

CAPSTONE

THE DEMOGRAPHICS OF MENTAL HEALTH AT UW BOTHELL:
DESCRIPTIVE ANALYSIS

Submitted by

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Abstract

A quantitative analysis of the percentage of students reporting mental health issues at the University of Washington Bothell found nearly one quarter of the study respondents reported that they are dissatisfied or very dissatisfied with their mental or emotional well-being. However, descriptive analysis indicated that no specific demographic was affected by mental health issues more than other groups. The study found that hours of sleep and attitude towards improving and maintaining health are significantly correlated with mental health.

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PURPOSE OF THE STUDY

The intent of this study is to reveal populations at the University of Washington (UW) Bothell who are affected by mental health issues. Colleges across the country are reporting large increases in the prevalence and severity of mental health conditions experienced by students attending their schools (Gruttadaro & Crudo, 2012). According to a 2017 report by the *Center for Collegiate Mental Health*, the lifetime prevalence rates of “threat-to-self” characteristics (non-suicidal self-injury, serious suicidal ideation, and suicide attempts) increased for the seventh year in a row among students seeking treatment (Pennsylvania State University). The UW Bothell might follow this trend.

The number of students who claim that their mental and emotional well-being is poor on the UW campus has not been determined. The vulnerable populations who are the most at risk for mental health issues are unidentified, thus unreachable for adequate care and service to meet their needs. The acknowledgement of the implications of mental health issues on the college campus is imperative to understanding how these issues influence the students’ experiences, academic performance, and retention rates. This study provides the fundamental data for the UW Bothell to implement individualized policy and funding decisions to maximize its effects on mental health on campus.

Identifying populations who are most affected by mental health issues and understanding behaviors and experiences associated with mental health conditions is the critical step to provide support and care on campus. Therefore, the demographic information of students who claim that their mental and emotional health is not good needs to be revealed. Furthermore, this study examines what experiences are associated with mental health issues.

This study analyzes *The UW Bothell College Health Promotion Survey* created by Dr. Jody Early and Dr. Hoa Appel of the School of Nursing and Health Studies at the UW Bothell (Appendix A). The survey asked respondents about their satisfaction regarding their physical and mental well-being. The respondents were students, staff, faculty, and both student and staff on the UW Bothell campus. In this study, responses of students are the focus. Several questions about daily activities and behaviors were included as well as demographic information.

In order to identify populations who are affected by mental health issues and what behaviors and experiences are negatively and positively affected, this study asks the following questions:

1. What is the percentage of students who report their mental health is not good?
2. How does this percentage differ by age, ethnicity, gender identity, years living in the United States, and school?
3. What behaviors or experiences of respondents have a significant correlation with their mental health condition?

It is my intention to persuade the UW Bothell that this study provides sufficient information to begin planning for the delivery of effective support and prevention to improve the mental and emotional well-being of the student population.

REVIEW OF LITERATURE

Nearly a third of college students have suffered depression according to *The Healthy Minds Study 2016-2017 Report*, the national web-based survey examining mental health, service utilization, and related issues among students on 54 college and university campuses across the United States (Healthy Minds Network, 2017). Another national research survey called the *National College Health Assessment*, organized by the American College Health Association (ACHA) reports that 21.6% of 31,463 students on 52 college campuses felt things were hopeless and 54.6% felt exhausted in the last 2 weeks, with exhaustion not being caused by physical activities (2017). In this assessment, 63.1% of the college students who participated in the survey felt very lonely and 67.3% felt very sad sometime within the last 12 months.

Anxiety and depression are the largest growing concerns on college campuses in the U.S. One quarter of college students suffered from anxiety disorders, and one in ten have contemplated suicide (Healthy Minds Network, 2017). Suicide is the second leading cause of death after unintentional injuries within the age group of 10 to 24 years old (Heron, 2017). The survey report called *College Students Speak* by the National Alliance on Mental Illness found that 64% answered “yes” to the question “Are you no longer attending college because of a mental health related reason?” (2012).

Stigma hinders students from seeking help. The same report showed that 50% of the students did not disclose their mental health condition to the college out of concern for possible negative impact because of negative bias. 38% of these students think that the stigma of mental illness is a barrier in accessing mental health services and support (The National Alliance on Mental Illness, 2012). The study shows that school-level stigma is associated with medication use, counseling and therapy visits, and to a lesser degree, informal support (Gaddis, Ramirez, & Hernandez, 2018). Removing stigma and the fear of being judged negatively is necessary for

students to receive the care they need. Stigma can be combated by educating students and staff on campus, and creating an environment where the subject of mental illness can be openly discussed.

