey, among students who used any tobacco products during the 12 months before the survey)
	Variable label: Tried to quit using all tobacco products
Q40.	How old were you when you had your first drink of alcohol other than a few sips?
	A. I have never had a drink of alcohol other than a few sips
	B. 8 years old or younger
	C. 9 or 10 years old
	D. 11 or 12 years old
	E. 13 or 14 years old
	F. 15 or 16 years old
	G. 17 years old or older
	Variable label: Initiation of alcohol use
	Short response:
	A. Never drank alcohol
	B. 8 years old or younger
	C. 9 or 10 years old
	D. 11 or 12 years old
	E. 13 or 14 years old
	F. 15 or 16 years old
	G. 17 years old or older
QN40:	Numerator: Students who answered B, C, or D for Q40
	Denominator: Students who answered A, B, C, D, E, F, or G for Q40
	Summary text: Percentage of students who had their first drink of alcohol before age 13 years (other than a few sips)
	Variable label: Had their first drink of alcohol before age 13 years

Q41.	During the past 30 days, on how many days did you have at least one drink of alcohol?
	A. 0 days
	B. 1 or 2 days
	C. 3 to 5 days
	D. 6 to 9 days
	E. 10 to 19 days
	F. 20 to 29 days
	G. All 30 days
	Variable label: Current alcohol use
QN41:	Numerator: Students who answered B, C, D, E, F, or G for Q41
	Denominator: Students who answered A, B, C, D, E, F, or G for Q41
	Summary text: Percentage of students who currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)
	Variable label: Currently drank alcohol Dependence: Required by QN44
Q42.	During the past 30 days, on how many days did you have 4 or more drinks of alcohol in a row, that is, within a couple of hours (if you are female) or 5 or more drinks of alcohol in a row, that is, within a couple of hours (if you are male)?
	A. 0 days
	B. 1 day
	C. 2 days
	D. 3 to 5 days
	E. 6 to 9 days
	F. 10 to 19 days
	G. 20 or more days
	Variable label: Current binge drinking
QN42:	Numerator: Students who answered B, C, D, E, F, or G for Q42
	Denominator: Students who answered A, B, C, D, E, F, or G for Q42
	Summary text: Percentage of students who currently were binge drinking (had four or more drinks of alcohol in a row for female students or five or more drinks of alcohol in a row for male students, within a couple of hours, on at least 1 day during the 30 days before the survey)
	Variable label: Currently were binge drinking

- Q43. During the past 30 days, what is the largest number of alcoholic drinks you had in a row, that is, within a couple of hours?
- A. I did not drink alcohol during the past 30 days
 - B. 1 or 2 drinks
 - C. 3 drinks
 - D. 4 drinks
 - E. 5 drinks
 - F. 6 or 7 drinks
 - G. 8 or 9 drinks
 - H. 10 or more drinks**

Variable label: Largest number of drinks

Short response:

- A. Did not drink alcohol in past 30 days
- B. 1 or 2 drinks
- C. 3 drinks
- D. 4 drinks
- E. 5 drinks
- F. 6 or 7 drinks
- G. 8 or 9 drinks
- H. 10 or more drinks**

QN43: Numerator: Students who answered H for Q43
 Denominator: Students who answered A, B, C, D, E, F, G, or H for Q43
 Summary text: Percentage of students who reported that the largest number of drinks they had in a row was 10 or more (within a couple of hours, during the 30 days before the survey)

Variable label: Reported that the largest number of drinks they had in a row was 10 or more

- Q44. During the past 30 days, how did you **usually** get the alcohol you drank?
- A. I did not drink alcohol during the past 30 days
 - B. I bought it in a store such as a liquor store, convenience store, supermarket, discount store, or gas station
 - C. I bought it at a restaurant, bar, or club
 - D. I bought it at a public event such as a concert or sporting event
 - E. I gave someone else money to buy it for me
 - F. Someone gave it to me**
 - G. I took it from a store or family member
 - H. I got it some other way

Variable label: Source of alcohol

Short response:

- A. Did not drink in past 30 days
- B. Bought in store
- C. Bought in restaurant
- D. Bought at public event
- E. I gave someone money to buy
- F. Someone gave it to me**
- G. Took from a store/family
- H. Some other way

QN44*: Numerator: Students who answered F for Q44
 Denominator: Students who answered B, C, D, E, F, or G for Q41 and answered B, C, D, E, F, G, or H for Q44
 Summary text: Percentage of students who usually got the alcohol they drank by someone giving it to them (during the 30 days before the survey, among students who currently drank alcohol)

Variable label: Usually got the alcohol they drank by someone giving it to them

Dependence: Depends on Q41

Q45.	During your life, how many times have you used marijuana?
A.	0 times
B.	1 or 2 times
C.	3 to 9 times
D.	10 to 19 times
E.	20 to 39 times
F.	40 to 99 times
G.	100 or more times
	Variable label: Ever marijuana use
QN45:	Numerator: Students who answered B, C, D, E, F, or G for Q45
	Denominator: Students who answered A, B, C, D, E, F, or G for Q45
	Summary text: Percentage of students who ever used marijuana (one or more times during their life)
Variable label:	Ever used marijuana
Q46.	How old were you when you tried marijuana for the first time?
A.	I have never tried marijuana
B.	8 years old or younger
C.	9 or 10 years old
D.	11 or 12 years old
E.	13 or 14 years old
F.	15 or 16 years old
G.	17 years old or older
	Variable label: Initiation of marijuana use
	Short response:
A.	Never tried marijuana
B.	8 years old or younger
C.	9 or 10 years old
D.	11 or 12 years old
E.	13 or 14 years old
F.	15 or 16 years old
G.	17 years old or older
QN46:	Numerator: Students who answered B, C, or D for Q46
	Denominator: Students who answered A, B, C, D, E, F, or G for Q46
	Summary text: Percentage of students who tried marijuana for the first time before age 13 years
Variable label:	Tried marijuana for the first time before age 13 years
Q47.	During the past 30 days, how many times did you use marijuana?
A.	0 times
B.	1 or 2 times
C.	3 to 9 times
D.	10 to 19 times
E.	20 to 39 times
F.	40 or more times
	Variable label: Current marijuana use
QN47:	Numerator: Students who answered B, C, D, E, or F for Q47
	Denominator: Students who answered A, B, C, D, E, or F for Q47
	Summary text: Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)
Variable label:	Currently used marijuana

