Dating Violence, Sexual Violence, and Suicidality Among Adolescents in the Commonwealth of the Northern Mariana Islands

Jacklyn Garote, Yoshito Kawabata, and Debra T. Cabrera

University of Guam

Abstract

The present study investigated the relationship between physical dating violence, sexual violence, and suicidality (ideation, plan, and attempt) among adolescents in the Commonwealth of the Northern Mariana Islands (CNMI). Data, which were retrieved from the 2019 CNMI Youth Risk Behavioral Surveillance System (YRBSS), included a self-report survey of forms of violence and suicidality. A two-stage cluster sampling was conducted for territories to produce a representative sample of CNMI students in grades 9-12. Participants were 2,308 racially diverse high school students aged 12–18. The results showed significant gender differences for all study variables, and the relationship between sexual violence, physical dating violence, and suicidality was significant for girls only. The findings suggest that girls are more vulnerable to physical and sexual violence and suicidality in the CNMI. Limitations, suggestions for future research, and theoretical and clinical implications are discussed.

Keywords: physical violence, sexual violence, suicidality, gender, the Pacific Islander youth

Suicide is death caused by self-injurious behavior that includes the intent to die (Centers for Disease Control and Prevention, 2022). Suicidality is also used as an umbrella term to cover related concepts, including suicide ideation (the thought of wanting to kill oneself, but with no plans), suicide plans (the thought/act of preparing to kill oneself), suicide attempts (fatal or non-fatal self-directed injurious behavior with the intent to die from the behavior), and completed suicide (the stage where one has died from their suicide attempt) (Centers for Disease Control and Prevention, 2022). Suicide

is one of the main causes that lead to death among adolescents (ages ranging from 10 to 19) in the United States (Ruch & Bridge, 2022). According to Ruch et al. (2022), suicide rates increase with age, and boys are more likely to commit suicide than girls. Specifically, boys died by suicide three times more often than girls, based on the statistics provided by YRBS between 2000 and 2019. The recent suicide rate of youth (15–19 years old) in the United States is 17.72 (27.84 boys and 7.2 girls) per 100,000 (World Health Organization, 2022). Research further shows that Native Hawaiian and Pacific Islander adolescents are more likely to develop severe levels of risk factors for suicide as compared to other ethnic groups (Wong et al., 2012), which may lead to higher suicide rates for Pacific Islander youth. The statistics about the youth suicide rates for the Pacific, such as Guam and the Commonwealth of the Northern Mariana Islands (CNMI), are not available from WHO. However, the statistics about the neighboring Pacific islands—the Federated States of Micronesia—show relatively higher rates of suicide for the youth in the Pacific (30.03 per total, 38.85 for boys, and 20.05 for girls per 100,000; WHO). Analyzing trends in suicide attempts, Arisoyin et al. (2023) found higher rates in some territories and freely associated states compared to the continental United States. Palau reported a higher attempted suicide rate of 25.2%, followed by the Northern Mariana Islands (17.6% in 2021) and Puerto Rico, Guam (9.9% in 2021).

Socio-Historical Context

The history of the Commonwealth of the Northern Mariana Islands (CNMI) reflects a sequence of colonial transitions, beginning with the settlement by Southeast Asians over 3,500 years ago, resulting in a matrilineal Chamorro society. Following the arrival of the Spanish in 1521, the islands were subjected to forced religious conversion and colonization, with most Chamorros relocated to Guam by 1710. Subsequent German control (1899–1914) brought limited interaction with the indigenous population. During the Japanese period (1914–1944), significant demographic changes occurred,

including the introduction of Japanese labor. After World War II, the islands became part of the U.S.-administered Trust Territory, and by 1986, U.S. citizenship was granted. (Farrel,1991).

In 2020, the CNMI's total population decreased from 53,883 in 2010 to 47,329 as of April 1, 2020, which was 12.2% drop (U.S. Census Bureau, 2020). Males comprised 53% of the population, while females accounted for 47% of the population. Those 18 years and older comprised 71% of the population. Approximately 25% of the population were Chamorro, 5% Carolinian (*Refaluwasch)*, and 33% Filipinos. The population is diverse, with mostly other Asian (i.e., Chinese, Korean, Bangladeshi) and Pacific (i.e., Chuukese, Palauan) ethnic groups represented in the population. In this ethnically diverse population, about 86% obtained a high school education or higher, and 21% earned a bachelor's degree or higher.

Accessible data on suicide rates in the CNMI is scarce. However, what has been published suggests a pattern of high prevalence of suicide among youth. The suicide rate was 20 per 100,000 in 1992, which increased to 35 per 100,000 in 2001 (Saipan Tribune, 2001). The populations with the highest suicide rates were primarily males of Chamorro descent and within the 15-24 age group (Saipan Tribune, 2001). The prevalence of youth suicidality continues today, with a local suicide prevention grant program reporting 65 youth suicide attempts between 2019-2020 (Garrett Lee Smith State & Tribal Suicide Prevention Annual Report, 2021). Changes in the demographics of attempted suicides are noted. However, since the program recorded females and Filipinos as the highest category of consumers for suicide prevention, these shifts in demographics warrant closer attention. Despite these occurrences, there remains a gap in research regarding suicide among all populations in the CNMI.

Existing sociocultural factors may contribute to the persistence of physical dating violence, sexual violence, and suicidality in the CNMI. For example, a culture of silence, or the passive acceptability of risky behaviors due to their being taboo, has also been

discussed in local CNMI news as a contributor to continued suicide rates (Maurin, 2019) and sexual/interpersonal violence (Encinares, 2016). This choice to be silent on abuse is also prevalent, depending on the situation. For example, threats or other tactics perpetrated by perpetrators known to the victim to keep victims from reporting (Watts & Zimmerman, 2002) can also increase negative emotions, including suicide (Edwards et al., 2012). This culture of silence may perpetuate an "acceptable climate for violence," an environment characterized by silence and inhibition by perpetrators of abuse, victim-blaming attitudes, and tolerance of abuse. This environment can lead girls to develop fear and not practice help-seeking behaviors (World Health Organization, 2002). Even further, the stigma and shame associated with receiving mental health services can lead individuals to seek other forms of care. This finding was presented by Buettner and colleagues (2013), who found that CNMI citizens who wanted to avoid stigma sought treatment from traditional healers, who aided individuals with their mental health problems. Kwan and colleagues (2020) included this stigma in the discourse of and treatment for mental health support in their identification of possible barriers to mental health services unique to Asian and Pacific Islanders. Aguon and Kawabata (2023) also found that high public stigma can lower the intent to seek mental health treatment for Chamorros through self-stigma and attitudes about mental health treatment. The alarming aspect of these problems further stresses the need for investigation. The present study examined the association between dating and sexual violence and suicidality among CNMI youths and whether this association differed for boys and girls. Given these sociocultural backgrounds, it is developmentally crucial to examine whether physical dating violence and sexual violence are linked to suicidality and whether gender matters in this link among CNMI adolescents.