UCLA sociology professor S. Michael Gaddis, who conducted the study on mental health stigma above, recalled his experience and struggle as a first-generation college student:

My parents were terrific and supportive but didn't know what the college experience was like," Gaddis said. "I didn't have anyone to fall back on to tell me that my struggling was normal. Mental health plays a big role in this feeling where you get stuck thinking 'I don't think this is for me,' or 'I don't understand what is happening.' And because there is no one from your own family who can really support you in this, it's much harder as a first-generation college student to cross that barrier and say 'I need to go talk to somebody.'" (Wolf, 2018)

Both first generation and international college students face struggles and events that trigger mental health problems. International students voiced experience of a range of economic, social and academic pressures which appear to be different in degree and often in kind from those experienced by 'home' students (Bradley, 2000). Adjusting to a new culture can be a stressful and life-changing event for some international students. The recent political climate intensifies existing issues of prejudice, discrimination, and microaggression. The existence and impact of these experiences shape and inform international students' lives in our communities and affect their adjustment on our campus (Prieto-Welch, 2016). Research indicates that international students' usage rates of counseling center services are lower than that of domestic students (Masuda et al., 2009). Susan L. Prieto-Welch, who works with international students at an institution in the United States explains:

International students' concept of mental health itself may be different, and there may be stigma that poses a barrier to help-seeking. Language differences and low language proficiency may be another barrier to help-seeking, as can cultural differences between mental health professionals and the international student. By the time these students seek help, symptoms may have developed and intensified. (Prieto-Welch, 2016)

Some cultures have negative attitudes towards mental illness and avoid social discussion.

The promotional material issued by the US Department of Health and Human Services says that one out of every 11 Hispanic or Latino youths reported having had a major depressive episode in 2013, and Hispanic and Latino youth were also less likely to access mental health care than White youth (Healthy People 2020, 2016). An article in the *Washington Post* also reported that American Indian and Alaska Native young adults have the highest rates of suicide in the United States at nearly 3 to 10 times more than other racial and ethnic groups (Horowitz, 2014). Another study presented that prevalence and treatment rates differ across races and ethnicities, tending to burden minority groups with worse mental health and less treatment (Frank et al., 2017). Arizona State University professors Holley, Tavassoli, and Stromwall found that people with mental illness who are of color and/or lesbian, gay, or bisexual experience mental health disparities, including within mental health treatment programs (2016). The participants of their study reported that they were ignored/not listened to, not viewed as complex individuals, experienced condescension/lack of respect and violations of privacy or other rights, and were presumed lacking intelligence (Holley et al., 2016). These studies and articles suggest that mental health issues for racial and sexual orientation minorities are not treated the same as non-minority individuals. Social stigma is also a factor for students who seek treatment. Stigma likely represents a very important conduit for improving individual mental health, treatment seeking behavior, and adherence (Gaddis, Ramirez, & Hernandez, 2018). Among African-Americans

stigmatization has been noted as one of the major obstacles in accessing mental health services (Masuda et al., 2012). These studies suggest that we need to approach all minority groups to provide equal access and treatment to support and care for their mental health well-being.

METHODOLOGY

The UW Bothell College Health Promotion Survey was created by Dr. Jody Early and Dr. Hoa Appel of the School of Nursing and Health Studies at the UW Bothell. The intention was to learn about physical and behavioral health on the UW Bothell campus, and to improve health and wellness programs and offerings at the Activities & Recreation Center (ARC) on campus.

Participants

272 participants completed the survey in the three week period. They all were related to the UW Bothell in some way: 171 were students, 56 were staff, 25 were faculty, and 14 were both student and staff. Only survey respondents who were students and both students and staff ($n=185$) were included in this study. Convenience sampling was used to gather participants on campus; they took the survey voluntarily by answering the email, filling in the paper copy, or by typing on iPads on campus.

Design and Materials

The survey consists of 40 questions about the health and wellness of participants as well as demographic questions at the end. Most of the questions were multiple choice with some write-in options. Participants' satisfaction regarding physical and mental health, lifestyle, behavior, health insurance, visits to healthcare professional, work, and activities were asked. One blank section was created to share comments or suggestions. The primary measures for this study are satisfaction with mental and emotional well-being and mental health condition in the past 30 days.

The online survey was emailed to UW Bothell students, faculty, and staff during fall quarter of 2017. A few posters were made and posted on campus during that time. Paper copies of the survey were also circulated, and a table was placed in front of the Activities & Recreation Center and the Food for Thought Café located in the campus bookstore where participants

completed the survey on paper and on iPads provided by the survey team. Participants' names were entered into a drawing at the end of the survey period for gift cards and other promotional items. The survey was open for three weeks in both paper and online format.

