



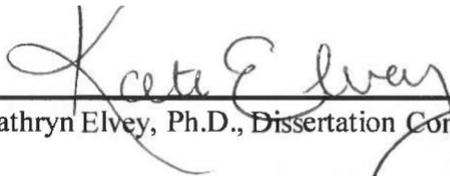
AN ABSTRACT FOR THE DISSERTATION OF

Jennifer L. Hammond for the degree of Doctor of Education in Learning, Leadership,  
and Community

Presented on March 23, 2021

Title: Cultivating Resilience: Sense of Safety and Belonging in Higher  
Education

Abstract approved:



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Kathryn Elvey, Ph.D., Dissertation Committee Chair

Taking into consideration a decline in value of the higher education experience, this research was done in order to determine alternative ways to assess value of higher education. Use of Maslow's Theory of Human Motivation as the framework, as well as a thorough literature review, highlights the importance of sense of safety and belonging in higher education. The literature review revealed a lack of research on sense of safety and belonging through a shared experience.

The purpose of this study was to determine whether or not there was a relationship between participation in extra-curricular activities and sense of safety, and/or if there was a relationship between extra-curricular activities and depression/anxiety and/or substance abuse. Secondary data collected through the Vermont Department of Health's College Health Survey was analyzed using multivariate logistic regression. Sample data (n=2,174) was chosen based on the participants experience with a traumatic event within the last 12 months.

Data was analyzed for statistical significance ( $p < .05$ ), regression coefficient to show negative/positive correlation with standard error, odds ratio for magnitude, and a 95% confidence ratio. Data analysis did not result in statistical significance of the relationship between independent and dependent variables, however, controlling for the dependent variable highlighted the importance of a representative survey for generalizability, the importance of a reliable survey tool, proper survey creation, and distribution processes.

*Keywords:* Higher education, sense of safety, sense of belonging, resilience

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March 23, 2021

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Cultivating Resilience: Sense of Safety and Belonging in Higher Education

By

Jennifer L. Hammond

A DISSERTATION

Submitted to

Plymouth State University

In partial fulfillment of  
the requirements for the degree of

Doctor of Education

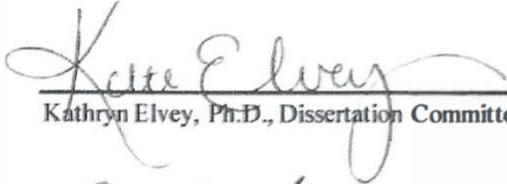
Defended March 23, 2021

Degree Conferred May 2021

Dissertation of Jennifer L. Hammond

Presented on March 23, 2021

APPROVED:



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Kathryn Elvey, Ph.D., Dissertation Committee Chair



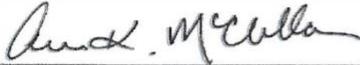
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I understand that my dissertation will become part of the permanent collection of Plymouth State University, Lamson Learning Commons. My signature below authorizes release of my dissertation to any reader upon request.



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Jennifer L. Hammond, Author

## ACKNOWLEDGMENTS

I am humbled by all the support. I could not have emerged from the depths of the dissertation process without the leadership and encouragement from my dissertation chair, Kate Elvey, Ph.D. I feel immense gratitude that our paths have crossed in such a profound way. Thank you to my committee Christopher Benedetti, Ph.D. and Marcel Lebrun, Ph.D. for helping me accomplish such a monumental challenge.

Thank you to Jessie Hammond from the Vermont Department of Health for your help to acquire the dataset. Thank you, also, to the hospitable team at the Garrison Hotel, Dover, NH. My self-induced writing retreats were essential to my success. Thank you to Richard and Laura Mathiasen for proper wrangling of the written word.

I feel fortunate to have shared this experience with Z Cohort. By far, my most favorite part of this journey was laughing, dancing, singing, and creating with you. I will forever cherish collecting memories with you all. This calls for a large celebratory group hug. Here's to a lifetime of developing our pre-frontal lobes.