Q48.	During your life, how many times have you used synthetic marijuana?
	A. 0 times
	B. 1 or 2 times
	C. 3 to 9 times
	D. 10 to 19 times
	E. 20 to 39 times
	F. 40 or more times
	Variable label: Ever synthetic marijuana use
QN48:	Numerator: Students who answered B, C, D, E, or F for Q48
	Denominator: Students who answered A, B, C, D, E, or F for Q48
	Summary text: Percentage of students who ever used synthetic marijuana (one or more times during their life)
	Variable label: Ever used synthetic marijuana
Q49.	During your life, how many times have you taken prescription pain medicine without a doctor's prescription or differently than how a doctor told you to use it?
	A. 0 times
	B. 1 or 2 times
	C. 3 to 9 times
	D. 10 to 19 times
	E. 20 to 39 times
	F. 40 or more times
	Variable label: Ever prescription pain medicine use
QN49:	Numerator: Students who answered B, C, D, E, or F for Q49
	Denominator: Students who answered A, B, C, D, E, or F for Q49
	Summary text: Percentage of students who ever took prescription pain medicine without a doctor's prescription or differently than how a doctor told them to use it (one or more times during their life)
	Variable label: Ever took prescription pain medicine without a doctor's prescription or differently than how a doctor told them to use it
Q50.	During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?
	A. 0 times
	B. 1 or 2 times
	C. 3 to 9 times
	D. 10 to 19 times
	E. 20 to 39 times
	F. 40 or more times
	Variable label: Ever cocaine use
QN50:	Numerator: Students who answered B, C, D, E, or F for Q50
	Denominator: Students who answered A, B, C, D, E, or F for Q50
	Summary text: Percentage of students who ever used cocaine (any form of cocaine, including powder, crack, or freebase, one or more times during their life)
	Variable label: Ever used cocaine

Q51.	During your life, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high? A. 0 times B. 1 or 2 times C. 3 to 9 times D. 10 to 19 times E. 20 to 39 times F. 40 or more times
	Variable label: Ever inhalant use
QN51:	Numerator: Students who answered B, C, D, E, or F for Q51 Denominator: Students who answered A, B, C, D, E, or F for Q51 Summary text: Percentage of students who ever used inhalants (sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high, one or more times during their life)
	Variable label: Ever used inhalants
Q52.	During your life, how many times have you used heroin (also called smack, junk, or China White)? A. 0 times B. 1 or 2 times C. 3 to 9 times D. 10 to 19 times E. 20 to 39 times F. 40 or more times
	Variable label: Ever heroin use
QN52:	Numerator: Students who answered B, C, D, E, or F for Q52 Denominator: Students who answered A, B, C, D, E, or F for Q52 Summary text: Percentage of students who ever used heroin (also called "smack," "junk," or "China White," one or more times during their life)
	Variable label: Ever used heroin
Q53.	During your life, how many times have you used methamphetamines (also called speed, crystal meth, crank, ice, or meth)? A. 0 times B. 1 or 2 times C. 3 to 9 times D. 10 to 19 times E. 20 to 39 times F. 40 or more times
	Variable label: Ever methamphetamine use
QN53:	Numerator: Students who answered B, C, D, E, or F for Q53 Denominator: Students who answered A, B, C, D, E, or F for Q53 Summary text: Percentage of students who ever used methamphetamines (also called "speed," "crystal meth," "crank," "ice," or "meth," one or more times during their life)
	Variable label: Ever used methamphetamines

Q54.	During your life, how many times have you used ecstasy (also called MDMA)?
	A. 0 times
	B. 1 or 2 times
	C. 3 to 9 times
	D. 10 to 19 times
	E. 20 to 39 times
	F. 40 or more times
	Variable label: Ever ecstasy use
QN54:	Numerator: Students who answered B, C, D, E, or F for Q54
	Denominator: Students who answered A, B, C, D, E, or F for Q54
	Summary text: Percentage of students who ever used ecstasy (also called "MDMA," one or more times during their life)
	Variable label: Ever used ecstasy
Q55.	During your life, how many times have you taken steroid pills or shots without a doctor's prescription?
	A. 0 times
	B. 1 or 2 times
	C. 3 to 9 times
	D. 10 to 19 times
	E. 20 to 39 times
	F. 40 or more times
	Variable label: Ever steroid use
QN55:	Numerator: Students who answered B, C, D, E, or F for Q55
	Denominator: Students who answered A, B, C, D, E, or F for Q55
	Summary text: Percentage of students who ever took steroids without a doctor's prescription (pills or shots, one or more times during their life)
	Variable label: Ever took steroids without a doctor's prescription
Q56.	During your life, how many times have you used a needle to inject any illegal drug into your body?
	A. 0 times
	B. 1 time
	C. 2 or more times
	Variable label: Illegal injected drug use
QN56:	Numerator: Students who answered B or C for Q56
	Denominator: Students who answered A, B, or C for Q56
	Summary text: Percentage of students who ever injected any illegal drug (used a needle to inject any illegal drug into their body, one or more times during their life)
	Variable label: Ever injected any illegal drug
Q57.	During the past 12 months, has anyone offered, sold, or given you an illegal drug on school property ?
	A. Yes
	B. No
	Variable label: Illegal drugs at school
QN57:	Numerator: Students who answered A for Q57
	Denominator: Students who answered A or B for Q57
	Summary text: Percentage of students who were offered, sold, or given an illegal drug on school property (during the 12 months before the survey)
	Variable label: Were offered, sold, or given an illegal drug on school property