Dr. Early and Appel used a cross-sectional design for best fit to obtain data and the desired outcomes. Cross-sectional design allows the data to be collected at one point in time (Creswell, 2018). Therefore, no external cause influenced the result of the survey or modified the behavior of participants. It was also useful to compare different variables and other population groups at one point in time.

Data Process Procedure

The online survey was hosted on Catalyst, an online tool provided by the University of Washington. The data file was downloaded directly from Catalyst into an Excel format. Data from the paper copy surveys was entered by a student researcher working on the project. Excel was used to collect all the answers in one place, and the data entry errors were corrected. Each variable was recorded for consistency, and questionable variables were categorized as either a new variable or a missing variable. The Excel file was converted to a CSV file in order to run analyses on IBM Statistical Package for the Social Sciences (SPSS).

Analysis Strategy

The students' responses for each variable were selected for this study. By using the IBM Statistical Package for Social Sciences (SPSS) function keys, descriptive statistics were computed on most of the survey responses in order to answer the Research Question 1: "What is the percentage of students who report their mental health is not good?" Chi-square analysis was used to analyze mental health condition and satisfaction of mental and emotional well-being in order to answer the Research Question 2: "How does this percentage differ by age, ethnicity, gender identity, years living in the United States, and school.

For the Research Question 3, “What behaviors or experiences of respondents have a significant correlation with their mental health condition?” Spearman’s correlation analysis was conducted to determine correlation between these variables:

- How many days they walked or exercised 30 minutes or more in the past 7 days
- How many days they slept at least 7 hours per night in the past 7 days
- How many days they went without a meal due to lack of money in the past 7 days
- How many days they got together with family or friends in the past 7 days
- Attitude towards maintaining or improving their health
- If they have experienced discrimination or been treated unfairly because of their race, ethnic background, gender, religion, or sexual orientation.

Ethical Considerations

The research application to the Institutional Review Board was submitted under the School of Nursing & Health Studies, part of the Human Subjects Division. It was titled *Overview of Health and Wellness at the University of Washington Bothell* by Dr. Early and Dr. Appel on September 8th 2017 and approved on September 19th.

Participation in this survey was completely voluntary. The participants were able to leave answers blank if they didn’t want to answer, and they could stop if they did not wish to proceed. For questions about health insurance, medical condition, discrimination, use of Activities & Recreation Center (ARC), the selection “I don’t know” was provided as one of multiple options. In regard to the question about gender identity, answer “prefer not to answer” was provided as well.

The intent of the survey was addressed in the beginning of the survey as “Your input will be used to strengthen and tailor health and wellness programming and activities for students at UWB.” Name or identifying information was not required for this survey.

RESULTS AND DISCUSSION

Demographics

Among the 272 respondents, 171 (62.9%) were students, 14 (5.1%) were both student and staff, 56 (20.6%) were staff, and 25 (9.2%) were faculty. This analysis extracted a total of 185 students (Table 1). Out of this 185 students, weighted response rates for age were 78.4% between 18-24, 11.9% between 25-30, 4.9% between 31-39, 3.2% between 40-49, 1.6% age 16 or 17. The largest ethnic group comprised Asian/Pacific Islander 38.4%, the second is Caucasian/White 27.0%, the third is African American/African/African Caribbean 10.3%, the fourth is both Hispanic/LatinX and Mixed/2 or more ethnicities groups 9.2%, and 3.8% answered other. There was only one respondent (0.5%) who was American Indian/Native American. Female respondents were 74.1%, while 22.7% were male, 1.1% were non-binary. Four respondents (2.2%) preferred not to answer the gender identity question.

For the question about years living in the U.S., 69.2% answered “I was born here and lived here most or all of my life,” 5.9% lived in the U.S. between 11-20 years, 4.3% were between 6-10 years, 2.7% answered either 1-5 years or over 20 years. Although a write in option was not provided as a choice, 15 respondents (8.1%) wrote various responses such as “3 years old,” “born in Canada,” or “as a toddler.” Thirteen respondents, 7.0% wrote in, “I am an international student.”

For the question “Which of the following school(s) is/are related to your major(s)?” 36.8% were Nursing and Health Studies, 24.3% were STEM, 17.3% were Interdisciplinary Arts & Sciences, 8.6% responded no major decided, 7.0% were Business, 4.3% were double major, and 1.1% were Educational Studies (Table 1).