Thank you to all the lovely people who are excited to call me Dr. Hammond. These challenging years have passed by relatively nicely with friends who indulged my monthly cheese days with nacho and sangria adventures, participated in Friday salad lunch trips, incredible adventures to swim with the loons and those who kept telling me I should be so proud (I needed that). A bunch of talented friends also managed to add countless hours of musical entertainment, my favorite distraction. I was also able to distract myself with trips around the world including Kripalu, Bermuda, Mexico, Key West, the Grand Canyon, Seattle, Nashville, Israel, and Greece. My journey around the world, collecting perspectives, helped me to grow along with this dissertation. To my

worldly friends, you rock. The writing process tends to get a little lonely especially during a rather isolating time in history. Writing this acknowledgement section has made me feel extremely grateful that I “get” to do this which was my mantra through the process when I was in the “what have I done?” phases. Infinite gratitude to the people and places that give me life.

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## **Doctor of Education: Learning, Leadership, and Community**

Cultivating Resilience: Sense of Safety and Belonging in Higher Education

Jennifer Hammond, Plymouth State University

Dissertation Defense: March 23, 2021

Executive Summary: March 23, 2021

**Introduction:** The purpose of this study was to determine whether or not there was a relationship between participation in extra-curricular activities and sense of safety, and/or if there was a relationship between extra-curricular activities and depression/anxiety and/or substance abuse.

**Problem of Practice:** Taking into consideration a decline in value of the higher education experience, this research was done in order to determine alternative ways to assess value of higher education. Use of Maslow's Theory of Human Motivation as the framework, as well as a thorough literature review, highlights the importance of sense of safety and belonging in higher education. The literature review revealed a lack of research on sense of safety and belonging through a shared experience.

**Research Method:** Secondary data was analyzed using multivariate logistic regression. Data was analyzed for statistical significance ( $p < .05$ ), regression coefficient to show negative/positive correlation with standard error, odds ratio for magnitude, and a 95% confidence ratio.

**Summary of Findings:** Data analysis did not result in statistical significance of the relationship between independent and dependent variables, however, controlling for the dependent variable highlighted the importance of a representative survey for generalizability, the importance of a reliable survey tool, proper survey creation, and distribution processes.

**Limitation(s) of Study:** Limitations due to secondary data analysis include researcher not having control over the survey questions and researcher needing to trust the integrity of survey process. The homogeneity of the sample also inhibited the generalizability of the study out to other populations.

**Implications/Significance of Study:** Due to the lack of research on shared experience and sense of safety and belonging there is potential for additional study on this topic. This was one of many ways to study the impact of university programs and the potential value they provide.

## DEDICATION

This dissertation is dedicated to my mom, Michele, who sprinkles magic wherever she goes. I am so lucky she is mine. It's also for my best buddy, Dakota. May the places you go be limitless and your curiosity boundless. You will always be my favorite boy. To my sister, Esther and brother, Will, who have always made me proud. I hope this inspires you to keep learning. To my dad, Lee, and stepdad Steve, maybe I'll take up a new hobby like home repair or reading for fun now that I'll have all this time on my hands. Maybe I'll just rest a while.

And to a past iteration of myself who didn't think she had what it took to complete this. She showed up and persevered.

## **Chapter 1**

### **Introduction: Moving from Problem to a Problem of Practice**

#### **Historical Perspectives of Higher Education**

Higher education, as it is known in the United States, has made some remarkable changes over its history (McDonald, 2002; Newfield, 2008; Schrecker, 2010; Thelin, 2011; Weschler, 2008). Historically, steeped in tradition, institutions of higher education (IHE) have had to adapt to changes with creative use of technology and innovation to remain viable as institutions of choice for a dwindling population of college-bound youths (Newfield, 2008; Schrecker, 2010). Early nineteenth century college life highlighted the elite entrant who were mostly male, higher in socioeconomic status and of the ethnic majority (Thelin, 2011).

The first IHE were created to train an unskilled workforce. The development of the early institutions was based on the need to advance industry through education and training (Goldin & Katz, 1999). The earliest institutions in the United States include Harvard College (now University), Yale, Brown, and William & Mary (Wechsler, 2008). Over time, higher education has transitioned from skill building to research-based, due to a need for innovation and development. IHE in the United States are a combination of British undergraduate and German places of research; however, the United States has added its own uniqueness over the years. Largely based on capitalism and state regulations rather than federal regulations, the current picture of higher education is very competitive (Eckel & King, 2004). Institutions have experienced financial, structural, and organizational upheaval that has forced them to re-imagine their process for and

philosophy of higher education (Goldin & Katz, 1999). Without periodic systematic change, these institutions would not exist today.