Dating Violence, Sexual Violence, and Suicidality

A recent systematic review by Wyatt et al. (2015) summarizes risk factors for suicide in Native Hawaiian and Pacific Islander youth, using an ecological theory as a

benchmark (i.e., suicide in context). The authors identified risk factors, including demographic characteristics – age, gender, ethnic group, and sexual orientation – as well as social and relational factors – violence, substance use, family discord, and negative peer relationships or bullying. Among these risk factors, the present study focused on dating and sexual violence as a predictor for suicide among Pacific Islander youth.

Physical dating violence involves any form of violence perpetrated by an individual within a romantic relationship and occurs among millions of young people ("Preventing Intimate Partner Violence," 2021). Dating violence has negative physical, social, and emotional consequences, such as depression and substance abuse, which may be predictably associated with suicidality (Barker et al., 2018). A large body of research indicates a strong link between dating violence and suicide risk among adolescents. For example, Belshaw et al. (2012) examined relationship violence and suicidal behaviors utilizing the 2007 Youth Risk Behavior Survey (YRBS) (n =11,781) among racially/ ethnically diverse youth in the United States. Results showed that individuals who reported relationship violence had a higher risk of planning and attempting suicide, compared to individuals who did not report relationship violence. With a similar intent, Baiden et al. (2019) investigated physical teen dating violence (TDV), suicide ideation, suicide plan, and suicide attempt through an analysis of the 2015 National YRBS (n = 9,693) in the United States. Racially/ ethnically diverse adolescents who experienced physical TDV were approximately two times more likely to experience suicidal ideation and make a suicide plan, and almost three times more likely to have attempted suicide, compared to their counterparts who did not experience physical TDV. Furthermore, in a sample of 16,410 students, experiences of more than one type of relationship violence (dating and fighting) were associated with higher suicidality rates (50.6%) compared to students who only experienced one type of dating violence (26%) in the United States (Joyal, 2013).

Sexual violence refers to any non-consensual sexual activity, including situations when victims are unable to refuse (Breiding et al., 2015). It also includes behaviors such as penetration (forced, non-physically pressured, and unwanted, or alcohol/drug facilitated, by another person towards the perpetrator), intentional sexual touching, or non-contact acts of sexual nature (Breiding et al., 2015). Extant studies have examined the role of sexual violence in exacerbating co-occurring mental health problems and suicide risk. For example, Mondin et al. (2016) focused on the association between sexual violence, manic and depressive episodes, and suicidality among diverse youth. The results showed that young people with a history of sexual violence were more likely to experience changes in mood and suicide risk, compared to individuals with no history of sexual violence. Choi et al. (2017) also investigated the role of adverse childhood experiences on suicide attempts and found that for both genders, the experience of sexual abuse, in addition to having parents/ other family members with mental illness, was associated with increased odds of suicide attempt; additionally, histories of sexual abuse and more adverse childhood experiences were associated with repeated suicide attempts among youth. Furthermore, Else et al. (2009) showed that interpersonal violence, including dating and sexual violence, predicted higher rates of suicide among youth, particularly the victims of interpersonal violence, in Hawaii, suggesting the negative influence of violence on suicide ideation, suicide plan, and suicide attempt among Native Hawaiian and Pacific Islander youth.

Despite the limited number of studies on risk factors for suicide in the CNMI, several factors that have consistently been associated with suicide in other regions of the world are occurring in the CNMI. Buettner et al. (2013) referred to results from the 2008 Youth Risk Behavior Surveillance of Pacific Island United States Territories, which found that interpersonal violence (having carried a weapon to school, having been injured in a physical fight, having experienced dating and sexual violence) and substance use (of cigarettes, alcohol, marijuana, and other illegal drugs) have been prevalent among high

school students. The prevalence of these risk factors was also found in the study by Sakamoto et al. (2020), which showed that being involved in a physical fight, forced sexual intercourse, and substance use were associated with depressed mood and suicidality.

Gender Differences in the Association Between Dating and Sexual Violence and Suicidality

Several studies have looked at gender differences in the association with dating violence, sexual violence, and suicidality among racially/ ethnically diverse youth in the United States. In one study, Tomasula et al. (2012) examined the association between sexual assault and suicidal ideation by utilizing the 2007 YRBS (n = 14,103). While male students with a history of sexual assault were found to be ten times more likely to have attempted suicide than male students without a history of assault, they were also found to be five times more likely to have medically serious suicide attempts than both male and female suicide attempters (Tomasula et al., 2012). In addition, Baiden et al. (2020), in an analysis of the 2017 YRBS (n = 10,475), showed that females who experienced sexual violence were twice more likely to report suicidal ideation compared to females who experienced no sexual violence; males who experienced sexual violence, on the other hand, had "more than threefold higher odds" of attempting suicide.

Smith et al. (2020) also explored teen dating violence and suicide risk, utilizing responses from the 2015 and 2017 YRBS (n = 1,962). Despite their finding that teen dating violence did not mediate biological sex and suicidality, biological sex was a predictor of suicide, as males reported lower suicide risks compared to females. Another study focused on the longitudinal impact of dating violence on behavioral and psychological health in males and females (Ackard et al., 2007). Among 1,516 youth, the association between adolescent dating violence, cigarette smoking, and suicide attempts was found for both genders. Additionally, males presented high associations with adolescent dating violence and suicide ideation, but females were marginally associated

with suicide attempts, having presented high associations in the relationship between adolescent dating violence and suicide attempts. Lastly, Vagi et al. (2015) analyzed the 2013 National YRBS (n = 9,900) and found that in addition to risk-behaviors being prevalent among all students who experienced teen dating violence (compared to their normative counterparts), females had a higher prevalence of physical teen dating violence, sexual teen dating violence, both physical and sexual teen dating violence, and any form of teen dating violence in general, compared to males. Overall, research has found substantial associations between dating violence, sexual violence, and suicidality among males and females, but differences in gender among these relationships are not clear. It is thus important to note that victimization (physical and sexual) and suicidality (ideas, plans, and attempts) differ across genders and must be more extensively studied.

The Present Study: The Hypotheses

The lack of literature regarding violence and mental health has led to major gaps in our knowledge of psychopathology in the CNMI. Although many studies present various risk factors for mental health problems in other parts of the world, such factors have yet to be fully explored in the CNMI. The present study investigated the relationship between dating violence, sexual violence, and suicidality. Gender differences were also explored.

It was hypothesized that, after controlling for the contributions of substance use, bullying, and sadness, 1) both dating violence and sexual violence would be associated with suicidality, and 2) gender would influence the relationship between dating violence, sexual violence, and suicidality. Substance use, bullying, and sadness, which have been shown to be predictive of suicide (Wyatt et al., 2015), were used as covariates.

Methodology

Participants

Participants of the sample (n = 2,323, 48.3% girls) were drawn from the secondary data provided by the 2019 CNMI Youth Risk Behavior Survey (YRBS). The sample consisted of students in grades 9-12, attending public schools; the age ranges were from 12 to 18 years old, and the students were racially and ethnically diverse. After accounting for missing data, the total sample was 2,308. The demographic information of the participants is summarized in Table 1.