Table 1

Total sample	N=185
Demographic characteristics	%
Age	
18-24	78.4
25-30	11.9
31-39	4.9
40-49	3.2
16	0.5
17	1.1
Ethnicity	
Caucasian/White	27.0
Hispanic/LatinX	9.2
African American/African/African Caribbean	10.3
Asian/Pacific Islander	38.4
American Indian/Native American	0.5
Mixed/2 or more ethnicities	9.2
Choose not to answer	1.1
Other	3.8
Missing	0.5
Gender	
Female	74.1
Male	22.7
Non-binary	1.1
Prefer not to answer	2.2
Years Living in the US	
1-5 years	2.7
6-10 years	4.3
11-20 years	5.9
Over 20 years	2.7
I was born here	69.2
International student	7.0
Other	8.1
School	
Business	7.0
Interdisciplinary Arts & Sciences	17.3
Nursing and Health Studies	36.8
Educational Studies	1.1
STEM	24.3
No major decided	8.6
Double Major	4.3
Missing	0.5

Research Question 1

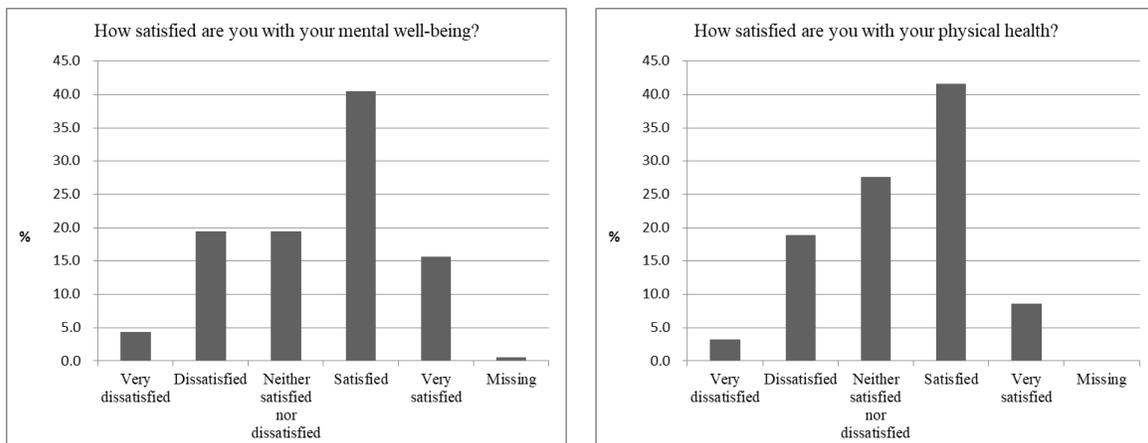
For research question 1, “What is the percentage of students who report their mental health is not good?” descriptive statistics and frequency tables were computed. The survey question, “How satisfied are you with your mental or emotional well-being?” 40.5% responded “satisfied,” 19.5% were “neither satisfied nor dissatisfied,” 19.5% were “dissatisfied,” 15.7% were “very satisfied,” and 4.3% were “very dissatisfied” (Table 2).

Table 2 Question: How satisfied are you with your mental or emotional well-being?

	Frequency	Percentage
Very dissatisfied	8	4.3
Dissatisfied	36	19.5
Neither satisfied nor dissatisfied	36	19.5
Satisfied	75	40.5
Very satisfied	29	15.7
Missing	1	0.5

This finding has a similar curve with the responses to the question “How satisfied are you with your physical health?” 41.6% of the respondents were “satisfied” with their physical health, 27.6% were “neither satisfied nor dissatisfied,” 18.9% were “dissatisfied,” 8.6% were “very satisfied,” and 3.2% were “very dissatisfied” in their physical health (Figure 1).

Figure 1



The survey question about mental health condition was also asked in a different way: “In the past 30 days, how many days would you say your mental health was not good?” 44.3% answered 1-5 days, 18.4% had none, 17.8% had more than 15 days, 11.9% had 6-10 days, and 7.6% had 11-15 days. On the other hand, 24.9% responded none to the question “In the past 30 days, how many days would you say your physical health was not good?” Only 8.6% responded more than 15 days to the physical health being not good while 17.8% answered to the same question about mental health (Table 3).

Table 3

Question: In the past 30 days, how many days would you say your mental health was not good?		
	Frequency	Percentage
None	34	18.4
1-5 days	82	44.3
6-10 days	22	11.9
11-15 days	14	7.6
More than 15 days	33	17.8

Research Question 2

For research question 2, “How does the percentage of the students who report their mental health is not good differ by age, ethnicity, gender identity, years living in the United States, and school?” chi-square tests were conducted. The survey question “How satisfied are you with your mental or emotional well-being?” was examined to identify any significant difference between study variables. The test indicated that there is no statistical differences in mental and emotional well-being for age groups [$X^2(25, N=185) = .054, P < .05$]. However, $P = .054$ is considered to be close to significant.

