



Research Article

Copyright © All rights are reserved by Venida Gray

Social Support and Mental Health Problems are Correlated with Substance Use among Middle and High School Students

Venida Gray*

Department of Nursing, Boston, Massachusetts, USA

*Corresponding author: Venida Gray, Department of Nursing, Boston, Massachusetts, USA, Email: venidag65@gmail.com

Received Date: July 14, 2021

Published Date: September 20, 2021

Abstract

Substance use is a major public health concern, and it may be correlated with mental health problems and inadequate social support. Youths who do not receive early intervention may be at high risk for substance use. The purpose of this study is to assess the correlation between mental health problems and substance use as well as substance use and social support among middle school and high school students, using secondary data from Maine Integrated Youth Health Survey. Logistic regressions were used to assess the correlation between the variables that measured substance use, social support, and mental health problems. The results showed that there was a statistically significant correlation between mental health problems and substance use as well as between substance use and social support among youths who are in middle and high school. By evaluating the correlation among substance use, mental health problems, and social support in middle school and high school students, focused interventions may be developed by providers and teachers to prevent substance use among youths.

Keywords: Substance Use; Mental Health problems; Youths; Young Adult; Social support; Middle and High school

Introduction

Substance use is a major public health concern and may be correlated with mental health problems [1] and inadequate social support over time [2]. Risk factors for substance use are widely considered to include parents' substance use and prescription opioid misuse [3]. Substance use may be prevalent not only in the adult population but also among students before they reach their adult years. Substance use among youths, in particular, may be associated with the level of social support available to the individual and may also be associated with mental health problems [4]. Substance use in this study referred to the use of legal or illegal substances without a prescription.

Manwell LA, et al. [5], defined mental health problems as the absence of mental disease, which includes the biological, psychological, and social factors that could affect a person's mental

state and their function in society. Mental health is an individual's state of well-being, where these individuals understand their potential, can cope with daily stress in their daily life, be productive, and contribute to their community [4].

Social support is a formal or informal relationship that an individual has with another person [6]. Social support that comes from family members, friends, and peers is considered informal social support, whereas when it comes from organization and healthcare professionals, it is considered formal social support [6]. Substance use and lack of social support can impact the youths sense of well-being and may result in mental health problems, which could create substantial societal burdens.

Many studies were done to assess the correlation between substance use, social support, and mental health problems in

adults [7-11]. These studies were done in colleges, communities, healthcare, and jails and used for current interventions for people with substance use. These interventions are used for the adult population to help with prevention and a healthier population. More assessment and treatment to help with substance use is necessary to provide youths with the right care [1].

A study conducted by Ni CF, et al. [10], showed that certain age groups, especially youths, were at a higher risk for substance use such as drinking and illicit drug use following inadequate social support, and mental health problems. Mason MJ, et al. [12] and Shahdadi H, et al. [13], maintained that there is a correlation between substance use, social support, and mental health problems and that this should be examined to identify potential risk factors. The authors found that substance use among young adults has increased; therefore, it is necessary to conduct research on substance use, social support, and mental health problems among youths.

Even though studies on the correlation among substance use, social support, and mental health problems were conducted in adults, not much has been studied on how substance use affects mental health problems, and social support in youths in the MS (Middle School) and HS (High School) population. Research is necessary to assess if substance use is correlated with social support and mental health problems in the MS and HS population. Consequently, this study examines if there is a correlation between substance use, social support, and mental health problems among youths in MS and HS population.

By examining the relation between substance use and mental health problems as well as between substance use and social support among youths before they enter their adult years, specific and more focused interventions could be developed to improve outcomes among the youth population. If the correlates of substance use are identified early in a young person's life, interventions could be implemented early, and thus help the youths with substance use to become more productive members of the society [14].

Methods

This study used secondary, quantitative correlational analysis of the data from MIYHS to examine the correlation between substance use and mental health problems as well as substance use and social support. The secondary data used was the MIYHS that was collected by the Maine CDC. The MIYHS was created by the Maine Department of Education and Maine Department of Health and Human Services in 2015. The sampling frames for the MIYHS comprised Maine's public and quasi-public schools that enrolled at least 10 students. In the state of Maine, the MIYHS questionnaire was given to all the students. These students were asked to provide an answer to the questions on the questionnaires after their parents sign a consent form. Individuals selected to participate in the MIYHS research must be a kindergarten-third grade, fifth-sixth grade, seventh-eighth grade (MS), and ninth through 12th grade (HS). MS and HS surveys have four versions, which include Version A, B,

C, and D. Maine Center for Disease Control and Prevention (Maine CDC) provided the data for the MS and HS for MIYHS 2017.