Table 1

Sample Characteristics

Variables		N	%
Age	12 years old or younger	4	0.2
	13 years old	3	0.1
	14 years old	227	9.9
	15 years old	608	26.4
	16 years old	620	26.9
	17 years old	511	22.2
	18 years old or older	330	14.3
Sex	Female	1128	48.9
	Male	1180	51.1
Ethnicity	American Indian/Alaska Native	3	0.1
	Asian	839	37.4
	Black or African American	7	0.3
	Native Hawaiian/Other Pacific Islander	1129	50.4
	White	16	0.7
	Hispanic/Latino	3	0.1
	Multiple - Hispanic/Non-Hispanic	245	10.9
Explanatory Variables			
Experienced Sexual Violence	0 times	1955	87.8
	1 or more times	271	12.2
Experienced Physical Dating Violence	Did not date/0 times	2069	95.4
	1 or more times	100	4.6
Outcome Variables			
Considered Suicide	No	1636	71.5
	Yes	652	28.5
Made a Suicide Plan	No	1662	73.1
	Yes	613	26.9
Attempted Suicide	0 times	1605	82.2
	1 or more times	347	17.8
Covariate Variables			
Bullying at School	No	1862	81.3
	Yes	427	18.7
Experienced E-Bullying	No	1961	85.6
	Yes	329	14.4
Sad/Hopelessness	No	1163	52.0
	Yes	1074	48.0
Current Marijuana Use	0 times	1515	68.0
	1 or more times	712	32.0
Current Alcohol Use	0 days	1526	74.9
	1 or more days	511	25.1

Measures

Physical dating violence. Physical dating violence was measured through the question, "During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose?" Responses were rated from 1 ("I did not go out with anyone during the past 12 months") - 6 ("6 or more times"), for both questions. Responses were recoded: "1" was recoded into "0" to denote "No" and "2-6" were recoded as "1" to denote "Yes".

Sexual violence. Sexual violence was measured through the question, "During the past 12 months, how many times did anyone force you to do sexual things that you did not want to do?". Responses to the second question were rated from 1 ("0 times") - 5 ("6 or more times"). Responses were recoded: "1" was recoded into "0" to denote "No" and "2-5" were recoded as "1" to denote "Yes".

Suicidality. Suicidality was measured through questions pertaining to suicidal ideation, suicide plan, suicide attempt, and suicide attempt that had to be treated by a doctor or nurse. Suicidal ideation was measured with the question, "During the past 12 months, did you ever seriously consider attempting suicide". Suicide plan was measured with the question "During the past 12 months, did you make a plan about how you would attempt suicide?". The response choices were 1 ("Yes") and 2 ("No") for both questions. Actual suicide attempt within the past year was measured with the question "During the past 12 months, how many times did you actually attempt suicide?"; responses were rated from 1 ("0 times") to 5 ("6 or more times"). Responses were then recoded: "1" was recoded into "0" to denote "No" and "2-5" were recoded as "1" to denote "Yes".

Substance use. Substance use was measured through reports of alcohol use and marijuana use. Current alcohol use was assessed through the question, "During the past 30 days on how many days did you have at least one drink of alcohol?", with responses

ranging from 1 (“0 days”) - 7 (“All 30 days”). Responses were recoded: “1” was recoded into “0” to denote “No” and “2-7” were recoded as “1” to denote “Yes”. Current marijuana use was assessed through the question “During the past 30 days, how many times did you use marijuana?”, with responses ranging from 1 (“0 times”) – 6 (“40 or more times”). Responses were recoded: “1” was recoded into “0” to denote “No” and “2-6” were recoded as “1” to denote “Yes”.

Sadness. Sadness was assessed through the question, “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?” The response was 1 (“Yes”) and 2 (“No”). Responses were then recoded into “0” to denote “No” and “1” to denote “Yes”.

Bullying. Bullying was assessed through two questions, “During the past 12 months, have you ever been bullied on school property?” and “During the past 12 months, have you ever been electronically bullied?” Responses to both questions were 1 (“Yes”) and 2 (“No”). Responses were then recoded: “1” was recoded into “0” to denote “No” and “2” was recoded as “1” to denote “Yes”.

Procedure

A two-stage cluster sampling was conducted for territories to produce a representative sample of students in grades 9-12 (Centers for Disease Control and Prevention, 2020). The CNMI institutional review board approved the protocol for the YRBS, as territory sites are instructed to receive IRB approval from local school boards (for the details, see “Overview and Methods for the Youth Risk Behavior Surveillance System - United States”, 2019). The YRBS procedures were intended to protect students’ privacy, and participation was anonymous and voluntary; parental permission was obtained prior to survey administration. One class period was allotted for students to complete the self-administered survey by recording their responses on a computer-scannable booklet.

Data Analysis

Data for the present study was drawn from the 2019 YRBS collected by the Center of Disease Control and Prevention. A two-stage complex sampling design was used to obtain samples representative of the population in the survey; thus, data from the 2019 CNMI YRBS was weighted. All statistical analyses were performed in the Complex Samples option of the SPSS Premium Edition program, one of the statistical programs recommended by the CDC to account for the YRBSS complex sampling design (Centers for Disease Control and Prevention, 2020). Data was analyzed using descriptive, cross-tabulation, and logistic regression analysis. Descriptive analysis presented the general distribution of all study variables using weighted percentages. Cross-tabulation was performed to display the distribution and Pearson chi-square tests of association between gender and explanatory, outcome, and covariate variables. Lastly, while controlling for covariates (age, ethnicity, sadness, bullying, e-bullying, current alcohol use, and current marijuana use), a logistic regression analysis was performed to examine gender differences in the relationship between explanatory variables (physical dating violence, sexual violence) and outcome variables (considering suicide, making a suicide plan, and attempting suicide). To observe gender differences in this relationship, the logistic regression analysis was conducted by gender. Missing cases were treated as listwise deletion as an alternative method, such as multiple imputation has not been recommended by the YRBSS.

Results

Descriptive Analysis

Table 1 displays the general distribution of the study variables. All explanatory, outcome, and covariate questions (except for substance use, which were framed to ask adolescents about their substance use within the past 30 days of taking the survey) were framed to ask adolescents if they experienced the situation within the past 12 months of

taking the survey. On explanatory variables, 12.2% (*N*=271) of adolescents reported one or more experiences of sexual violence and 4.6% (*N*=100) reported one or more experiences of physical dating violence. On outcome variables, 28.5% (*N*=652) reported that they considered suicide, 26.9% (*N*=613) reported making a suicide plan, and 17.8% (*N*=347) reported a suicide attempt. Regarding covariate variables, 18.7% (*N*=427) reported an experience of bullying in school, and 14.4% of adolescents *(N*=329*)* reported an experience of electronic bullying (e-bullying). A total of 48% (*N*= 1,074) of adolescents reported feelings of sadness. Regarding substance use, within the past 30 days, 32% (*N*=712) reported using marijuana and 25.1% (*N*=511) reported consuming alcohol.