The chi-square analysis also indicated that there is no significant difference in mental and emotional well-being between different ethnicities; White/Caucasian, Hispanic/LatinX, African American/African/ African Caribbean, Asian/Pacific Islander, American Indian/Native American, Mixed/two or more ethnicities, other, and chose not to answer groups [$X^2(40, N=185) = .096, P < .05$]. Gender identity also had the same result of no significant difference in mental or emotional well-being between female, male, non-binary and not to answer groups [$X^2(15, N=185) = .351, P < .05$]. The years living in the U.S. had no significant difference as well [$X^2(30, N=185) = .415, P < .05$]. The result was the same, no significant difference for attending different schools on the UW Bothell campus [$X^2(35, N=185) = .846, P < .05$]. No specific group by age, ethnicity, gender, years living in the U.S. or school was detected by the analysis. No significant difference was found with international students, either.

In order to confirm the results above, another question, “In the past 30 days, how many days would you say your mental health was not good?” was analyzed by chi-square. This analysis resulted in no significant difference: age [$X^2(20, N=185) = .848, P < .05$], ethnicity [$X^2(32, N=185) = .446, P < .05$], gender [$X^2(12, N=185) = .211, P < .05$], years living in the U.S. [$X^2(24, N=185) = .099, P < .05$], and school [$X^2(28, N=185) = .852, P < .05$] showed no significant difference. There is no significant difference with mental health condition between groups of each study variable; age, ethnicity, gender, years living in the U.S., and school (Table 4).

Table 4

Total sample	Question: How satisfied are you with your mental or emotional well-being?						Chi-squared
	Very dissatisfied	Dissatisfied	Neither	Satisfied	Very satisfied	Missing	<i>P</i> value
Percentage							
Demographic characteristics							
Age							
18-24	4.8	18.6	20.0	41.4	15.2	0.0	0.054
25-30	4.5	27.3	13.6	36.4	18.2	0.0	
31-39	0.0	33.3	33.3	22.2	0.0	11.1	
40-49	0.0	0.0	0.0	66.7	33.3	0.0	
16	0.0	0.0	0.0	0.0	100.0	0.0	
17	0.0	0.0	50.0	50.0	0.0	0.0	
Ethnicity							
Caucasian/White	2.0	22.0	28.0	24.0	22.0	2.0	0.096
Hispanic/LatinX	5.9	17.6	23.5	41.2	11.8	0.0	
African American/African/African Caribbean	0.0	10.5	15.8	52.6	21.1	0.0	
Asian/Pacific Islander	5.6	18.3	18.3	43.7	14.1	0.0	
American Indian/Native American	0.0	0.0	100.0	0.0	0.0	0.0	
Mixed/2 or more ethnicities	5.9	23.5	5.9	58.8	5.9	0.0	
Choose not to answer	0.0	0.0	0.0	50.0	50.0	0.0	
Other	0.0	42.9	0.0	57.1	0.0	0.0	
Missing							
Gender							
Female	4.4	22.6	20.4	38.0	13.9	0.7	0.351
Male	2.4	11.9	11.9	50.0	23.8	0.0	
Non-binary	0.0	0.0	50.0	50.0	0.0	0.0	
Prefer not to answer	25.0	0.0	50.0	25.0	0.0	0.0	
Years Living in the US							
1-5 years	0.0	20.0	0.0	80.0	0.0	0.0	0.415
6-10 years	12.5	25.0	12.5	37.5	12.5	0.0	
11-20 years	9.1	9.1	45.5	36.4	0.0	0.0	
Over 20 years	0.0	80.0	0.0	20.0	0.0	0.0	
I was born here	3.9	18.0	21.1	39.8	16.4	0.8	
International student	7.7	7.7	15.4	38.5	30.8	0.0	
Other	0.0	26.7	6.7	46.7	20.0	0.0	
School							
Business	0.0	7.7	7.7	76.9	7.7	0.0	0.846
Interdisciplinary Arts & Sciences	6.3	15.6	21.9	37.5	18.8	0.0	
Nursing and Health Studies	2.9	19.1	17.6	45.6	13.2	1.5	
Educational Studies	0.0	0.0	50.0	50.0	0.0	0.0	
STEM	6.7	26.7	17.8	28.9	20.0	0.0	
No major decided	0.0	25.0	25.0	37.5	12.5	0.0	
Double Major	12.5	12.5	37.5	25.0	12.5	0.0	
Missing	0.0	0.0	0.0	0.0	100.0	0.0	

Research Question 3

Spearman's correlation analysis was conducted to answer research question 3, "What behaviors or experiences of respondents have a significant correlation with their mental health condition?" The respondents' mental well-being was tested to assess the relationship with the responses of the questions below.