Q58.	Have you ever had sexual intercourse? A. Yes B. No
	Variable label: Ever sexual intercourse
QN58:	Numerator: Students who answered A for Q58 Denominator: Students who answered A or B for Q58 Summary text: Percentage of students who ever had sexual intercourse
	Variable label: Ever had sexual intercourse
Q59.	How old were you when you had sexual intercourse for the first time? A. I have never had sexual intercourse B. 11 years old or younger C. 12 years old D. 13 years old E. 14 years old F. 15 years old G. 16 years old H. 17 years old or older
	Variable label: Sex before 13 years
	Short response: A. Never had sex B. 11 years old or younger C. 12 years old D. 13 years old E. 14 years old F. 15 years old G. 16 years old H. 17 years old or older
QN59:	Numerator: Students who answered B or C for Q59 Denominator: Students who answered A, B, C, D, E, F, G, or H for Q59 Summary text: Percentage of students who had sexual intercourse for the first time before age 13 years
	Variable label: Had sexual intercourse for the first time before age 13 years
Q60.	During your life, with how many people have you had sexual intercourse? A. I have never had sexual intercourse B. 1 person C. 2 people D. 3 people E. 4 people F. 5 people G. 6 or more people
	Variable label: Multiple sex partners
	Short response: A. Never had sex B. 1 person C. 2 people D. 3 people E. 4 people F. 5 people G. 6 or more people
QN60:	Numerator: Students who answered E, F, or G for Q60 Denominator: Students who answered A, B, C, D, E, F, or G for Q60 Summary text: Percentage of students who had sexual intercourse with four or more persons during their life
	Variable label: Had sexual intercourse with four or more persons during their life

Q61.	During the past 3 months, with how many people did you have sexual intercourse?
A.	I have never had sexual intercourse
B.	I have had sexual intercourse, but not during the past 3 months
C.	1 person
D.	2 people
E.	3 people
F.	4 people
G.	5 people
H.	6 or more people
	Variable label: Current sexual activity
	Short response:
A.	Never had sex
B.	None during past 3 months
C.	1 person
D.	2 people
E.	3 people
F.	4 people
G.	5 people
H.	6 or more people
QN61:	Numerator: Students who answered C, D, E, F, G, or H for Q61
	Denominator: Students who answered A, B, C, D, E, F, G, or H for Q61
	Summary text: Percentage of students who were currently sexually active (had sexual intercourse with at least one person, during the 3 months before the survey)
	Variable label: Were currently sexually active
Dependence:	Required by QN62, QN63, QN64, QNIUDIMP, QNOTHHPL, QNDUALBC, and QNBCNONE
Q62.	Did you drink alcohol or use drugs before you had sexual intercourse the last time ?
A.	I have never had sexual intercourse
B.	Yes
C.	No
	Variable label: Alcohol/drugs and sex
	Short response:
A.	Never had sex
B.	Yes
C.	No
QN62*:	Numerator: Students who answered B for Q62
	Denominator: Students who answered C, D, E, F, G, or H for Q61 and answered B or C for Q62
	Summary text: Percentage of students who drank alcohol or used drugs before last sexual intercourse (among students who were currently sexually active)
	Variable label: Drank alcohol or used drugs before last sexual intercourse
Dependence:	Depends on Q61

Q63.	The last time you had sexual intercourse, did you or your partner use a condom?
	A. I have never had sexual intercourse
	B. Yes
	C. No
	Variable label: Condom use
	Short response:
	A. Never had sex
	B. Yes
	C. No
QN63*:	Numerator: Students who answered B for Q63 Denominator: Students who answered C, D, E, F, G, or H for Q61 and answered B or C for Q63 Summary text: Percentage of students who used a condom during last sexual intercourse (among students who were currently sexually active) Variable label: Used a condom during last sexual intercourse Dependence: Depends on Q61 Required by QNDUALBC
Q64.	The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy ? (Select only one response.)
	A. I have never had sexual intercourse
	B. No method was used to prevent pregnancy
	C. Birth control pills
	D. Condoms
	E. An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon)
	F. A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing)
	G. Withdrawal or some other method
	H. Not sure
	Variable label: Birth control pill use
	Short response:
	A. Never had sex
	B. No method was used
	C. Birth control pills
	D. Condoms
	E. IUD or implant
	F. A shot, patch, or birth control ring
	G. Withdrawal/some other method
	H. Not sure
QN64*:	Numerator: Students who answered C for Q64 Denominator: Students who answered C, D, E, F, G, or H for Q61 and answered B, C, D, E, F, G, or H for Q64 Summary text: Percentage of students who used birth control pills before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active) Variable label: Used birth control pills before last sexual intercourse Dependence: Depends on Q61 Required by QNIUDIMP, QNOTHHPL, QNDUALBC, and QNBCNONE

Q65.	During your life, with whom have you had sexual contact?
	A. I have never had sexual contact B. Females C. Males D. Females and males
	Variable label: Sex of sexual contacts
	Short response: A. Never had sexual contact B. Females C. Males D. Females and males
Q66.	Which of the following best describes you?
	A. Heterosexual (straight) B. Gay or lesbian C. Bisexual D. Not sure
	Variable label: Sexual identity
Q67.	How do you describe your weight?
	A. Very underweight B. Slightly underweight C. About the right weight D. Slightly overweight E. Very overweight
	Variable label: Perception of weight
QN67:	Numerator: Students who answered D or E for Q67 Denominator: Students who answered A, B, C, D, or E for Q67 Summary text: Percentage of students who described themselves as slightly or very overweight
	Variable label: Described themselves as slightly or very overweight
Q68.	Which of the following are you trying to do about your weight?
	A. Lose weight B. Gain weight C. Stay the same weight D. I am not trying to do anything about my weight
	Variable label: Weight loss
	Short response: A. Lose weight B. Gain weight C. Stay the same weight D. Not trying to do anything
QN68:	Numerator: Students who answered A for Q68 Denominator: Students who answered A, B, C, or D for Q68 Summary text: Percentage of students who were trying to lose weight
	Variable label: Were trying to lose weight

- Q69. During the past 7 days, how many times did you drink **100% fruit juices** such as orange juice, apple juice, or grape juice? (Do **not** count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)
- A. **I did not drink 100% fruit juice during the past 7 days**
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day

Variable label: Fruit juice drinking

Short response:

- A. **Did not drink fruit juice**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN69: Numerator: Students who answered A for Q69
 Denominator: Students who answered A, B, C, D, E, F, or G for Q69
 Summary text: Percentage of students who did not drink fruit juice (100% fruit juices one or more times during the 7 days before the survey)
 Variable label: Did not drink fruit juice

Dependence: Required by QNFR0, QNFR1, and QNFR2

- Q70. During the past 7 days, how many times did you eat **fruit**? (Do **not** count fruit juice.)
- A. **I did not eat fruit during the past 7 days**
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day

Variable label: Fruit eating

Short response:

- A. **Did not eat fruit**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN70: Numerator: Students who answered A for Q70
 Denominator: Students who answered A, B, C, D, E, F, or G for Q70
 Summary text: Percentage of students who did not eat fruit (one or more times during the 7 days before the survey)

Variable label: Did not eat fruit

Dependence: Required by QNFR0, QNFR1, and QNFR2

Q71. During the past 7 days, how many times did you eat **green salad**?