The 21<sup>st</sup> century has seen a boom in numbers of institutions, hitting an all time high of 7,253 in 2013, with a slight decline in numbers since then (U.S. Department of Education. Institute of Education Sciences, 2019). An IHE in the United States is attractive to incoming students because of the perceived quality of faculty and diversity of resources offered on campus (Thelin, 2011). For international students in particular, the allure of higher education in the United States is also based on its ability to provide the immersive cultural experience (Yao, 2016). The increased number of institutions has made higher education very competitive, while diluting the pool of potential students. With the decline of potential students there is an increasing need for further student outreach. This outreach includes a consideration for a larger demographic including race/ethnicity, and a wider range of socioeconomic status than in the past (Seltzer, 2016).

The IHE of today looks much different than in years past, due in part to the focus on inclusivity and accessibility. Once a place only for the social and ethnic majority, IHE now profess to welcome all. The 20<sup>th</sup> century saw a shift in enrollment from the elite, to a more inclusive model, opening doors for underserved populations (Schreker, 2010). In fact, more than half of all students attending an IHE are women, with a third from ethnic/racial minorities, as it relates to the demographic of the US population. This landscape would not have been possible in the early years of higher education (Eckel & King, 2004). The focus to diversify the entrant pool into IHE also offers a much more well-rounded education.

Re-imagining higher education is not a new concept as history has shown its' institutions have had to make changes before (Brubacher, 2017). The state of higher education is constantly changing despite leaving the impression the industry has remained stagnant. The current landscape of higher education is considered to be in a particular urgent state of transition as perceived value is on the decline. Brubacher (2017) describes higher education as competitive, costly, and challenged for its perceived inability to produce desired results. Higher education is currently under fire for its perceived failure in helping to create productive, resilient, and skilled graduates. Higher education is expensive and places financial and psychological burdens on society when students graduate with debt and are unable to secure proper employment (Dylan, 2012). Data from the Federal Survey of Consumer Finances (2019) shows the average debt of college graduates in the United States reached \$23,900 for the 35 year old and under group. For some, this debt reaches over \$100,000, making education second only to mortgage debt in the US. This amount of debt puts a heavy financial burden on graduates making it more difficult to buy a house, get married, raise a family, and save for retirement. Ultimately, putting a financial strain on the economy (Renzulli, 2018).

### **Defining the Value of the Higher Education Experience**

Critics of higher education, including republican and democratic lawmakers argue that, despite changes made, the higher education experience has not increased in value. Even worse, IHE are not meeting the basic expectations including, readying students for the world at large by providing them with necessary skills for the workforce and instilling a basic sense of value and civility (Karabell, 1999; The Carnegie Foundation for the Advancement of Teaching, 1990; Weeks, 2011). Spiros Protosaltis, a senior Education

Department official during the Obama administration and current a professor of education policy at George Mason University, is quoted as saying “The heightened scrutiny is due to the combined effect of skyrocketing student debt, many low-value college credentials and a drumbeat of scandal”. He also states, “There is a growing concern on both sides of the aisle that higher education hasn’t been accountable for a very long time” (Fain, 2019).

There remains a constant challenge for IHE to properly align their mission with perceived value. Consequences of a perceived de-valuation of higher education is reduced funding, support, and trust (Fain, 2019). The implications of this perceived lack in value are important to understand when taking into account what higher education provides by way of resources and benefits for each individual, as well as, within local and global communities. Resources and benefits that include professional (NACE, 2018), financial/economic (Fain, 2017), and psychosocial (McMahon, 2009).

### ***Professional***

Given that one of the main objectives of higher education is to ready graduates for the workforce, there is an emphasis on professional skill building (Thelin, 2011). The time spent in college can help boost a students’ experience in a strategic and well-equipped environment that allows for a well-rounded learning experience, including both in theory and in practice. Emphasis has been placed on human capital (value in skills) from both the student and employer perspectives. The National Association of Colleges and Employers (NACE) whose mission is to empower college educated talent by making relevant connections between college and workforce, reports 68.1% of college graduates

have engaged in an internship experience. Internships, when properly administered, can provide value for both the intern and the placement facility.