Cross-Tabulation Analysis

Table 2 presents the distribution of and results of the chi-square tests of independence between gender and outcome, explanatory, and covariate variables. A higher proportion of girls reported experiencing sexual violence (66.5%) than boys (33.5%) (χ^2 (1) = 40.105, $p < .001$). More boys (52.6%) than girls (47.4%) reported experiences of physical dating violence; however, this was not statistically significant. Regarding outcome variables, more girls than boys considered suicide (60.5% vs. 39.5%) (χ^2 (1) = 52.668, $p < .001$), made a suicide plan (60.6% vs. 39.4%) (χ^2 (1) = 48.704, $p < .001$), and attempted suicide (61.1% vs. 38.9%) (χ^2 (1) = 138.9, $p < .001$). More girls than boys reported more experiences of bullying, both in school (54.8% vs. 45.2%) (χ^2 (1) = 7.753, $p < .006$) and online (65.9% vs. 34.1%) (χ^2 (1) = 44.803, $p < .001$), and feelings of sadness (60% vs. 40%) (χ^2 (1) = 101.074, $p < .001$). Regarding substance use, boys, compared to girls, reported higher alcohol consumption (53.8% vs 46.2%) (χ^2 (1) = 4.401, $p < .047$) and marijuana use (56.1% vs. 43.9%) (χ^2 (1) = 12.146, $p < .001$).

Table 2

Frequencies and Chi-Square Results for Gender and Predictor, Outcome, and Covariate Variables

Variables	Girls	Boys	OR(95% C.I.)	P value
Sexual Violence	%		.429 (.315-583)***	<.001
0 times	45.9	54.1		
1 or more times	66.5	33.5		
Physical Dating Violence			1.067 (.688-1.656)	0.77
Did not date/0 times	49	51		
1 or more times	47.4	52.6		
Considered Suicide			.507 (.416-.616)***	<.001
No	43.7	56.3		
Yes	60.5	39.5		
Made a Suicide Plan			.513 (.422-.625)***	<.001
No	44.1	55.9		
Yes	60.6	39.4		
Attempted Suicide			.584 (.443-.772)***	<.001
0 times	47.8	52.2		
1 or more times	61.1	38.9		
Bullying			.739 (.598-.914)**	0.006
No	47.2	52.8		
Yes	54.8	45.2		
E-Bullying			.437 (.338-.566)***	<.001
No	45.8	54.2		
Yes	65.9	34.1		
Sad or Hopeless			.421 (.350-.507)***	<.001
No	38.8	61.2		
Yes	60	40		
Current Marijuana Use			1.369 (1.152-1.626)***	<.001
0 times	51.8	48.2		
1 or more times	43.9	56.1		
Current Alcohol Use			1.236 (1.002-1.525)*	0.047
0 days	51.5	48.5		
1 or more days	46.2	53.8		

Logistic Regression Analysis

For boys, no statistically significant associations were found between predictors (sexual violence and physical dating violence) and outcome variables (having considered suicide, having made a suicide plan, and having attempted suicide, see Table 3). However, many important associations between covariates and outcome variables were found. Boys who self-identified as Asian were more likely to report having made a suicide plan (B = -.637, S.E. = .270, Wald statistic (*t*) = -2.356, Odds Ratio (*OR*) = .529, $p < .02$, 95% C.I. = .310–.904) and suicide attempt (B = -.815, S.E. = .356, *t* = -2.292, *OR* = .442, $p < .024$, 95% C.I. = .219-.895). Additionally, boys who reported feelings of sadness had 6.8 higher odds of reporting they considered suicide (B = 1.923, S.E. = .191, *t* = 10.096, *OR* = 6.844, $p < .001$, 95% C.I. = 4.693–9.982), 4.7 higher odds of reporting they made a suicide plan (B = 1.554, S.E. = .191, *t* = 8.157, *OR* = 4.731, $p < .001$, 95% C.I. = 3.244-6.900), and 4.5 odds of reporting a suicide attempt (B = 1.510, S.E. = .290, *t* = 5.213, *OR* = 4.582, $p < .001$, 95% C.I. = 2.551-8.038). Further, boys who reported an experience of bullying at school were 2.5 times more likely to report they considered suicide (B = .949, S.E. = .246, *t* = 3.857, *OR* = 2.582, $p < .001$, 95% C.I. = 1.586-4.203), 1.6 times more likely to report they made a suicide plan (B = .497, S.E. = .229, *t* = 2.172, *OR* = 1.644, $p < .032$, 95% C.I. = 1.045–2.589), and 2.2 times more likely to report a suicide attempt (B = .793, S.E. = .335, *t* = 2.368, *OR* = 2.210, $p < .02$, 95% C.I. = 1.138–4.294); those who experienced e-bullying were 2.5 times more likely to report they made a suicide plan (B = .902, S.E. = .335, *t* = 2.692, *OR* = 2.465, $p < .008$, 95% C.I. 1.269-4.789). Lastly, boys who reported alcohol use had 1.6 higher odds of reporting they considered suicide (B = .497, S.E. = .244, *t* = 2.033, *OR* = 1.643, $p < .044$, 95% C.I. = 1.013–2.666) and 1.8 higher odds of reporting they made a suicide plan (B = .627, S.E. = .244, *t* = 2.57, *OR* = 1.873, $p < .011$, 95% C.I. = 1.155–3.037).

However, the results regarding sexual and physical violence were different for girls (see Table 4). In other words, girls presented significant associations between predictors

(sexual violence and physical dating violence) and outcome variables (considering suicide, making a suicide plan, and

Table 3

Complex Samples Logistic Regression Results Predicting Suicide Ideation, Plan and Attempt for Boys

Variables	Considered Suicide				Made a Suicide Plan				Attempted Suicide			
	B (std.error)	Wald	OR(95% C.I.)	P value	B (std.error)	Wald	OR(95% C.I.)	P value	B (std.error)	Wald	OR(95% C.I.)	P value
Age	.073 (.076)	0.968	1.076 (.926-1.251)	0.335	-.083 (.078)	-1.068	.920 (.789-1.073)	0.288	.092 (.121)	0.76	1.096 (.862-1.394)	0.449
Ethnicity (Other)												
Asian	-.332 (.303)	-1.093	.718 (.394-1.309)	0.277	-.637 (.270)	-2.356	.529 (.310-.904)	0.02	-.815 (.356)	-2.292	.442 (.219-.895)	0.024
Native Hawaiian/Other PI	-.248 (.282)	-0.879	.780 (.446-1.364)	0.381	-.482 (.267)	-1.809	.617 (.364-1.047)	0.073	-.705 (.422)	-1.669	.494 (.214-1.141)	0.098
Sexual Violence (0 times)												
1 or more times	.066 (.373)	0.176	1.068 (.510-2.237)	0.837	.745 (.378)	1.972	2.107 (.997-4.456)	0.051	.436 (.455)	0.96	1.547 (.628-3.809)	0.339
Physical Dating Violence (Did not date/0 times)												
1 or more times	.397 (.518)	0.766	1.487 (.533-4.149)	0.434	.137 (.648)	0.211	1.147 (.317-4.144)	0.833	-.318 (.765)	-0.416	.727 (.160-3.314)	0.678
Current Marijuana Use (0 times)												
1 or more times	-.099 (.237)	-0.419	.906 (.566-1.448)	0.676	-.023 (.240)	-0.095	.977 (.608-1.571)	0.924	.077 (.351)	0.219	1.080 (.539-2.163)	0.827
Current Alcohol Use (0 days)												
1 or more days	.497 (.244)	2.033	1.643 (1.013-2.666)	0.044	.627 (.244)	2.57	1.873 (1.155-3.037)	0.011	.469 (.317)	1.479	1.598 (.853-2.993)	0.142
Bullying (No)												
Yes	.949 (.246)	3.857	2.582 (1.586-4.203)	<.001	.497 (.229)	2.172	1.644 (1.045-2.589)	0.032	.793 (.335)	2.368	2.210 (1.138-4.292)	0.02
E-Bullying (No)												
Yes	.574 (.397)	1.444	1.775 (.808-3.901)	0.148	.902 (.335)	2.692	2.465 (1.269-4.789)	0.008	.311 (.449)	0.692	1.365 (.561-3.323)	0.49
Sad or Hopeless (No)												
Yes	1.923 (.191)	10.096	6.844 (4.693 - 9.982)	<.001	1.554 (.191)	8.157	4.731 (3.244-6.900)	<0.001	1.510 (.290)	5.213	4.528 (2.551-8.038)	<.001