Data collection

After signing a confidentiality agreement and getting IRB approval, access to the data was provided. Since the current study data analysis uses secondary data, the participants did not need to provide informed consent, but the Maine CDC gave data use authorization.

Weighting

This research used a base weight that was pre-computed and provided in the data. The MIYHS 2015 methodology book provides more details on the method for computing the weight. The link to MIYHS 2015 methodology book is provided in the appendix.

Hypothesis

Research Question 1: Using the MIYHS dataset, what is the correlation between substance use and mental health problems among youths who are MS or HS students?

H_0 : There is no correlation between substance use and mental health problems among youths who are MS or HS students.

H_a : There is a correlation between substance use and mental health problems among youths who are MS or HS students.

Research Question 2: Using the MIYHS dataset, what is the correlation between substance use and social support among youths who are MS or HS students?

H_0 : There is no correlation between substance use and social support among youths who are MS or HS students.

H_a : There is a correlation between substance use and social support among youths who are MS or HS students.

Instrument

Variables measuring substance use, mental health problems, and social support were taken from the following questions:

Mental Health Problems

- Item 12: Have you ever felt so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities;
- Item 14: Have you ever seriously thought about killing yourself.
- Item 20: During the past 12 months, did you ever seriously consider attempting suicide.

Substance Use

- Item 32: Have you ever used an electronic vapor product,
- Item 45: About how many adults over 21 have you known with personally who in the past year have used marijuana, crack, cocaine, or other drugs.

- Item 63: During the past 30 days, how many times did with you take a prescription drug (such as Oxycodone, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription.
- Item 69: During your life, how many times have you used with any form of cocaine, including powder, crack or freebase,
- Item 71: During your life, how many times have you used with methamphetamines, also called meth, speed, crystal, crack, or ice) are the construct for substance use.
- Item 85: About how many adults over 21 have you known with personally who in the past year have used marijuana, crack, cocaine, or other drugs.

Social Support

- Item 107: I have support from adults other than my parents;

- Item 108: I have a family that gives me love and support.

Method of analysis

To answer these research questions, I used univariate and multivariable odds ratio from logistic regression models to determine the relationship, direction, strength, and significance between the mental health problems variable and social support. The multivariable regression adjusted for adults over 21 years old around participants who have used substance in the past. This was meant to account for the influence of adults.

Result

Demographics

Of the 35,503 HS respondents that participated in the study, 17,742 were females, 17,395 were male. Most of the responders (90.0%) were white, and a few (0.1%) of the participant were Native Hawaiian or other Pacific Islander. Table 1 shows the demographic characteristics of the respondents.

Table 1: Demographics.

Characteristics	HS (High School)				MS (Middle School)			
	Actual count	Weighted count	%	95% CI	Actual count	Weighted count	%	95% CI
Age (years)								
10 or younger	N/A	N/A	N/A	N/A	20	19	0.1	0.0, 0.1
11	N/A	N/A	N/A	N/A	65	89	0.3	0.2, 0.4
12 or younger	160	190	0.3	0.3, 0.4	5038	7384	27.2	26.0, 28.5
13	83	109	0.2	0.1, 0.3	9059	13264	48.9	48.0, 49.8
14	5193	7354	13.3	12.8, 13.9	4153	6105	22.5	21.5, 23.5
15	9359	13532	24.6	24.0, 25.2	167	235	0.9	0.7, 1.1
16	9185	13962	25.3	24.8, 25.9	18	21	0.1	0.0, 0.1
17	7887	13502	24.5	23.8, 25.2	N/A	N/A	N/A	N/A
18 or older	3524	6439	11.7	11.0, 12.4	N/A	N/A	N/A	N/A
Sex								
Female	17742	26456	48.3	47.7, 49.0	9158	13071	48.5	47.6, 49.4
Male	17395	28296	51.7	51.0, 52.3	9234	13871	51.5	50.6, 52.4
Grades								
7th	N/A	N/A	N/A	N/A	9220	13508	50.2	48.5, 52.0
8th	N/A	N/A	N/A	N/A	9069	13301	49.5	47.7, 51.2
9th	9698	13681	25.0	24.3, 25.8	N/A	N/A	N/A	N/A
10th	9465	13873	25.4	24.7, 26.0	N/A	N/A	N/A	N/A
11th	8636	13517	24.7	24.1, 25.4	N/A	N/A	N/A	N/A
12th	7100	13386	24.5	23.4, 25.6	N/A	N/A	N/A	N/A
Ungraded or other grade	149	200	0.4	0.3, 0.5	63	82	0.3	0.2, 0.4
Ethnicity Hispanic or Latino								
Yes	1849	1500	2.8	2.6, 3.0	958	668	2.7	2.4, 2.9
No	32706	52282	97.2	97.0, 97.4	16228	24483	97.3	97.1, 97.6