- A. **I did not eat green salad during the past 7 days**
- B. 1 to 3 times during the past 7 days
- C. 4 to 6 times during the past 7 days
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

Variable label: Green salad eating

Short response:

- A. **Did not eat green salad**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN71: Numerator: Students who answered A for Q71
Denominator: Students who answered A, B, C, D, E, F, or G for Q71
Summary text: Percentage of students who did not eat green salad (one or more times during the 7 days before the survey)
Variable label: Did not eat salad
Dependence: Required by QNVEG0, QNVEG1, QNVEG2, and QNVEG3

Q72. During the past 7 days, how many times did you eat **potatoes**? (Do **not** count french fries, fried potatoes, or potato chips.)

- A. **I did not eat potatoes during the past 7 days**
- B. 1 to 3 times during the past 7 days
- C. 4 to 6 times during the past 7 days
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

Variable label: Potato eating

Short response:

- A. **Did not eat potatoes**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN72: Numerator: Students who answered A for Q72
Denominator: Students who answered A, B, C, D, E, F, or G for Q72
Summary text: Percentage of students who did not eat potatoes (one or more times during the 7 days before the survey)
Variable label: Did not eat potatoes
Dependence: Required by QNVEG0, QNVEG1, QNVEG2, and QNVEG3

Q73. During the past 7 days, how many times did you eat **carrots**?

- A. **I did not eat carrots during the past 7 days**
- B. 1 to 3 times during the past 7 days
- C. 4 to 6 times during the past 7 days
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

Variable label: Carrot eating

Short response:

- A. **Did not eat carrots**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN73: Numerator: Students who answered A for Q73
Denominator: Students who answered A, B, C, D, E, F, or G for Q73
Summary text: Percentage of students who did not eat carrots (one or more times during the 7 days before the survey)
Variable label: Did not eat carrots
Dependence: Required by QNVEG0, QNVEG1, QNVEG2, and QNVEG3

Q74. During the past 7 days, how many times did you eat **other vegetables**? (Do **not** count green salad, potatoes, or carrots.)

- A. **I did not eat other vegetables during the past 7 days**
- B. 1 to 3 times during the past 7 days
- C. 4 to 6 times during the past 7 days
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

Variable label: Other vegetable eating

Short response:

- A. **Did not eat other vegetables**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN74: Numerator: Students who answered A for Q74
Denominator: Students who answered A, B, C, D, E, F, or G for Q74
Summary text: Percentage of students who did not eat other vegetables (one or more times during the 7 days before the survey)
Variable label: Did not eat other vegetables
Dependence: Required by QNVEG0, QNVEG1, QNVEG2, and QNVEG3

- Q75. During the past 7 days, how many times did you drink a **can, bottle, or glass of soda or pop**, such as Coke, Pepsi, or Sprite? (Do **not** count diet soda or diet pop.)
- A. **I did not drink soda or pop during the past 7 days**
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day

Variable label: No soda drinking

Short response:

- A. **Did not drink soda or pop**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN75: Numerator: Students who answered A for Q75
Denominator: Students who answered A, B, C, D, E, F, or G for Q75
Summary text: Percentage of students who did not drink a can, bottle, or glass of soda or pop (such as Coke, Pepsi, or Sprite, not counting diet soda or diet pop, during the 7 days before the survey)

Variable label: Did not drink a can, bottle, or glass of soda or pop

Dependence: Required by QNSODA1, and QNSODA2

- Q76. During the past 7 days, how many **glasses of milk** did you drink? (Count the milk you drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.)
- A. **I did not drink milk during the past 7 days**
 - B. 1 to 3 glasses during the past 7 days
 - C. 4 to 6 glasses during the past 7 days
 - D. 1 glass per day
 - E. 2 glasses per day
 - F. 3 glasses per day
 - G. 4 or more glasses per day

Variable label: No milk drinking

Short response:

- A. **Did not drink milk**
- B. 1 to 3 glasses
- C. 4 to 6 glasses
- D. 1 glass per day
- E. 2 glasses per day
- F. 3 glasses per day
- G. 4 or more glasses per day

QN76: Numerator: Students who answered A for Q76
Denominator: Students who answered A, B, C, D, E, F, or G for Q76
Summary text: Percentage of students who did not drink milk (during the 7 days before the survey)
Variable label: Did not drink milk

Dependence: Required by QNMILK1 and QNMILK3

Q77.	During the past 7 days, on how many days did you eat breakfast ?
	A. 0 days
	B. 1 day
	C. 2 days
	D. 3 days
	E. 4 days
	F. 5 days
	G. 6 days
	H. 7 days
	Variable label: Breakfast eating
QN77:	Numerator: Students who answered A for Q77
	Denominator: Students who answered A, B, C, D, E, F, G, or H for Q77
	Summary text: Percentage of students who did not eat breakfast (during the 7 days before the survey)
	Variable label: Did not eat breakfast
Dependence:	Required by QNBK7DAY
Q78.	During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day ? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)
	A. 0 days
	B. 1 day
	C. 2 days
	D. 3 days
	E. 4 days
	F. 5 days
	G. 6 days
	H. 7 days
	Variable label: Physical activity \geq 5 days
QN78:	Numerator: Students who answered F, G, or H for Q78
	Denominator: Students who answered A, B, C, D, E, F, G, or H for Q78
	Summary text: Percentage of students who were physically active at least 60 minutes per day on 5 or more days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)
	Variable label: Were physically active at least 60 minutes per day on 5 or more days
Dependence:	Required by QNPA0DAY and QNPA7DAY

Q79. On an average school day, how many hours do you watch TV?