Note: Reference category indicated in bracket; OR: Odds Ratios; C.I.: Confidence Interval

Table 4

Complex Samples Logistic Regression Results Predicting Suicide Ideation, Plan and Attempt for Girls

Variables	Considered Suicide				Made a Suicide Plan				Attempted Suicide			
	B (std.error)	Wald	OR(95% C.I.)	P value	B (std.error)	Wald	OR(95% C.I.)	P value	B (std.error)	Wald	OR(95% C.I.)	P value
Age	-0.023 (.064)	-0.358	.977 (.862-1.109)	0.721	-.180 (.071)	-0.2547	.835 (.726-.961)	0.012**	-.113 (.092)	-1.22	.893 (.744-1.073)	0.225
Ethnicity												
Asian	-.420 (.262)	-1.601	.657 (.391-1.105)	0.112	-.398 (.279)	-1.428	.671 (.387-1.167)	0.156	-.740 (.320)	-2.315	.477 (.253-.899)	0.022*
Native Hawaiian/Other PI	-.243 (.273)	-0.889	.784 (.457-1.347)	0.376	-.167 (.277)	-0.601	.847 (.489-1.466)	0.549	-.251 (.325)	-0.771	.778 (.408-1.483)	0.442
Sexual Violence												
1 or more times	.890 (.225)	3.949	2.436 (1.558-3.808)	<.001***	.793 (.214)	3.703	2.210 (1.446-3.379)	<.001***	.551 (.220)	2.503	1.735 (1.122-2.683)	0.014*
Physical Dating Violence												
1 or more times	.897 (.472)	1.899	2.453 (.962-6.254)	0.06	.358 (.407)	0.881	1.431 (.639-3.201)	0.38	.672 (.447)	1.504	1.958 (.808-4.746)	0.135
Current Marijuana Use												
1 or more times	.228 (.210)	1.089	1.257 (.829-1.904)	0.287	.385 (.198)	1.946	1.469 (.993-2.174)	0.054	.173 (.247)	0.70	1.189 (.729-1.938)	0.486
Current Alcohol Use												
1 or more days	.355 (.202)	1.759	1.426 (.956-2.126)	0.081	.385 (.212)	1.815	1.469 (.965-2.237)	0.072	.594 (.238)	2.494	1.810 (1.130-2.901)	0.014
Bullying												
Yes	.311 (.213)	1.463	1.365 (.896-2.081)	0.146	.416 (.213)	1.952	1.516 (.994-2.313)	0.053	.374 (.248)	1.507	1.454 (.889-2.379)	0.135
E-Bullying												
Yes	.255 (.205)	1.241	1.290 (.859-1.936)	0.217	.560 (.241)	2.318	1.750 (1.085-2.824)	0.022	.392 (.273)	1.44	1.481 (.863-2.540)	0.153
Sad or Hopeless												
Yes	1.517 (.175)	8.66	4.558 (3.222-6.448)	<.001	1.396 (.169)	8.26	4.037 (2.889-5.642)	<.001	1.371 (.227)	6.053	3.941 (2.516-6.173)	<.001

Note: Reference category indicated in bracket; OR: Odds Ratios; C.I.: Confidence Interval

Discussion and Conclusion

The association between experiences of sexual violence/physical dating violence and suicidality has long been explored in previous research. However, the phenomenon is often understudied in the CNMI. The present study addressed this gap and provided an understanding of the relationship between sexual violence, physical dating violence, and suicidality among CNMI adolescents while exploring gender differences in this relationship. Altogether, the study's hypotheses were supported: controlling for covariates, 1) there was a significant association between the predictors (sexual violence and physical dating violence) and outcome variables (suicide ideation, plan, and attempt) and 2) the relationship between sexual and physical dating violence was statistically significant for girls, but not for boys. Compared to boys, girls presented a higher prevalence of sexual violence and suicide ideation, attempts, and plans. Although boys reported more experiences of physical dating violence than girls, no significant gender differences were revealed. Lastly, regarding covariates, girls reported higher experiences of both school and electronic bullying and sadness, while boys reported higher instances of current substance use (alcohol and marijuana use).

Results of the study fully supported the first hypothesis, which was that the victims of sexual/physical dating violence were at a higher risk of either suicide ideation, plan, or attempt. This finding is consistent with prior studies that have examined the link between experiences of dating violence and suicidality (e.g., Baiden et al., 2019), and even other studies that show increased suicidality as a result of more than one experience of violence (e.g., Joyal, 2013). The findings are also consistent with previous studies which link experiences of sexual violence with suicidality (e.g., Tomasula et al., 2012). This suggests that despite gender differences, all victims of sexual/physical dating violence are at risk of suicidality, which prompts the need for continued intervention and prevention programs

Results of the study also fully supported the second hypothesis, which was that there were gender differences in the frequency of, and relationship between, sexual violence, physical dating violence, and suicidality. Specifically, girls had higher experiences of sexual violence, physical dating violence, and suicidal ideation, plan, and attempt than boys; additionally, girls who experienced sexual and physical dating violence had higher odds of suicide ideation, plan and attempt than boys. These findings reflect results of previous studies (Ackard et al., 2007; Vagi et al., 2015; Baiden et al., 2020; Smith et al., 2020) and fully strengthen gender differences in experienced sexual violence, physical dating violence and suicidality, and show that girls are more affected than boys in this relationship.