Table 1: Demographics Continues.

Characteristics	HS (High School)				MS (Middle School)			
	Actual count	Weighted count	%	95% CI	Actual count	Weighted count	%	95% CI
Race American Indian or Alaskan Native	951	725	1.4	1.2, 1.5	576	402	1.6	1.4, 1.8
Asian Black or African American	1133	984	1.8	1.3, 2.5	351	251	1	0.8, 1.2
	1086	892	1.7	1.1, 2.5	648	455	1.8	1.1, 3.0
Hispanic Native Hawaiian or Other Pacific Islander	1849	1500	2.8	2.6, 3.0	958	668	2.7	2.4, 3.0
	95	77	0.1	0.1, 0.2	61	43	0.2	0.1, 0.2
White Multiple Races	27644	47920	90	88.8, 91.1	13414	22346	90	88.6, 91.3
	1444	1158	2.2	2.0, 2.4	942	659	2.7	2.4, 2.9

There were 18,706 respondents in the data for MS; of which, 9,158 were female, 9,234 were male. Most of the respondents (90.0%) in MS data were whites, while (0.9%) were Native Hawaiian or other Pacific Islander.

Answers for the Research Questions

Research Questions 1: Using the MIYHS dataset, what is the correlation between substance use and mental health problems among youths who are MS or HS students?

High school: Frequencies: Of the 26,034 weighted participants for HS, approximately (14.7%) of the participants indicated they seriously consider attempting suicide during the past 12 months, while 85.3% indicated not seriously consider attempting suicide. About four percent (4.3%) of the participants indicated that they had used cocaine, including powder, crack, or freebase, whereas 95.7% have indicated no use of cocaine, including powder, crack, or freebase. Table 2 presents the prevalence of mental health and substance use among HS students.

Table 2: Prevalence of Mental Health and Substance Use Among HS Students.

Items	Actual count	Weighted count	Percent: 95% CI
Ever seriously consider attempting suicide during the past 12 months			
Yes	5296	3827	14.7
No	29416	22207	85.3
Have you used any form of cocaine, including powder, crack or freebase			
Yes	860	1112	4.3
No	16130	24922	95.7

High school: Univariate odds ratio: The odds of seriously consider attempting suicide during the past 12 months among participants who used any form of cocaine, including powder, crack or freebase were 3.94 (CI: 3.36,4.61) times that of the odds among participants who do not use any form of cocaine, including powder, crack or freebase. In other words, the use of any form of cocaine,

including powder, crack, or freebase was associated with 293% higher odds of seriously considering attempting suicide in the past 12 months. Since the 95% confidence interval for the odds excludes one (1), the odds are statistically significant. Table 2 presents the univariate analysis of the participants. Table 3 presents the odds ratio.

Table 3: Univariate and Multivariable Odds Ratio for Assessing the Correlation Between Substance Use and Mental Health Problems Among HS Students.

Items	Univariate odds ratio (95% CI)	Multivariable odds ratio (95% CI)
Have you used any form of cocaine, including powder, crack or freebase		
Yes vs. No	3.935 (3.360, 4.608)	3.057 (2.383, 3.924)

Note: Dependent variable: Ever seriously consider attempting suicide during the past 12 month. The multivariable logistic regression adjusted for the following question: About how many adults over 21 have you known personally who in the past year have used marijuana, crack, cocaine, or other drugs?

High school: Multivariable or adjusted odds ratio: Controlling for adults over 21 around participants who have used illegal substances in the past, the odds of ever seriously considering

attempting suicide during the past twelve months among participants who indicated they used cocaine, including powder, crack or freebase was 3.057 times that of the odds among

participants who indicated no use of cocaine, including powder, crack or freebase. This suggests that the substance use was associated with 205.7% higher odds of ever seriously considering attempting suicide during the past twelve months. Table 3 presents the adjusted odds ratio for assessing association between mental health and substance use.