Despite there being a great deal of potential in these experiences, criticisms of higher education highlight career readiness competencies are not being met. Research done by NACE shows that employers agree there is still work to do to increase career competency from a higher education perspective. Results from Job Outlook 2018 and the Class of 2017 Student Survey Report, both conducted by NACE, highlight where students may need help developing their skills. See Table 1.1 for Employer vs student perception of proficiency in career competencies. Data presented in this table displays an inflated level of confidence and may highlight a lack of actual skills gained through a college experience.

**Table 1.1 Employer vs. Student Perception of Proficiency in Career Readiness Competencies, by Percentage of Respondents**

<b>Competency</b>	<b>% Of employers that rated recent grads proficient</b>	<b>% Of students who considered themselves proficient</b>
<b>Professionalism/work ethic</b>	42.5%	89.4%
<b>Oral/written communications</b>	41.6%	79.4%
<b>Critical thinking/problem solving</b>	55.8%	79.9%
<b>Teamwork/collaboration</b>	77.0%	85.1%
<b>Leadership</b>	33.0%	70.5%
<b>Digital technology</b>	65.8%	59.9%
<b>Career management</b>	17.3%	40.9%
<b>Global/intercultural fluency</b>	20.7%	34.9%

*Note:* Reprinted from Are College Graduates “Career Ready”? by NACE Staff, retrieved from <https://www.nacweb.org> Copyright 2018 by National Association of Colleges and Employers

*Financial/economic*

State institutions, including community colleges, provide an opportunity for a wider range of in-state applicants due to lower tuition rates compared to private and out-of-state institutions. Enabling a larger population to afford an in-state education also increases the likelihood these educated residents remain in the state after they graduate. Keeping an educated population supports the state economy through innovation and business venture (Eckel & King, 2004). The more educated the population is, the higher potential income is, which is better for the state in terms of potential tax payers and increased revenue. A state which values education has an opportunity to provide a valuable service by providing a quality experience at a discounted rate making it affordable for in-state students to obtain a degree (Berger & Fisher, 2013). Another benefit in this area is illustrated by the results from the Survey of Consumer Finances (2019) that found the median net worth of families with a college degree was \$308,200 compared to \$74,000 for those with a high school diploma only. IHE also provide employment opportunities in their communities, which contribute directly to local economies, and can have far-reaching financial and economic implications (Fain, 2017).

In spite of these financial and economic benefits there is still the possibility of the burden of debt, and a job market unable to provide the proper financial opportunities for graduates (Fain, 2019). The financial/economic implications are very important when determining value. Some people may evaluate a higher education experience on these factors alone, which does a disservice to the other areas of higher education that provide resources and benefits.

### ***Psychosocial***

The benefits of higher education at the psychosocial level are more difficult to quantify than income and demonstrated professional skills. Although all the benefits of a higher education experience are combined to create the full picture, many aspects of the higher education experience are not as well examined as the more easily quantifiable. Psychosocial factors of the higher education experience include how the physical and social environments can contribute to mental health. McMahon (2009) describes the non-market private and social benefits of higher education as producing more impact than is realized, and when controlled for income, outweigh the financial/economic benefits of education. More specifically, there is a significant correlation between years spent engaged in higher education and improved social capital (value placed on connection between people). This improved social capital also correlates to increased happiness due to lower crime rates, increased community engagement, and improved vitality and overall health. This has measurable effects on the financial/economic stability of a community, as well as, quality of life (McMahon, 2009).

### **Rationale**

Although evaluating an institutions' effectiveness based on financial/economic impact and/or professional competencies may be popular, this research is focused on the measurable components of sense of safety and belonging (psychosocial) and their effect on personal resilience. Drifting away from basic traditional workforce skill building into the realm of mental health. The purpose of this research is to determine if there are measurable factors that contribute to sense of safety and belonging at IHE and if these factors contribute to personal resilience.

Personal resilience is important in the larger picture of the success and viability of IHE but are not represented as heavily in the research. Much of the research is focused on the ability of these institutions to produce successful graduates with the practical skills to enter the workforce with little regard to mental health (Schrecker, 2010). NACE has focused on the importance of developing workforce ready attributes including effective communication, collaboration, and analytical skills. As recently as 2018, adaptability/flexibility made it on the list of skills that were important for employability but represented a much lower magnitude than workforce ready skills (NACE, 2019). With the addition of this category there is potential for more of a focus on the importance of mental health in the workplace. The importance of mental health should not be understated. Taking the theoretical framework of Maslow (1943) and his Theory of Human Motivation into account, it makes it clear that success is based on being able to learn the skills only after basic human needs are realized. Neither variable is mutually exclusive in determining success of the individual and ultimately, the success of the institution that the individual emerges from.