Many prevalence studies have shown women to be disproportionately affected by sexual violence (Basile & Smith, 2011) and dating violence (Breiding et al., 2014) worldwide, and these factors have been associated with increased suicidality. Several factors have been investigated over time to explain this association. Women face a myriad of physical, economic, social, and psychological consequences of sexual/dating violence. Physical and sexual health consequences of abuse include disability, organ damage, chronic pain, gynecological disorders, and sexually transmitted diseases, to name a few (Jina & Thomas, 2013). Economic problems, stemming from their partner's not allowing them to work or go to school, can leave the victim without essential resources, which perpetuates the cycle of not being able to leave the relationship (Jina & Thomas, 2013). Social problems brought on by the controlling power of the perpetrator include being distanced from family members, facing stigmatization for abuse, and negative attitudes from society, which heightens stress for victims (Watts & Zimmerman, 2002; Jina & Thomas, 2013). Further social factors include the possibility that girls are in an "acceptable climate for violence", created by silence and inhibition by abusers, victim blaming attitudes, and tolerance of abuse by members known to the abuser and victim, or even by the victim themself (Edwards et al., 2012). All the

mentioned circumstances can contribute to and increase the psychological problems women experience, which include substance use disorders, depression, fear, anxiety, poor self-esteem, and post-traumatic stress disorder (Jina & Thomas, 2013), which are all linked to an increased risk of suicide (World Health Organization, 2002). An acknowledged global health concern, more attention should be directed to victims of violence in the understudied communities of the Pacific region.

For boys, even as the link between sexual violence, physical dating violence, and suicidality was not significant, there were still significant associations between covariates (sadness/hopelessness bullying, e-bullying, and alcohol use) and suicidality. In other words, boys who reported sadness, bullying, e-bullying, and alcohol use also had high risks of suicidality. This finding is crucial to consider, as previous research shows that Asian American and Pacific Islander (AA/PI) males are still found to have concerning rates of depression (Iwamoto & Liu, 2010), substance use (Wu & Blazer, 2015), and suicide (Lowry et al., 2011). While there can be many other predeterminants to mental health and behavioral problems, AA/PI males can experience barriers to seeking help for these mental health problems, ranging from stigma to gender role conflicts that would keep this population from not receiving services (Chang & Subramaniam, 2008). Thus, boys should not be undermined when examining negative health risk factors, as they, too, are at risk of serious mental health outcomes.

Regardless of the gender differences in covariates, the results of the present study have linked all covariates (sadness, bullying, e-bullying, and substance use, specifically alcohol) to increased odds of suicidality for both genders, which have been presented consistently in previous studies. Depressed mood has consistently been found to be a strong predictor of suicide among adolescents (Thapar et al., 2012). Bullying in both forms (traditional and cyberbullying) has been linked to increased suicide ideation, plans, and attempts for both boys and girls. This finding is consistent with earlier

studies (Kim & Leventhal, 2008). Thus, bullying must be addressed and considered more closely as a risk factor to avoid potential adverse outcomes.

Lastly, substance use for both genders was associated with an increased suicide risk. This finding supports existing studies (Nelon et al., 2019), and shows support for previous studies that have linked alcohol to increased suicidality (Baiden et al., 2019). Adolescents have been found to use substances to cope with negative affective states, despite the results of substance use leading to exacerbated stress levels and psychopathology (Goldston, 2004). Thus, more attention should be given to adolescent substance use, which has been shown to have negative health outcomes throughout one's lifespan that surpass one's mental health (Schulte & Hser, 2017). This is especially important in the context of Pacific Islander youth, who, in previous studies, have a higher risk of engaging in more serious substance use, such as binge drinking (Subica & Wu, 2018) and more serious negative mental outcomes (Wu & Blazer, 2014).

Limitations and Future Research

Although the present study clearly demonstrated the prevalence of and gender differences between sexual violence, physical dating violence, and suicidality among CNMI adolescents, there are several limitations. First, because the YRBSS is self-administered, reporter bias may have occurred. Individuals may have intentionally provided inaccurate responses if they intended not to report unfavorable or negative experiences; thus, respondents may have underreported instances of sexual/physical dating violence or suicide ideation, plan, or attempt. Second, the results of the YRBSS are not entirely generalizable to all adolescents in the CNMI. Because the survey was administered only at public high schools, private high school students were not able to participate in the survey. Third, due to the quantitative nature of the YRBSS, unique, in-depth experiences of violence victimization and suicidality and other related mental health risk factors were not recorded. Mental health symptoms differ cross-culturally, and the Micronesian region is heavily understudied. Thus, concepts revealed only

through interviews can display these cultural differences mental health problems; these concepts include, but are not limited to, the interpretation and display of mental health symptoms (such as depression and anxiety), as well as perceptions and approaches to these mental health problems. Future researchers can conduct qualitative research to collect narratives from victims, or uncover other factors related to sexual violence/dating violence and suicidality not previously considered. Furthermore, mixed-methods studies can be employed to provide a more comprehensive understanding of sexual/physical dating violence and how it contributes to suicide risk in the CNMI.

Clinical and Educational Implications

Several clinical implications are in place as we widen our understanding of negative mental health factors in the population. Mental health professionals and community members working with sexual violence and physical dating violence victims can work to develop/refine a culturally adaptive framework specific to the Micronesian region. This framework will aid in conceptualizing risk and protective factors for mental health problems, not limited to sexual violence, physical dating violence, and suicidality.

Guided by a culturally informed framework, mental health professionals can develop and implement culturally appropriate treatments which can lower adolescents' experiences of negative emotionality. Practitioners can actively learn and understand the norms and values for Asian and Pacific Islanders' behaviors (as presented in earlier sections), and how these cultural elements can contribute to their help-seeking behaviors (Kwan et al., 2020). Goldston and colleagues (2009) identified concepts of help-seeking behaviors for Asian American and Pacific Islander (AA/PI) youth, and these concepts can be considered in the development of culturally appropriate treatment in the CNMI. Because AA/PI youth are more likely to seek support for their mental health problems from friends or family (Goldston et al., 2009), outreach or mental health services can incorporate social support into the treatment process. As shame and stigma against mental health is prominent among A.A./PIs, mental health professionals

can also acknowledge this, as well as the silent acceptance of risk factors for mental health occurring in the community (depression, suicide, experience of sexual/dating violence), to reduce shame in association with mental health problems and help-seeking behaviors (Goldston et al., 2009).

Within the school setting, school counselors can also provide psychoeducation in the form of presentations within schools to raise awareness of sexual violence, physical dating violence, and suicidality (Goldston et al., 2009). Counselors can also be trained to provide culturally sensitive interventions for students. Additionally, staff members are encouraged to be aware of their beliefs about which gender may be more affected by mental health problems, as both have substantial risks of experiencing negative mental health outcomes (depression, bullying, and substance use) that co-occur with suicidality. This can maximize our opportunities to identify and offer services to all adolescents who can benefit from opportunities to lower their negative emotional/behavioral symptoms. Since female victims of sexual/physical dating violence are at a higher risk of suicide, continued prevention and intervention methods can be offered to encourage them to speak out and increase help-seeking practices.

Lastly, outside of the school setting, relevant organizations can sponsor outreach events and presentations to increase their presence within the community. Continued efforts to eliminate the culture of silence can address and decrease the stigma of seeking mental health services and promote help-seeking attitudes. Training opportunities can be offered on being a supportive and effective mandated reporter for those working closely with adolescents. Moreover, training can also be provided to assist individuals displaying suicidal thoughts and behaviors. In increasing our knowledge of prevailing risk factors within the community, efforts can be made to overall lower the rates of violence and suicidality.