Middle school: Frequencies: Of the 12,961 weighted participants for MS, approximately sixteen percent (16.5%) of the participants seriously thought about killing themselves, while 83.5% indicated no thought about killing themselves. About 10.3%

of the participants indicated ever using an electronic vapor product, whereas 89.7% have indicated no use of an electronic vapor product. The odds of participants thought about suicide were 3.692 (CI: 3.174, 4.294) times that of the odds among participants who do not use electronic vapor product. In other words, the use of electronic vapor product was associated with 269% higher odds of seriously thought about killing oneself. Since the 95% confidence interval for the odds excludes one (1), the odds are statistically significant. Table 4 presents the frequency and prevalence of substance use and mental health problems among the MS participants.

Table 4: Frequency of Prevalence of Substance Use and Mental Health Problems Among MS Students.

Items	Actual count	Weighted count	Percent: 95% CI
Have you ever seriously thought about killing yourself			
Yes	3074	2142	16.5
No	15155	10820	83.5
Have you ever used an electronic vapor product			
Yes	991	1339	10.3
No	8072	11622	89.7

Middle school: Multivariable or adjusted odds ratio: Have you ever seriously thought about killing yourself (dependent variable). Have you ever used an electronic vapor product (independent

variable). The model did not converge for the MS. Table 5 presents the univariate and multivariable odds ratio for the correlation between substance use and mental health.

Table 5: Univariate and Multivariable Odds Ratio for Assessing the Correlation Between Substance Use and Mental Health Problems Among MS Students.

Items	Univariate odds ratio (95% CI)	Multivariable odds ratio (95% CI)
Have you ever used an electronic vapor product		
Yes vs. No	3.692 (3.174, 4.294)	Model did not converge

Note: Dependent variable: Have you ever seriously thought about killing yourself. The multivariable logistic regression adjusted for the following question: About how many adults over 21 have you known personally who in the past year have used marijuana, crack, cocaine, or other drugs?

Research Question 2: Using the MIYHS dataset, what is the correlation between substance use and social support among youths who are MS or HS students?

are statistically significant. Table 6 presents the odds ratio for the assessment of substance use social support.

High School: Univariate Odds Ratio: The odds of using any form of cocaine, including powder, crack, or freebase among participants who have family that give them love and support was 0.115 (CI: 0.095, 0.140) times that of the odds among participants without family who give them love and support. In other words, family support is associated with 88% lower odds of using any form of cocaine, including powder, crack, or freebase. Since the 95% confidence interval for the odds excludes one (1), the odds

High School: Multivariable or Adjusted Odds Ratio: Controlling for adults over 21 around participants who have used substance in the past, the odds of substance use among participants who indicated having family love and support was 0.115 times that of the odds of substance use among participants who indicate not having family love and support. This suggests that the use of drugs was associated with 88.5% lower odds of family love and support. Table 6 presents the adjusted odds ratio.

Table 6: Univariate and Multivariable Odds Ratio for Assessing the Association Between Substance Use and Social Support Among HS Students.

Items	Univariate odds ratio (95% CI)	Multivariable odds ratio (95% CI)
Family give me love and support		
Yes vs. No	0.115 (0.095, 0.140)	0.115 (0.083, 0.160)

Note: Dependent variable: Have you ever seriously thought about killing yourself. The multivariable logistic regression adjusted for the following question: About how many adults over 21 have you known personally who in the past year have used marijuana, crack, cocaine, or other drugs?

Middle school: Frequency: Of the 18,693 weighted count among MS participants, approximately one percent (1.4%) of the participants indicated that during the past 30 days they took a prescription drug (such as Oxycodone, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescriptions, while 98.6% indicated that during the past 30 days they did not use a prescription drug without a doctor's prescriptions. About ninety-seven percent (97.4%) of the participants indicated that family gives them love and support, whereas 2.6% indicated not having love and support from family. Table 7 presents the frequency and prevalence of substance use and social support among MS participants.

Middle School: Univariate Odds Ratio: The odds of taking a

prescription drug (such as Oxycodone, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription during the past 30 days among participants who have family that give them love and support was 0.124 (CI: 0.084, 0.182) times that of the odds among participants who do not have family that give them love and support. In other words, family love and support are associated with 88% lower odds of taking a prescription drug without a doctor's prescription during the past 30 days. Since the 95% confidence interval for the odds excludes one (1), the odds are statistically significant. Table 8 presents the odds ratio for assessing the association between substance use and social support among MS students.