- How many days they walked or exercised 30 minutes or more in the past 7 days
- How many days they slept at least 7 hours per night in the past 7 days

- How many days they went without a meal due to lack of money in the past 7 days
- How many days they got together with family or friends in the past 7 days
- Attitude towards maintaining or improving their health
- If they have experienced discrimination or been treated unfairly because of their race, ethnic background, gender, religion, or sexual orientation.

There was a strong positive correlation between mental well-being and the number of days the respondents slept at least 7 hours per night in the past 7 days [$r = .210$, $n = 185$, $P = .004$] as well as their attitude towards maintaining or improving their health [$r = .193$, $n = 185$, $P = .008$].

Another variable to show a significant correlation was the number of days the respondents got together with family or friends in the past 7 days [$r = .148$, $n = 185$, $P = .044$].

No significant correlation was found between the respondents' mental well-being and the number of the days the respondents went without a meal due to lack of money [$r = -.045$, $n = 185$, $P = .542$]. Although there was no strong correlation with number of the days the respondents walk or exercise 30 minutes or more in the past 7 days, the result was close to significant [$r = .137$, $n = 185$, $P = .063$]. There was no correlation between mental well-being and being discriminated against by race, ethnicity, gender, religion, or sexual orientation [$r = .019$, $n = 185$, $P = .793$].

Discussion

Descriptive analyses of the data revealed insights into the respondents' mental health care and low utilization of mental health care services compared to utilization of physical health care services. A much higher number (17.8%) of participants claimed that their mental health was not good more than 15 days a month. The number of participants who claimed that their physical health care was not good more than 15 days a month was 8.6%. However, participants stated that in the past 12 months 105 respondents (56.8%) visited their primary healthcare provider at least

once, 101 respondents (54.6%) visited a medical professional, clinic or hospital at least once in the 12 months, and 83 participants (44.9%) visited an emergency room at least once. The causes and medical nature of these visits to primary healthcare providers, clinics and Emergency Rooms is not available in the data. Participants were also asked how many times they had visited a mental health professional such as a psychologist, licensed professional counselor, or psychiatrist in the past 12 months. 32 respondents (17.3%) answered that they had seen a mental health professional in the past 12 months.

The higher number of respondents (17.8%) claiming 15 days or more of poor mental health compared with 8.6% of respondents claiming 15 days or more of poor physical health begs the question, “Why don’t respondents seek mental health care services at a similar rate to which they seek physical health care services?” This survey shows that roughly 50% of participants sought physical health care in the past 12 months but only 17.3% sought mental health care, even though more respondents claimed that their mental health was not good more than 15 days a month. The relatively larger percentage of participants experiencing not good mental health more than 15 days a month may be explained in the chronic or daily appearance of symptoms compared with not good physical health where treatment may require a Dr. visit, treatment or a medication prescription.

Even though 93% of the respondents have health insurance, 37.3% said they haven’t visited their medical professional in the past 12 months, and 75.1% have never visited a mental health professional in the past 12 months. Nearly half of the respondents have never visited an emergency room in the past 12 months.

This study provides evidence that survey respondents did not seek assistance with mental health care. It appears that when physical and mental health issues surfaced, the respondents went to a medical professional at a clinic or hospital, but not to a mental health

professional even though they had insurance. Dentists, dental hygienists, and the ER are more frequently visited than mental health care professionals.

The test results did not reveal any specific population who are affected by mental health issues; however, nearly one quarter of the students claim that they are dissatisfied or very dissatisfied with their mental or emotional well-being on the UW Bothell campus. Mental and emotional well-being is not caused by ethnic, gender, sexual orientation, or religious discrimination. Mental well-being is associated with lifestyle activities including sleep, social life and perhaps exercise, as well as their attitude toward maintaining and improving their health.

CONCLUSION

Findings

The purpose of this study was to discover populations who are affected by mental health issues in order to provide appropriate care and support programs. However, the statistical analyses did not detect a particular group of study participants from the descriptive and statistical analyses. Mental health condition and well-being are affected indiscriminately throughout the population on the UW Bothell campus. The test results revealed that the respondents' behavior and attitude toward maintaining and improving health is the most important factor for mental and emotional well-being. The relationship between mental health and physical health are closely tied together. Being physically healthy is the way to keep mentally healthy. However, it is alarming that the participants are hesitant to seek care and support from mental health professionals such as psychologists, licensed professional counselors or psychiatrists. Perhaps a lack of information about how and where they can receive mental health care could affect this result. Social stigma toward mental illness could be another reason. Since the participants experience mental health issues as frequently as physical health issues, I would suggest that the UW Bothell promote programs to inform and educate students about physical as well as mental health issues. The campus counseling center needs to be advertised in a prominent way on the UW Bothell website as well as mentioning the counseling services during campus tours for incoming students. The UW Bothell can be an important focal point where students can connect with off campus agencies, resources or health care professionals.