References

Ackard, D. M., Eisenberg, M. E., & Neumark-Sztainer, D. (2007). Long-term impact of adolescent dating violence on the behavioral and psychological health of male and female youth. *The Journal of Pediatrics*, *151*(5), 476–481. https://doi.org/10.1016/j.jpeds.2007.04.034

Aguon, C. T., & Kawabata, Y. (2023). Examining mental health stigma on Guam: A serial mediation model. *Asian American Journal of Psychology*, *14*(2), 177–185. https://doi.org/10.1037/aap0000286

Arisoyin, A. E., Adeyemi, A. H., Okobi, O. E., et al. (2023, August 25). Analyzing trends in suicide attempts among the pediatric population in the United States: A study using CDC's Youth Risk Behavior Surveillance System (YRBSS) database. *Cureus, 15*(8), e44099. https://doi.org/10.7759/cureus.44099

Baiden, P., Mengo, C., & Small, E. (2021). History of physical teen dating violence and its association with suicidal behaviors among adolescent high school students: Results from the 2015 Youth Risk Behavior Survey. *Journal of Interpersonal Violence*, *36*(17-18), NP9526–NP9547. https://doi.org/10.1177/0886260519860087

Baiden, P., Xiao, Y., Asiedua-Baiden, G., LaBrenz, C., & Boateng, G., Graaf, G., & Muehlenkamp, J. (2020). Sex differences in the association between sexual violence victimization and suicidal behaviors among adolescents. *Journal of Affective Disorders Reports, 1*. https://doi.org/10.1016/j.jadr.2020.100011

Barker, L. C., Stewart, D. E., & Vigod, S. N. (2019). Intimate partner sexual violence: An often overlooked problem. *Journal of Women's Health (2002)*, *28*(3), 363–374. https://doi.org/10.1089/jwh.2017.6811

Basile, K. C., & Smith, S. G. (2011). Sexual violence victimization of women: Prevalence, characteristics, and the role of public health and prevention. *American Journal of Lifestyle Medicine, 5*(5), 407–417. https://doi.org/10.1177/1559827611409512

Belshaw, S.H., Siddique, J.A, Tanner, J., & Osho, G.S. (2012). The relationship between dating violence and suicidal behaviors in a national sample of adolescents. *Violence and Victims, 27*(4), 580-591. https://doi.org/10.1891/0886-6708.27.4.580.

Breiding, M.J., Basile, K.C., Smith, S.G., Black, M.C., & Mahendra, R.R. (2015). *Intimate Partner Violence Surveillance Uniform Definitions and Recommended Data Elements Version 2.0*. CDC. www.cdc.gov/violenceprevention/pdf/ipv/intimatepartnerviolence.pdf.

Buettner, K., Sablan, J., Funk, M., Arriola, J., Price, S., Sugiura, K., Diminic, S., & Drew, N. (2013). WHO profile on mental health in development (WHO proMIND): Commonwealth of the Northern Mariana Islands. Geneva, World Health Organization. https://apps.who.int/iris/handle/10665/85304

Centers for Disease Control and Prevention (2022). Suicide prevention: Facts about suicide. https://www.cdc.gov/suicide/facts/index.html

Centers for Disease Control and Prevention. (2020). *2019 Software for Analysis of YRBS Data*. https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2019/2019_YRBS_analysis_software.pdf

Chang, T., & Subramaniam, P. R. (2008). Asian and Pacific Islander American men's help-seeking: Cultural values and beliefs, gender roles, and racial stereotypes. *International Journal of Men's Health, 7*(2), 121–136. https://doi.org/10.3149/jmh.0702.121

Choi, N. G., DiNitto, D. M., Marti, C. N., & Segal, S. P. (2017). Adverse childhood experiences and suicide attempts among those with mental and substance use disorders. *Child Abuse & Neglect*, *69*, 252–262. https://doi.org/10.1016/j.chiabu.2017.04.024

Edwards, V. J., Freyd, J. J., Dube, S. R., Anda, R. F., & Felitti, V. J. (2012). Health outcomes by closeness of sexual abuse perpetrator: A test of betrayal trauma theory. *Journal of Aggression, Maltreatment & Trauma, 21*(2), 133–148. https://doi.org/10.1080/10926771.2012.648100

Else, I. R., Goebert, D. A., Bell, C. K., Carlton, B., & Fukuda, M. (2009). The relationship between violence and youth suicide indicators among Asian American and Pacific Islander youth. *Aggression and Violent Behavior, 14*(6), 470-477. https://doi.org/10.1016/j.avb.2009.07.009

Encinares, E. (2016, Oct. 7). 167 survivors sought relief from the family court. *Saipan Tribune*. Retrieved from https://www.saipantribune.com/news/local/167-survivors-sought-relief-from-the-family-court/article_98c56dec-958e-585a-818b-bde30893e414.html

Erediano, E. T. (2022, February 15). Bill to help NMI Access Mental Health Services. *Marianas Variety News & Views*. https://www.mvariety.com/news/bill-to-help-nmi-access-mental-health-services/article_0fa69de6-8d86-11ec-9c5e-473b06b932fc.html?msclkid=a4d9ae99b30711ecbad88c7cdd03a74b

Farrell, D. (1991). *History of the Northern Mariana Islands*, *Commonwealth of the Northern Mariana Islands:* Public School System, CNMI.

Goldston, D. (2005). Conceptual issues in understanding the relationship between suicidal behavior and substance use in adolescence. *Drug and alcohol dependence*. 76 Suppl. S79-91. 10.1016/j.drugalcdep.2004.08.009.

Goldston, D. B., Molock, S. D., Whitbeck, L. B., Murakami, J. L., Zayas, L. H., & Hall, G. C. (2008). Cultural considerations in adolescent suicide prevention and psychosocial treatment. *The American psychologist*, *63*(1), 14–31. https://doi.org/10.1037/0003-066X.63.1.14

Holt, M. K., Vivolo-Kantor, A. M., Polanin, J. R., Holland, K. M., DeGue, S., Matjasko, J. L., Wolfe, M., & Reid, G. (2015). Bullying and suicidal ideation and behaviors: a meta-analysis. *Pediatrics*, *135*(2), e496–e509. https://doi.org/10.1542/peds.2014-1864

Jina, R., & Thomas, L.S. (2013). Health consequences of sexual violence against women. *Best Practice & Research Clinical Obstetrics & Gynecology, 27*(1), 15–26. https://doi.org/10.1016/j.bpobgyn.2012.08.012

Joyal, S. L. (2013). *Relationship violence and suicidality among high school students* (Order No. 1533153). [Doctoral Dissertation]. ProQuest Dissertations and Theses Global.