Table 7: Frequency of Prevalence of Substance use and Social Support Among MS Student.

Items	Actual count	Weighted count	Percent: 95% CI
Family give me love and support			
Yes	12458	6273	97.4
No	435	169	2.6
During the past 30 days, did you take a prescription drug (such as Oxycodone, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescriptions			
Yes	275	259	1.4
No	17212	18434	98.6

Middle School: Multivariable or Adjusted Odds Ratio: Controlling for adults over 21 around participants who have used substance in the past for MS, the odds of using prescription drugs among participants who indicated their family gives them love and support was 0.122 times the odds among participants who indicated

their family did not give them love and support. This suggests that family love and support are associated with 87.8% lower odds of using prescription drugs. Table 8 presents the adjusted odds ratio for assessing the association between substance use and social support among MS students.

Table 8: Univariate and Multivariable Odds Ratio for Assessing the Association Between Substance Use and Social Support Among MS Students.

Items	Univariate odds ratio (95% CI)	Multivariable odds ratio (95% CI)
Family give me love and support		
Yes vs. No	0.124 (0.084, 0.182)	0.122 (0.061, 0.244)

Note: Dependent: During the past 30 days, did you take a prescription drug (such as Oxycodone, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription. The multivariable logistic regression adjusted for the following question: About how many adults over 21 have you known personally who in the past year have used marijuana, crack, cocaine, or other drugs?

Discussion

The current study finds that social support from family is associated with lower odds of feeling sad or hopeless almost every day for 2 weeks or more in the past 12 months among youths. These findings are consistent with previous literature that stated that providing social support in the family and the community helps decrease distress and promote hope [2]. However, the current study focused on youths, whereas previous research focused on adulthood.

The results of this study suggest that social support is associated with lower odds of having mental health problems. The association between mental health and social support can be explained using RRT. This theory states that individuals improve their mental health through the diversity of relationships [15], and social support is an

example of diversity of relationships.

These findings are consistent with previous literature, which showed that substance use may be associated with social support [12]. The association between social support and substance use can be explained using the self-medication theory. Substance use is a problem worldwide, and it is a risk factor for many health problems. By considering the correlation between substance use and social support, implementation of programs and policies that discourage substance use among youths could be implemented.

In this current study, the results show that family support is associated with lower odds of substance use including any form of cocaine, including powder, crack, or freebase. The result of this study also suggests that family love and support are associated with lower odds of taking a prescription drug (e.g., Oxycodone, Percocet,

Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription. These findings are consistent with previous literature that suggests that college students with no positive social networks are at higher risk for using a substance, including alcohol, tobacco, and marijuana. Support from spouse and family may be protective to prevent substance use [12,16]. This study extends the body of knowledge about correlation between substance use and social support because the current study focused on youths, whereas previous studies focused on college students and older adults. The RRT and the self-medication theory may be used to explain the association between social support and substance use.

This study also suggests that using an electronic vapor product is associated with higher odds of serious thought about killing oneself. These findings are consistent with previous literature that showed that substance use might be associated with a mental health problem such as suicide [12]. Substance use is a problem worldwide, and it is a risk factor for many health problems. Identifying the correlation between substance use and mental health problems could help investigator implement programs and policies to discourage substance use among youths.

This study used a cross-sectional, retrospective, correlational design. Longitudinal and cohort studies are recommended for future study in the MS and HS population. Longitudinal study will help identify trends over time. This study focused on the analysis of the MS and HS students' data from the MIYHS. A future cross-sectional study with other states is recommended to compare the study results across the entire United States. The literature suggests that correlation between mental health problems and social support has been reported in different countries and states, such as American Indians from the Eastern Tribe, American Indians [10], Oru camp near Ago-Iwoye in Ogun state, Nigeria [7]. It is recommended that early social support may help prevent mental health problems in youths [2]. It is also recommended that practitioners develop focused age-specific interventions for students at risk for mental health problems and to plan prevention programs for school-aged youths. According to the University of Minnesota [17], social support can enhance the quality of an individual's life by providing a buffer in times of crisis.