- A. I do not watch TV on an average school day
- B. Less than 1 hour per day
- C. 1 hour per day
- D. 2 hours per day
- E. 3 hours per day**
- F. 4 hours per day**
- G. 5 or more hours per day**

Variable label: Television watching

Short response:

- A. No TV on average school day
- B. Less than 1 hour per day
- C. 1 hour per day
- D. 2 hours per day
- E. 3 hours per day**
- F. 4 hours per day**
- G. 5 or more hours per day**

QN79: Numerator: Students who answered E, F, or G for Q79
Denominator: Students who answered A, B, C, D, E, F, or G for Q79
Summary text: Percentage of students who watched television 3 or more hours per day (on an average school day)

Variable label: Watched television 3 or more hours per day

Q80. On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Count time spent playing games, watching videos, texting, or using social media on your smartphone, computer, Xbox, PlayStation, iPad, or other tablet.)

- A. I do not play video or computer games or use a computer for something that is not school work**
- B. Less than 1 hour per day**
- C. 1 hour per day
- D. 2 hours per day
- E. 3 hours per day**
- F. 4 hours per day**
- G. 5 or more hours per day**

Variable label: Computer use

Short response:

- A. No playing video/computer game**
- B. Less than 1 hour per day**
- C. 1 hour per day
- D. 2 hours per day
- E. 3 hours per day**
- F. 4 hours per day**
- G. 5 or more hours per day**

QN80: Numerator: Students who answered E, F, or G for Q80
Denominator: Students who answered A, B, C, D, E, F, or G for Q80
Summary text: Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as playing games, watching videos, texting, or using social media on your smartphone, computer, Xbox, PlayStation, iPad, or other tablet, for something that was not school work, on an average school day)

Variable label: Played video or computer games or used a computer 3 or more hours per day

Q81.	In an average week when you are in school, on how many days do you go to physical education (PE) classes? A. 0 days B. 1 day C. 2 days D. 3 days E. 4 days F. 5 days
	Variable label: PE attendance
QN81:	Numerator: Students who answered B, C, D, E, or F for Q81 Denominator: Students who answered A, B, C, D, E, or F for Q81 Summary text: Percentage of students who attended physical education (PE) classes on 1 or more days (in an average week when they were in school) Variable label: Attended physical education (PE) classes on 1 or more days
Dependence:	Required by QNDLYPE
Q82.	During the past 12 months, on how many sports teams did you play? (Count any teams run by your school or community groups.) A. 0 teams B. 1 team C. 2 teams D. 3 or more teams
	Variable label: Sports team participation
QN82:	Numerator: Students who answered B, C, or D for Q82 Denominator: Students who answered A, B, C, or D for Q82 Summary text: Percentage of students who played on at least one sports team (counting any teams run by their school or community groups, during the 12 months before the survey)
Variable label:	Played on at least one sports team
Q83.	During the past 12 months, how many times did you have a concussion from playing a sport or being physically active ? A. 0 times B. 1 time C. 2 times D. 3 times E. 4 or more times
	Variable label: Concussion
QN83:	Numerator: Students who answered B, C, D, or E for Q83 Denominator: Students who answered A, B, C, D, or E for Q83 Summary text: Percentage of students who had a concussion from playing a sport or being physically active (one or more times during the 12 months before the survey)
Variable label:	Had a concussion from playing a sport or being physically active
Q84.	Have you ever been tested for HIV, the virus that causes AIDS? (Do not count tests done if you donated blood.) A. Yes B. No C. Not sure
	Variable label: HIV testing
QN84:	Numerator: Students who answered A for Q84 Denominator: Students who answered A, B, or C for Q84 Summary text: Percentage of students who were ever tested for human immunodeficiency virus (HIV) (not counting tests done if they donated blood)
Variable label:	Were ever tested for human immunodeficiency virus (HIV)

Q85.	During the past 12 months, have you been tested for a sexually transmitted disease (STD) other than HIV, such as chlamydia or gonorrhea? A. Yes B. No C. Not sure
	Variable label: STD testing
QN85:	Numerator: Students who answered A for Q85 Denominator: Students who answered A, B, or C for Q85 Summary text: Percentage of students who were tested for a sexually transmitted disease (STD) other than HIV, such as chlamydia or gonorrhea (during the 12 months before the survey)
	Variable label: Were ever tested for a sexually transmitted disease (STD)
Q86.	When was the last time you saw a dentist for a check-up, exam, teeth cleaning, or other dental work? A. During the past 12 months B. Between 12 and 24 months ago C. More than 24 months ago D. Never E. Not sure
	Variable label: Oral health care
QN86:	Numerator: Students who answered A for Q86 Denominator: Students who answered A, B, C, D, or E for Q86 Summary text: Percentage of students who saw a dentist (for a check-up, exam, teeth cleaning, or other dental work, during the 12 months before the survey)
	Variable label: Saw a dentist
	Dependence: Required by QNNODNT
Q87.	Has a doctor or nurse ever told you that you have asthma? A. Yes B. No C. Not sure
	Variable label: Asthma
QN87:	Numerator: Students who answered A for Q87 Denominator: Students who answered A, B, or C for Q87 Summary text: Percentage of students who had ever been told by a doctor or nurse that they had asthma
	Variable label: Had ever been told by a doctor or nurse that they had asthma
Q88.	On an average school night, how many hours of sleep do you get? A. 4 or less hours B. 5 hours C. 6 hours D. 7 hours E. 8 hours F. 9 hours G. 10 or more hours
	Variable label: Sleep
QN88:	Numerator: Students who answered E, F, or G for Q88 Denominator: Students who answered A, B, C, D, E, F or G for Q88 Summary text: Percentage of students who got 8 or more hours of sleep (on an average school night)
	Variable label: Got 8 or more hours of sleep