Sense of safety and belonging are very important and Maslow speculates with his work, they are necessary to have before any other aspects can be quantified. Basic human needs, known as Deficiency Values (D-Values) including physiological (e.g. food, water, sex, and shelter), safety (e.g. feeling free from harm), and sense of belonging (e.g. feeling part of a group) must be satisfactorily maintained first. Only when these basic needs are met can Being Values (B-Values) be realized. These include what Maslow highlights as self efficacy, self- actualization, and ultimate comfort in oneself (Maslow, 1968).

### **Statement of Purpose**

This research will be conducted in order to highlight the level of importance of sense of safety and belonging on college campuses. This research will be done to discover if there is a relationship between participation in extra-curricular activities and ability to maintain a sense of safety and belonging following a traumatic event. Understanding the impact of the non-market private and social benefits of higher education on the local and global economies could change the perceived value of higher education. Improvement in perceived value of higher education could correlate to more funding, support, and trust in a system that factually creates heightened social capital (McMahon, 2009).

### **Research Questions**

1. In what ways, if any, does participation in extra-curricular activities instill a measurable sense of safety and belonging?
2. In what ways, if any, do sense of safety and belonging increase resilience in students experience with a personal traumatic event?
3. How can an Institution of Higher Education be proactive in the development of a community that enables a sustainable and measurable sense of safety and belonging and, ultimately, why does it matter?

### **Relating Data to Research Questions**

The data used in this research was acquired through the efforts of the Vermont Department of Health. The secondary data analysis, discussed in depth in Chapter 3, was chosen for its convenience and efficient use of time and money. The richness of sample provided data from across many different universities and included the variables this

researcher wanted to test. The College Health Survey (2016) was conducted to provide insight into the campus environments at all the institutions within the Vermont state higher education system. The dataset was chosen for its relation to mental health and the perception of safety and belonging. The variables aligned with the purpose of the research and also opened up new avenues for discovery that may contribute to further research. This further research will be discussed further in Chapter 5.

### **Definition of Key Terms**

A set of definitions for key concepts is important to help eliminate any ambiguity in the terminology. This research will be based on the following definitions of key terms:

**B -Values** - Represented in Maslow's Theory of Human Motivation as the Being Values of Esteem and Self-actualization. Realized when D- values are sufficiently and consistently realized.

**D-Values** - Represented in Maslow's Theory of Human Motivation as the Deficiency values of physiological, safety, and sense of belonging. Need to be realized before moving up through the other levels.

**Human capital** - the economic value of a person's skill set

**Institutions of Higher Education (IHE)** - For the purpose of this study IHE will be considered 2 and 4-year institutions offering a residential experience.

**Resilience** -The ability to bounce back from a setback or trauma.

**Sense of belonging** - A persons feeling of fitting in with a group regardless of efforts of inclusion from the group. A state of perception of the person experiencing the phenomenon.

**Sense of safety** - A persons' ability to genuinely feel safe from harm regardless of a safety infrastructure. A state of perception of the person experiencing the phenomenon.

**Social capital** – the value of the connection between people.

**Trauma** – both shared and personal are experienced on a continuum and are subjective.

## Chapter 2

### Literature Review: Knowledge for Action

Maintaining a campus climate that is conducive to learning and providing a safe space for all its members is paramount to the success of IHE (U.S. Department of Education, Office of Elementary and Secondary Education, & Office of Safe and Healthy Solutions, 2013). This is especially important when an institution considers its ability to thrive in the wake of a large-scale traumatic event or even in the face of small, personal traumas, which students face daily. This is evident by understanding the process institutions go through following such events (Wildman, 2008). In the wake of such an event, institutional resiliency is put to the test. Such resiliency is defined by a combination of infrastructure, community, and personal resiliency (Magis, 2010).