Conclusion

Substances use is associated mental health problems such as suicide, and this could affect an individual's health. Therefore, identifying substance use early is essential, so that intervention can be implemented early to help youths live their best life. The results from this study convey that substance use is associated with mental health among MS and HS students. Findings from the study showed that social support is associated with substance use among MS and HS youths. By identifying social support early in a young person's life, intervention may be implemented early to help youths become more productive in society. More research in other states is necessary to affirm the study result for the study. Further research concerning substance use correlation with mental health problems must get conducted. Findings from the study showed that lack of

social support might lead to substance use and affect the well-being of MS and HS youth. Future research in a different state is needed in validating the finding of the study and more research on substance use correlated mental health problems and social support should be conducted in the future.

Acknowledgement

None.

Conflict of Interest

Author declare no conflict of interest.

References

1. Conway KP, Green VR, Kasza KA, Silveira ML, Borek N, et al. (2018) Co-occurrence of tobacco product use, substance use, and mental problems among youth: Findings from wave 1 (2013-2014) of the population assessment of tobacco and health (PATH) study. *Addict Behav* 76: 208-217.
2. Holden L, Dobson AJ, Ware RS, Hockey R, Lee C (2015) Longitudinal trajectory patterns of social support: Correlates and associated mental health in an Australian national cohort of young women. *Qual Life Res* 24(9): 2075-2086.
3. Kerr DCR, Tiberio SS, Capaldi DM, Owen LD (2020) Paternal and maternal prescription opioid use and misuse: General and specific risks for early adolescents' substance use. *Addict Behav* 103: 106248.
4. Cheng Y, Li X, Lou C, Sonenstein FL, Kalamar A, et al. (2014) The association between social support and mental health among vulnerable adolescents in five cities: Findings from the study of the well-being of adolescents in vulnerable environments. *J Adolesc Health* 55 (6 Suppl): S31-S38.
5. Manwell LA, Barbic SP, Roberts K, Durisko Z, Lee C, et al. (2015) What is mental health? Evidence towards a new definition from a mixed methods multidisciplinary international survey. *BMJ Open* 5(6): e007079.
6. Joni LS, Leonard EE (2013) The impact of social support on outcomes in adult patients with type 2 diabetes: Systematic review. *Curr Diab Rep* 12(6): 769-781.
7. Amosu SM, Onifade PO, Adamson TA (2016) Psychoactive substance use and general mental health among refugees in a Nigerian camp. *Journal of Substance Use* 21(3): 230-236.
8. Firestone M, Smylie J, Maracle S, McKnight C, Spiller M, et al. (2015) Mental health and substance use in an urban First Nations population in Hamilton, Ontario. *Can J Public Health* 106(6): e375-e381.
9. Jibeen T (2016) Perceived social support and mental health problems among Pakistani university students. *Community Ment Health J* 52(8): 1004-1008.
10. Ni CF, Harrington CE, Wilkins Turner F (2017) Mental health conditions and substance use among American Indians from eastern tribes. *Journal of Multicultural Counseling and Development* 45(1): 20-36.
11. Zhuang XY, Wong DFK (2017) Differential impacts of social support on mental health: A comparison study of Chinese rural-to-urban migrant adolescents and their urban counterparts in Beijing, China. *International Journal of Social Psychiatry* 63(1): 48-56.
12. Mason MJ, Zaharakis N, Benotsch EG (2014) Social Networks, Substance Use, and mental health in college students. *J Am Coll Health* 62(7): 470-477.
13. Shahdadi H, Mansouri A, Nasiri AA, Bandani E (2017) An assessment of the relationship between social support and mental health of students of Zabol University of Medical Science in 2017. *Middle East Journal of Family Medicine*: 248-252.
14. Costello EJ (2016) Early detection and prevention of mental health problems: Development epidemiology and systems of support. *Journal of clinical child and adolescent psychology. J Clin Child Adolesc Psychol* 45(6): 710-717.

15. John R, Louise M (2013) Relational regulation theory and the role of social support and organisational fairness for nurses in a general acute context. *J Clin Nurs* 22(21-22): 3160-3169.
16. Studer J, Baggio S, Dupuis M, Mohler Kuo M, Daeppen JB, et al. (2017) Substance use in young Swiss men: The interplay of perceived social support and dispositional characteristics. *Subst Use Misuse* 52(6): 798-810.
17. University of Minnesota (2016) Taking charge of your health and wellbeing. University of Minnesota, USA.

Appendix: MIYHS 2015 Methodology Book

<https://data.mainepublichealth.gov/miyhs/files/UpcomingSurvey2017/2015%20MIYHS%20Mho>