This study also revealed a number of participants who skip a meal due to lack of money: 47 respondents, 25.4% of all respondents skipped 1 or more meals in the past 7 days. Ten respondents (5.4%) out of 185 students skipped a meal 6 or 7 days a week. Skipping a meal affects not only physical and mental well-being, but also emotional well-being and academic

performance. In addition to the campus food pantry, other measures can be considered to solve this issue including discounts for the food that they can eat on campus or by issuing free meal tickets. Information about local food banks or church programs that provide free meals can be advertised on campus as well.

Promoting a healthy lifestyle including sleep and exercise will decrease negative effects on physical and mental health. Overall well-being of students leads to better academic performance and more positive experiences on campus.

Limitations

Data limitations were present with this study because not all students took the survey, thus limiting the accuracy as it pertains to this study's population. The survey mostly reflected the population of the Nursing and Health Studies and STEM schools. Two thirds of the survey participants were female.

There were some differences between the hard copy survey and online survey in terms of numbering and open-ended items. Some hard copy surveys were submitted with some questions unanswered or extra write-in answers. Several participants did not read the question thoroughly and gave irrelevant answers. Human errors were also inevitable when answers on the hard copy surveys were transferred to an excel spreadsheet. From the answers, the two most confusing questions to answer were about ethnicity and "how long have you lived in the United States." Some participants felt that categorizing African American, African, and African Caribbean into one box did not reflect their ethnicity nor was it a logical ethnic grouping. This was the same for Middle Eastern participants who do not identify themselves as Asian/Pacific Islander. People have strong opinions about their race and ethnicity; therefore, differentiating ethnicity from race and creating multiple categories would be useful if race or ethnicity were an important factor of the study. The question about years living in the US had various answers even though there was no write-in box

provided. Thirteen participants answered, “I am an international student.” Some people mistook this question as whether they were a citizen of the United States or not. This question needs to be asked in a more logical way to illicit correct answers from the participants. Future research comparing the UW Bothell with national data may help identify student populations requiring assistance.

APPENDICES

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Appendix A

UW Bothell College Health Promotion Survey

Thank you for participating in this UW Bothell Health & Well-Being Survey! Your input will be used to strengthen and tailor health and wellness programming and activities for students at UWB.

This survey consists of 40 questions which are a mix of multiple choice, write in and multiple answer. It should take no more than 10 minutes to complete the survey. Your answers are confidential and your name or identifying information is not required.

If you wish to enter our gift card drawings, please enter your email at the end of the survey. Your email will not be linked to your survey responses. Results from this survey will be shared with the campus during Winter Quarter.

Question 1.

How satisfied are you with your physical health?

- very satisfied
- satisfied
- neither satisfied nor dissatisfied
- dissatisfied
- very dissatisfied

Question 2.

How satisfied are you with your mental or emotional well-being?

- very satisfied
- satisfied
- neither satisfied nor dissatisfied
- dissatisfied
- very dissatisfied

Question 3.

In the past 30 days, how many days would you say your physical health was not good (include illness and injury)?

- none
- 1-5 days
- 6-10 days
- 11-15 days

more than 16 days

Question 4.

In the past 30 days, how many days would you say your mental health was not good (e.g. due to extreme stress, depression, anxiety, etc.)?

none

1-5 days

6-10 days

11-15 days

more than 15 days

Question 5.

In the past 30 days, how many days did poor physical or mental health keep you from doing your usual activities (such as self-care, school, work or recreation)?

none

1-5 days

6-10 days

11-15 days

more than 15 days

Question 6.

In the past 7 days, how many days did you eat 5 five servings of fruit or vegetables per day?

Question 7.

In the past 7 days, how many days did you talk with your neighbors?

Question 8.

In the past 7 days, how many days did you walk or exercise 30 minutes or more?

Question 9.

In the past 7 days, how many days did you sleep at least 7 hours per night?

Question 10.

In the past 7 days, how many days did you go without a meal due to lack of money?

Question 11.

In the past 7 days, how many days did you get together with family or friends?

Question 12.

In the past 12 months, how many times have you visited your primary healthcare provider?

Question 13.

In the past 12 months, how many times have you visited your any medical professional at a medical clinic or hospital (e.g. nurse practitioner, physician, physician assistant, dietician, etc.)

Question 14.

In the past 12 months, how many times have you visited a dentist or dental hygienist?

Question 15.

In the past 12 months, how many times have you visited an emergency room?

Question 16.