Q89.	During the past 12 months, how would you describe your grades in school?
	<p>A. Mostly A's B. Mostly B's C. Mostly C's D. Mostly D's E. Mostly F's F. None of these grades G. Not sure</p>
	Variable label: Grades in school
QN89:	<p>Numerator: Students who answered A or B for Q89 Denominator: Students who answered A, B, C, D, E, F, or G for Q89 Summary text: Percentage of students who described their grades in school as mostly A's or B's (during the 12 months before the survey)</p>
	Variable label: Described their grades in school as mostly A's or B's
Q90.	During the past 30 days, how many times have you taken prescription pain medicine without a doctor's prescription or differently than how a doctor told you to use it?
	<p>A. 0 times B. 1 or 2 times C. 3 to 9 times D. 10 to 19 times E. 20 to 39 times F. 40 or more times</p>
	Variable label: Current prescription pain medicine use
QN90:	<p>Numerator: Students who answered B, C, D, E, or F for Q90 Denominator: Students who answered A, B, C, D, E, or F for Q90 Summary text: Percentage of students who currently took prescription pain medicine without a doctor's prescription or differently than how a doctor told them to use it (one or more times during the 30 days before the survey)</p>
	Variable label: Current prescription pain medicine use without a doctor's prescription or differently than how a doctor told them to use it
Q91.	During your life, how many times have you used hallucinogenic drugs , such as LSD, acid, PCP, angel dust, mescaline, or mushrooms?
	<p>A. 0 times B. 1 or 2 times C. 3 to 9 times D. 10 to 19 times E. 20 to 39 times F. 40 or more times</p>
	Variable label: Ever used LSD
QN91:	<p>Numerator: Students who answered B, C, D, E, or F for Q91 Denominator: Students who answered A, B, C, D, E, or F for Q91 Summary text: Percentage of students who ever used hallucinogenic drugs (such as LSD, acid, PCP, angel dust, mescaline, or mushrooms, one or more times during their life)</p>
	Variable label: Ever used hallucinogenic drugs

- Q92. During the past 7 days, how many times did you drink a **can, bottle, or glass of a sports drink** such as Gatorade or PowerAde? (Do **not** count low-calorie sports drinks such as Propel or G2.)
- A. **I did not drink sports drinks during the past 7 days**
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day

Variable label: Sports drinks

Short response:

- A. **I did not drink**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN92: Numerator: Students who answered A for Q92
Denominator: Students who answered A, B, C, D, E, F, or G for Q92
Summary text: Percentage of students who did not drink a can, bottle, or glass of a sports drink (such as Gatorade or PowerAde, not counting low-calorie sports drinks such as Propel or G2, during the 7 days before the survey)

Variable label: Did not drink a can, bottle, or glass of a sports drink

- Q93. During the past 7 days, how many times did you drink a **bottle or glass of plain water**? (Count tap, bottled, and unflavored sparkling water.)
- A. **I did not drink water during the past 7 days**
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day

Variable label: Plain water

Short response:

- A. **Did not drink water**
- B. 1 to 3 times
- C. 4 to 6 times
- D. 1 time per day
- E. 2 times per day
- F. 3 times per day
- G. 4 or more times per day

QN93: Numerator: Students who answered A for Q93
Denominator: Students who answered A, B, C, D, E, F, or G for Q93
Summary text: Percentage of students who did not drink a bottle or glass of plain water (counting tap, bottled, and unflavored sparkling water, during the 7 days before the survey)

Variable label: Did not drink a bottle or glass of plain water

Q94.	Are there any foods that you have to avoid because eating the food could cause an allergic reaction, such as skin rashes, swelling, itching, vomiting, coughing, or trouble breathing?
A.	Yes
B.	No
C.	Not sure
Variable label:	Food allergies
QN94: Numerator:	Students who answered A for Q94
Denominator:	Students who answered A, B, or C for Q94
Summary text:	Percentage of students who have to avoid some foods because eating the food could cause an allergic reaction (such as skin rashes, swelling, itching, vomiting, coughing, or trouble breathing)
Variable label:	Have to avoid some foods because eating the food could cause an allergic reaction
Q95.	During the past 7 days, on how many days did you do exercises to strengthen or tone your muscles , such as push-ups, sit-ups, or weight lifting?
A.	0 days
B.	1 day
C.	2 days
D.	3 days
E.	4 days
F.	5 days
G.	6 days
H.	7 days
Variable label:	Muscle strengthening
QN95: Numerator:	Students who answered D, E, F, G, or H for Q95
Denominator:	Students who answered A, B, C, D, E, F, G, or H for Q95
Summary text:	Percentage of students who did exercises to strengthen or tone their muscles on three or more days (such as push-ups, sit-ups, or weight lifting, during the 7 days before the survey)
Variable label:	Did exercises to strengthen or tone their muscles on three or more days
Q96.	During the past 12 months, how many times did you use an indoor tanning device such as a sunlamp, sunbed, or tanning booth? (Do not count getting a spray-on tan.)
A.	0 times
B.	1 or 2 times
C.	3 to 9 times
D.	10 to 19 times
E.	20 to 39 times
F.	40 or more times
Variable label:	Indoor tanning
QN96: Numerator:	Students who answered B, C, D, E, or F for Q96
Denominator:	Students who answered A, B, C, D, E, or F for Q96
Summary text:	Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth, not counting getting a spray-on tan, one or more times during the 12 months before the survey)
Variable label:	Used an indoor tanning device

Q97.	When you are outside for more than one hour on a sunny day, how often do you wear sunscreen with an SPF of 15 or higher? A. Never B. Rarely C. Sometimes D. Most of the time E. Always
	Variable label: Sunscreen
QN97:	Numerator: Students who answered A or B for Q97 Denominator: Students who answered A, B, C, D, or E for Q97 Summary text: Percentage of students who rarely or never wear sunscreen with an SPF of 15 or higher (when being outside for more than one hour on a sunny day)
	Variable label: Rarely or never used sunscreen
Q98.	Because of a physical, mental, or emotional problem, do you have serious difficulty concentrating, remembering, or making decisions? A. Yes B. No
	Variable label: Difficulty concentrating
QN98:	Numerator: Students who answered A for Q98 Denominator: Students who answered A or B for Q98 Summary text: Percentage of students who have serious difficulty concentrating, remembering, or making decisions (because of a physical, mental, or emotional problem)
	Variable label: Have serious difficulty concentrating, remembering, or making decisions
Q99.	How well do you speak English? A. Very well B. Well C. Not well D. Not at all
	Variable label: How well speak English
QN99:	Numerator: Students who answered A or B for Q99 Denominator: Students who answered A, B, C, or D for Q99 Summary text: Percentage of students who speak English well or very well
	Variable label: Speak English well or very well

Footnotes

1. Literature included in this chapter include data and studies from the U.S. unless otherwise specified.
2. Question numbers indicated in the measures section are the numbers indicated in the survey questionnaire.
3. SAMHSA defines heavy alcohol use as binge drinking on 5 or more days in the past month (SAMHSA, n.d)