Kim, Y. S., & Leventhal, B. (2008). Bullying and suicide. A review. *International Journal of Adolescent Medicine and Health*, *20*(2), 133–154. https://doi.org/10.1515/ijamh.2008.20.2.133

Kwan, P. P., Soniega-Sherwood, J., Esmundo, S., Watts, J., Pike, J., Sabado-Liwag, M., & Palmer, P. H. (2020). Access and utilization of mental health services among Pacific Islanders. *Asian American Journal of Psychology, 11(2)*, 69–78. https://doi.org/10.1037/aap0000172

Lee, S., Martinez, G., Ma, G. X., Hsu, C. E., Robinson, E. S., Bawa, J., & Juon, H. S. (2010). Barriers to health care access in 13 Asian American communities. *American Journal of Health Behavior*, *34*(1), 21–30. https://doi.org/10.5993/ajhb.34.1.3

Lowry, R., Eaton, D. K., Brener, N. D., & Kann, L. (2011). Prevalence of health-risk behaviors among Asian American and Pacific Islander high school students in the U.S., 2001-2007. *Public Health Reports (Washington, D.C.: 1974)*, *126*(1), 39–49. https://doi.org/10.1177/003335491112600108

Maurin, I. (2019, September 13). Breaking the silence on suicide: The silent killer in the CNMI. *Saipan Tribune*. https://www.saipantribune.com/index.php/breaking-the-silence-on-suicide-the-silent-killer-in-the-cnmi/

Mondin, T.C., Cardoso, T de A., Jansen, K., Konradt, C.E., Zaltron R.F., Behenck, M. de O., de Mattos, L.D., & da Silva, R.A. (2016). Sexual violence, mood disorders and suicide risk: a population-based study. *Cien Saude Coletiva, Mar 21*(3):853-60. https://doi.org/10.1590/1413-81232015213.10362015

National Institute of Mental Health. (n.d.) *Suicide*. https://www.nimh.nih.gov/health/statistics/suicide.shtml#part_154973

Nelon, J. L., De Pedro, K. T., Gilreath, T. D., Patterson, M. S., Holden, C. B., & Esquivel, C. H. (2019). A latent class analysis of the co-occurrence of sexual violence, substance use, and mental health in youth. *Substance Use & Misuse*, *54*(12), 1938–1944. https://doi.org/10.1080/10826084.2019.1618337

Ruch, D. A., & Bridge, J. A. (2022). Epidemiology of suicide and suicidal behavior in youth. In *Youth Suicide Prevention and Intervention* (pp. 3-12). Springer, Cham.

Saipan Tribune. (2001, April 04). Cases of Suicide in CNMI alarm officials. https://www.saipantribune.com/index.php/96e7ef0e-1dfb-11e4-aedf-250bc8c9958e/

Sakamoto, J. L., Shibanuma, A., & Jimba, M. (2020). Depressed mood, suicidal behaviors, and health risk behaviors among youths in the Commonwealth of the

Northern Mariana Islands: the 2017 CNMI Youth Risk Behavior Survey. *BMC Public Health*, *20*(1), 489. https://doi.org/10.1186/s12889-020-08663-z

Schulte, M. T., & Hser, Y. I. (2014). Substance use and associated health conditions throughout the lifespan. *Public Health Reviews*, *35*(2). https://web-beta.archive.org/web/20150206061220/http://www.publichealthreviews.eu/upload/pdf_files/14/00_Schulte_Hser.pdf. https://doi.org/10.1007/BF03391702

Smith, A. U., Reidy, D., & Norris, A. E. (2020). Teen dating violence and suicide risk among bisexual adolescents. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine*, *67*(5), 685–691. https://doi.org/10.1016/j.jadohealth.2020.04.014

Subica, A. M., & Wu, L. T. (2018). Substance use and suicide in Pacific Islander, American Indian, and Multiracial youth. *American journal of preventive medicine*, *54*(6), 795–805. https://doi.org/10.1016/j.amepre.2018.02.003

Thapar, A., Collishaw, S., Pine, D. S., & Thapar, A. K. (2012). Depression in adolescence. *Lancet (London, England)*, *379*(9820), 1056–1067. https://doi.org/10.1016/S0140-6736(11)60871-4

The World Bank. (n.d.) *Northern Mariana Islands*. Retrieved April 18, 2022, from https://data.worldbank.org/country/MP

Tomasula, J. L., Anderson, L. M., Littleton, H. L., & Riley-Tillman, T. C. (2012). The association between sexual assault and suicidal activity in a national sample. *School Psychology Quarterly*, *27*(2), 109–119. https://doi.org/10.1037/a0029162

U.S. Department of Health and Human Services. (n.d.). *Overview of the State - Northern Mariana Islands - 2020*. HRSA.gov.

https://mchb.tvisdata.hrsa.gov/Narratives/Overview/ad48c169-b39e-4883-84a0-ea7e5bcf9695

Vagi, K. J., O'Malley Olsen, E., Basile, K. C., & Vivolo-Kantor, A. M. (2015). Teen dating violence (physical and sexual) among US high school students: Findings from the 2013 National Youth Risk Behavior Survey. *JAMA pediatrics*, *169*(5), 474–482. https://doi.org/10.1001/jamapediatrics.2014.3577

Variety News Staff. (2011, April 13). 60-80% of sexual violence crimes unreported. *Marianas Variety.* https://mvariety.com/news/local/60-80-of-sexual-violence-crimes-unreported/article_45a9414e-2e46-5d95-a923-350435385105.html

U.S. Census Bureau. (2020). *DECIA Northern Mariana Islands Demographic Profile. (Table DP1 General Demographic Characteristics). U.S. Department of Commerce.*

https://data.census.gov/table?g=0400000US69&d=DECIA+Northern+Mariana+Islands+Demographic+Profile&tid=DECENNIALDPMP2020.DP1.

U.S. Census Bureau. (2020). *DECIA Northern Mariana Islands Demographic Profile.*

(Table DP2 Selected Social Characteristics). U.S. Department of Commerce.

https://data.census.gov/table?g=0400000US69&d=DECIA+Northern+Mariana+Islands+Demographic+Profile&tid=DECENNIALDPMP2020.DP2.

Watts, C., & Zimmerman, C. (2002). Violence against women: global scope and magnitude. *Lancet (London, England)*, *359*(9313), 1232–1237. https://doi.org/10.1016/S0140-6736(02)08221-1

World Health Organization. (n.d.). *Mental health in the Western Pacific.* https://www.who.int/westernpacific/health-topics/mental-health.

Wu, L., & Blazer, D. (2015). Substance use disorders and co-morbidities among Asian Americans and Native Hawaiians/Pacific Islanders. *Psychological Medicine, 45*(3), 481-494. https://doi:10.1017/S0033291714001330

Wong, S. S., Sugimoto-Matsuda, J. J., Chang, J. Y., & Hishinuma, E. S. (2012). Ethnic differences in risk factors for suicide among American high school students, 2009: The vulnerability of multiracial and Pacific Islander adolescents. *Archives of suicide research, 16*(2), 159-173. https://doi.org/10.1080/13811118.2012.667334

Wyatt, L. C., Ung, T., Park, R., Kwon, S. C., & Trinh-Shevrin, C. (2015). Risk factors of suicide and depression among Asian American, Native Hawaiian, and Pacific Islander youth: A systematic literature review. *Journal of health care for the poor and underserved, 26*(2 0), 191 – 273. https://doi:10.1353/hpu.2015.00