In the past 12 months, how many times have you visited a mental health professional such as a psychologist, licensed professional counselor, or psychiatrist?

Question 17.

In the past 12 months, how many times have you visited a naturopathic doctor (ND) or chiropractor?

Question 18.

In reference to your dental health, how often during the last year, have you had painful aching anywhere in your mouth? Would you say:

- a. Very often
- b. Occasionally
- c. Hardly ever
- d. Never
- e. Don't know
- f. Refused (if question is unanswered)

Question 19.

In maintaining or improving your health, which of these best describes you?

- a. I could be doing a lot more
- b. I could be doing a little more
- c. I am doing as much as I can
- d. I am not sure

Question 20.

Do you have health insurance?

- Yes
- No
- Don't know

Question 21.

My health insurance is:

- a. Paid for entirely by me
- b. Paid entirely by my employer
- c. Split between me & my employer
- d. Medicaid or medical assistance
- e. Paid for by someone else _____
- f. I don't know

Question 22.

Do you have a medical or health condition that requires treatment or special care?

- Yes
- No
- Don't know

Question 23.

In the past 12 months, have you experienced discrimination or been treated unfairly because of your race, ethnic background, gender, religion, or sexual orientation?

- Yes
- No
- Don't Know

Question 24.

How satisfied are you with your overall well-being?

- a. Very satisfied
- b. Satisfied
- c. Neither satisfied or dissatisfied
- d. Dissatisfied
- e. Very Dissatisfied

Question 25.

Have you visited the Activities & Recreation Center (ARC) at UWB?

- a. Yes
- b. No
- c. I don't know

Question 26.

Do you plan to visit or use the Activities and Recreation Center (ARC)?

- a. In the next week
- b. In the next month
- c. Sometime in the next year
- d. I don't know
- e. Never

Question 27.

What type(s) of activities would you be most interested in participating in at the ARC? Check all that apply.

- a. Indoor cycling
- b. Strength training/weight lifting
- c. Cardio
- d. Yoga
- f. Group fitness classes
- g. Other _____

Question 28.

What types of individual or team oriented activities would you be interested in? (Check all that apply).

- Not interested

Soccer
Basketball
Tennis/racquet sports
Gaga ball
Football/flag football
Volleyball
Video games/gaming
Hiking
Camping
Winter sports (e.g. skiing, snow shoeing, snow boarding, etc.)
Rock climbing/bouldering
Other:

Question 29.

Regarding health education & promotion, which of the following topics are of most interest to you?
(Check all that apply.)

- Stress reduction
- Alcohol and other drug use
- Depression/Anxiety
- Eating Disorders
- Grief and loss
- How to help others in distress
- Injury Prevention
- Nutrition and healthy eating
- Physical Activity
- Pregnancy Prevention
- Pregnancy Planning
- Problem use of internet/computer games
- Relationship difficulties
- Sexual assault/relationship violence prevention
- Sexually transmitted disease infection/prevention
- Sleep difficulties
- Burn-out
- Suicide prevention
- Tobacco use

- o Violence prevention
- o Other _____

Question 30.

What is your age?

- 18-24
- 25-30
- 31-39
- 40-49
- 50 and over

Question 31.

What is your ethnicity?

- Caucasian/White
- Hispanic/LatinX
- African American/African/African/Caribbean
- Asian/Pacific Islander
- American Indian/Native American
- Mixed/2 or more ethnicities
- Choose not to answer
- Other:

Question 32.

What is your gender identity?

- Female
- Male
- Non-Binary
- Prefer not to answer

Question 33.

How long have you lived in the United States?

- I was born here and lived here most/all of my life
- Less than a year
- 1-5 years
- 6-10 years

11-20 years
over 20 years

Question 34.

What is your marital status?

Single
Married/have partner
Separated
Divorced
Widowed

Question 35.

What is your relationship to UW Bothell?

student
staff
faculty
both staff and student status

Question 36.

If you are a student, do you live.....

on campus
less than 10 miles from UWB
11-20 miles from UWB
More than 20 miles from UWB

Question 37.

From the list below, which of the following schools is/are related to your major or majors (if double major, indicate 2). Limit response to two answers.

Business
Interdisciplinary Arts & Sciences
Nursing and Health Studies
Educational Studies
STEM
No major decided

Question 38.

What is your employment status?

1-10 hours per week

11-20 hours per week

21- 30 hours per week

31 or more hours per week

I am unemployed (0 hours)

Question 39.

Please share any comments or suggestions for creating a healthy campus below:

Question 40.

OPTIONAL: If you would like to enter our gift cards drawings (6 drawings to retailers like Amazon, Food for Thought and the Husky Bookstore), type in your email below. Your email will be separated from your survey results.