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- Zimmer-Gembeck, M. J., & Helfand, M. (2008). Ten years of longitudinal research on U.S. adolescent sexual behavior: Developmental correlates of sexual intercourse, and the importance of age, gender and ethnic background. *Developmental Review, 28*(2), 153-224. <https://doi.org/10.1016/j.dr.2007.06.001>

Curriculum Vita

Aysha Mabin

Professional Background

- 2016 - 2023 **Doctor of Philosophy**, Syracuse University (SU), Human Development and Family Science (HDFS)
- *Comprehensive Exam*: Background and Situational Predictors of Teen Dating Violence Perpetration: A Systematic Review – February 5, 2020
 - *Dissertation*: Black Teen's Experiences of Victimization in Dating Relationships: Assessment of Risk and Protective Factors and Outcomes, Advisor: Dr. Ambika Krishnakumar
- 2019 **Master of Science**, SU, HDFS
- *Master's Thesis*: Effectiveness of a Teen Dating Violence Prevention Program in Middle Schools, Advisor: Dr. Ambika Krishnakumar
- 2016 **Bachelor of Arts**, California State University, Fullerton (CSUF), Psychology
Minor: Child and Adolescent Studies
- *McNair Research Thesis*: Divorce and Academic Achievement: The Mediation of Internalizing Behaviors and Moderation of Peer Support among Adolescents, Advisor: Dr. Susan Sy

Manuscripts in Preparation

Mabin, A., Krishnakumar, A. (submitted for review) Prevalence, Background and Situation Predictors of Physical Teen Dating Violence Perpetration: A Comprehensive Literature Review

Conference Presentations

- Mabin, A.**, & Krishnakumar, A. (accepted for presentation November 2023). *Black Teen's Experiences of Victimization in Dating Relationships: Assessment of Risk and Protective Factors and Outcomes*. Poster presented at the National Council on Family Relations Annual Conference, Orlando, Florida.
- Millan, I, **Mabin, A.**, Heath, R. D. (2023) *Evaluating the New York State School-Age Care Credential: A Qualitative Study*. Poster presented at the NYS Annual Conference, NY
- Mabin, A.**, & Krishnakumar, A. (2018). *Effectiveness of a Teen Dating Violence Prevention Program in Middle Schools*. Poster presented at the National Council on Family Relations Annual Conference, San Diego, CA.
- Mabin, A.**, & Sy R. S. (2016). *Divorce and academic achievement: The mediation of internalizing behaviors and moderation of peer support among adolescents*. Poster presented at the Western Psychological Association Convention, Long Beach, CA.
- Mabin, A.**, Furry, N. A., Alberts, J., Condon, J. C., O'Brien, B., & Hale, M. (2016). *Ethnic differences in treatment motivation for youth in substance abuse treatment*. Poster presented at the Western Psychological Association Convention, Long Beach, CA.

- Cortez L., Krueger, C., & **Mabin, A.** (2016). *Family identity and latino adolescent school adjustment: Differences among boys and girls?* Poster presented at the Western Psychological Association Convention, Long Beach, CA.
- Krueger C., **Mabin, A.**, Cortez, L., & Espinoza, G., (2015). *Are girls more sensitive to friendships?: Friendship quality in relation to school climate perception among latino adolescents.* Poster presented at the Southern California Conference for Undergraduate Research at Harvey Mudd College, Claremont, CA.
- Sanders, J., **Mabin, A.**, Salazar, E., Mayfield, C., & Sy, S. (2015). *The influence of parental attitudes on daily at-home reading.* Poster presented at the Western Psychological Association Convention, Red Rock, NV.
- Mayfield, C., **Mabin, A.**, Salazar, E., Sanders, J., & Sy, S. (2015). *Fathers, fritos and fractions: A structural model.* Poster presented at the Western Psychological Association Convention, Red Rock, NV.
- Sy, S., Sudit, A., Sanders, J., **Mabin, A.**, Salazar, E., & Mayfield, C. (2015). *At-Home reading logs, parent involvement, and children's reading achievement.* Poster presented at the Western Psychological Association Convention, Red Rock, NV.

Professional Conference Workshops

- Mabin, A.**, Bay, D., Weerakoon, S., Montroy, D. (2018). *Let's play to learn: Incorporating play in college classrooms.* Workshop presented at the Future Professoriate Program Convention, Hamilton, NY.

Research Experience

4/2023 – present

NYS APR Project

Dr. Ryan Heath, Department of Social Work (SU)

Research Assistant

Network for Youth Success (NYS) Annual Performance Report (APR)

- Serve as a discussion facilitator to engage participants in meaningful conversations regarding NYS APR Funding,
- Perform data analysis tasks independently, as assigned by the PI, utilizing appropriate analytical techniques and software to interpret and make sense of research findings.
- Ensure accuracy and reliability in data analysis, adhering to established research methodologies.

5/2023 – present

EYS Project

Dr. Ryan Heath, Department of Social Work (SU)

Research Assistant

Evalumetrics Youth Survey (EYS) Project

- Engage in effective communication with team members, school officials, and other stakeholders to facilitate smooth project coordination.
- Identify potential research challenges and propose practical solutions in consultation with the PI and research team.

- Adapt research strategies as needed to address unexpected issues or changes in project requirements.
- Provide weekly comprehensive and timely progress reports to the PI, highlighting research achievements, challenges, and upcoming tasks.
- Attend regular meetings with the PI, research team, and school officials.

Complete analyses independently as delegated to them by the PI.

3/2022 – present

School Age Care Credential Study

Dr. Ryan Heath, Department of Social Work (SU)

Project Manager

- Assist in managing evaluation methods of qualitative and quantitative data through the oversight of data management and coding to examine the value of the SAC credential program.
- Conducted Interviews with out-of-school time professionals to examine and interpret their experiences with a New York State SAC Credential Program.
- Provided oversight for data management and coding, ensuring accuracy and consistency in evaluation methods.
- Conducted an in-depth examination and interpretation of out-of-school time professional experiences concerning the New York State SAC Credential Program

Volunteers of America Los Angeles

Dr. Maria Jimenez, Evaluation Department

7/2022 – present

Research Analyst II

3/2020 – 6/2022

Research Analyst I

- Provide training to social service program personnel (e.g., case managers) on entering client data in the department-managed electronic database.
- Manage, organize, and analyze quantitative and qualitative data using a combination of tools (e.g., R, Atlas Ti, Excel, Tableau, Power BI).
- Prepare written and visual data summaries to convey results to stakeholders, including program evaluation reports, annual reports, and dashboards.
- Manage and supervise the department-led database to facilitate the implementation of new programs, ensuring seamless data collection and accurate input into the system.
- Proficiently led and contributed to evaluation projects, employing written reports and interactive dashboards to facilitate program assessment of progress and outcomes.
- Effectively manage project timelines, ensuring adherence to schedules and overseeing the timely completion of project deliverables.

- Conduct community needs assessments and survey design.

3/2017 – 9/2017

Institute for Veterans and Military Families

Rosalinda Maury, Department of Research and Evaluation

Research Assistant

- Compose Research Reviews with policy and practice implications on current research for public dissemination on relevant research topics.
- Work collaboratively with a research team to conduct and organize theoretical literature reviews.

8/2014 – 5/2016

Harbour View Project

Dr. Susan Sy, Department of Psychology, CSUF

Research Assistant

- Research parental influences on academic outcomes amid elementary aged students.
- Work collaboratively with graduate students to collect and manage data, (i.e., to clean data and analyze relationships).
- Present findings at regional psychological conferences; prepared reports for dissemination.

8/2015 – 5/2016

Peer Relationships Study

Dr. Guadalupe Espinoza, Department of Child and Adolescent Studies, CSUF

Research Assistant

- Begin the literature review and research plan for a study on adolescent cyberbullying and peer relationships.
- Create research proposals and posters to present at research conferences.

5/2015 – 6/2016

Client Evaluation of Self and Treatment

Allyson Furry, Health Policy & Research, County of Orange Health Care Agency

Research Assistant

- Assist with data entry, management, and analysis for a screening tool measuring mental health, substance abuse, treatment motivation and trauma with patients from local community clinics.

5/2015 – 6/2016

Screening, Brief Intervention, and Referral to Treatment

Allyson Furry, Health Policy & Research, County of Orange Health Care Agency

Research Assistant

- Work with government researchers to measure behavioral health program outcomes.
- Conduct literature reviews and summaries to identify psychometrically sound mental health measures.

11/2015 – 10/2015

California English Language Development Training

Long Beach Unified School District

Student Evaluation Technician

- Administered and scored assessments for new and current students from K-12 grade to determine competency in the English language. Evaluated and assessed student comprehension for language development in the English language.

Teaching Experience

Human Development and Family Science Department, SU

Graduate Teaching Assistant

Fall 2018 –
Spring 2019

CFS 388 Human Sexuality

- Assist professor with the grading of exams and research papers.
- Attend weekly class sessions for two course sections.

Fall 2018

CFS 425 Lust, Love, and Relationships

- Assist professor with the grading of exams and research papers.
- Attend weekly class sessions.

Assistant Teacher

Fall 2017 –
Spring 2018

Bernice M. Wright Child Development Laboratory School

- Support the head teacher in providing child-centered early childhood education through developmentally appropriate activities promoting the cognitive, physical, social, and emotional development of a class of 10-13 preschool children.
- Create and supervise developmentally appropriate activities to promote the independence, individuality, and creativity of preschool children.
- Assist in the supervision of undergraduate students training to become early childhood teachers.

Graduate Teaching Assistant

Spring 2017

CFS 201 Family Development

- Maintain weekly office hours to assist students with questions
- Assist professor with the grading of assignments and exams
- Attend weekly class sessions

Spring 2017

CFS 388 Human Sexuality

- Responsible for leading two weekly discussion groups of 11 – 16 students on topics of human sexuality.
- Assist professor with the grading of exams and research papers.
- Attend weekly class sessions.

Fall 2016

CFS 388 Human Sexuality

- Responsible for leading three weekly discussion groups of 12 – 18 students on topics of human sexuality.
- Assist professor with the grading of exams and research papers.
- Attend weekly class sessions.

Fall 2016

CFS 327 Human Development and Sport

- Maintain weekly office hours to assist students with questions
- Assist professor with the grading of assignments and exams
- Class presentation: *Parent Influences and Outcomes*
- Attend weekly class sessions.

ABC Unified School District

Para Educator

5/2012 – 6/2016

- Supervise and facilitate educational activities to promote physical, mental, and social development among students between the ages of 4-17.
- Help students with equipment use and materials to prevent injuries and damage.
- Tutor children individually or in small groups who require support to master assignments and reinforce learning concepts presented by teachers.
- Provide extra assistance to students with special needs.

ABC Unified School District

AVID Tutor

11/2014 – 6/2015

Carmenita Middle School

- Engaged with 7th and 8th grade students in small groups to monitor and guide students using the Socratic Method to help their peers solve pertinent questions based on the California Common Core Standards.
- Provided academic guidance using pedagogical tools (e.g., the Socratic Method).

Professional Service

4/2023

Career Day Presentation and Discussion Facilitation – Samuel-Gompers Middle School - Los Angeles, CA

4/2023

NYS APR Funding – Discussion Facilitator

5/2022

Conference Proposal Reviewer, American Evaluation Association (AEA)

5/2022

Abstract Reviewer, APHA 2022 Annual Meeting & Expo

1/2021 – 3/2021

Faculty Search Committee, student member, SU

6/2020

AD HOC Reviewer, Empirical Article, *Psychosocial Intervention*

3/2020

Abstract Reviewer, Family Violence Prevention Caucus, APHA's 2020 Annual Meeting and Expo

9/2017 – 5/2019

New HDFS Graduate Student Mentor, SU

9/2017 – 5/2018

Co-Chair, Travel Grant Committee, Graduate Student Organization (GSO), SU

8/2015 – 5/2016

Finance Director, Black Student Union, CSUF

Professional Development

08/2016 – 5/2019 Future Professoriate Program, SU
5/2019 Yoga and Mindfulness Teacher Certification – 200 hour

Professional Affiliations

10/2018 – present National Council on Family Relations (NCFR)
2/2020 – present American Public Health Association (APHA)

Awards

2/2022 Dean Edith Smith Endowed Dissertation Grant
2021-2022 Syracuse University Dissertation Fellowship
5/2018 Masters Award for Research Excellence
10/2018 Graduate Student Organization Travel Grant
11/2018 HDFS Travel Grant