Many factors are considered, but there is research that places importance on the students' perception of safety (infrastructure, policy, and procedure), and sense of belonging (environment and social) (Hausmann, Ye, Schofield, & Woods, 2009; Hawdon & Ryan, 2011). Residential IHE have the opportunity to provide a unique environment for students to flourish and succeed under normal circumstances, by providing for basic needs while helping students' development. The level of resiliency both organizationally and personally, will determine how efficiently an institution can return to normal following a traumatic event, and on a micro level, how each individual can flourish in spite of personal setbacks (Magis, 2010). In absence of a large scale traumatic event it is the personal stories of resilience that define the strength of the IHE community.

For a university to remain viable it must provide proper shelter from the elements, food, and water, which make up the most basic human needs (Maslow, 1943). For an

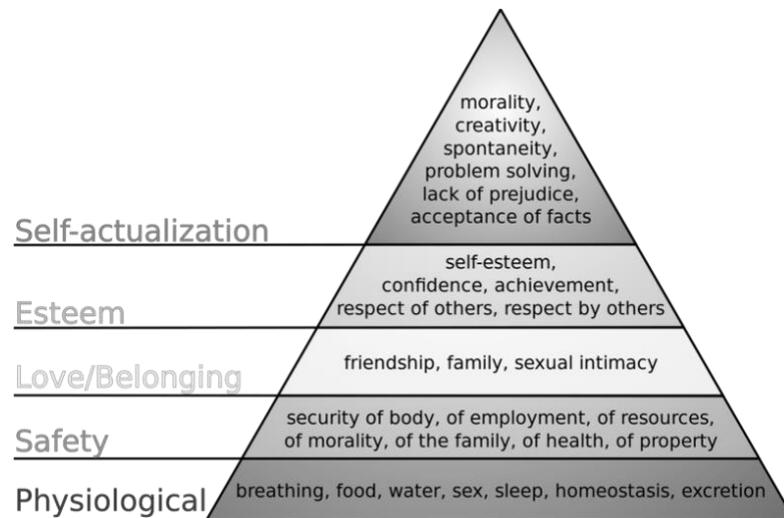
institution to remain competitive, it must provide more. IHE are competing for a declining number of high school graduates so they must be attractive to remain an institution of choice (Schrecker, 2010). Admissions, retention, and graduation rates are all important aspects of university enrollment statistics. A quality educational experience includes a campus climate that is safe, inviting, and promotes learning. This is done, in part, by offering attractive curricula taught by qualified faculty (Schrecker, 2010). The institution of choice will also boast a portfolio of social activities to balance out the students lived experience. The interweaving of these necessities also include, although more subtly, a well organised emergency operations plan (EOP) with proper campus climate considerations on the students sense of safety and belonging. Financial, staffing, and infrastructure resources enable IHE to provide the potential for a well equipped, safe place that provides opportunities for developing a sense of belonging, while creating an open and safe place for learning (U.S. Department of Education, Office of Elementary and Secondary Education, & Office of Safe and Healthy Solutions, 2013). Maintaining perceived value of higher education is important for the global economy and overall quality of life (Karen, 2002). Considering the importance of higher education, it is imperative these institutions continuously adapt to a changing and uncertain landscape.

### **Higher Education and Human Motivation: A Theoretical Framework**

Seminal work by Abraham Maslow (1943) describes his Theory of Human Motivation that aligns with the university environment. This Theory of Human Motivation aligns with the growth mindset of residential universities. In basic terms, Maslow proposed growth commonly happens for humans when they are less likely to be in constant deficit. The hierarchical nature of this theory proposes that one develops by

moving through what are considered the layers of deficit (physiological, safety, love/belonging) also known as D-Values to reach abundance (esteem and self actualization) also known as B- Values. See Figure 2.1 for a visual representation of Maslow's Hierarchy of Needs

Figure 2.1 Abraham Maslow's Hierarchy of Needs



Note: Abraham Maslow's Hierarchy of Needs. Adapted from *Wikimedia*, by Author J. Finkelstein, 2006, [https://commons.wikimedia.org/wiki/File:Maslow%27s\\_hierarchy\\_of\\_needs.png](https://commons.wikimedia.org/wiki/File:Maslow%27s_hierarchy_of_needs.png). Adapted with permission through the GNU Free Documentation License

This theory does not completely line up with the idea that human experiences, both positive and negative, can enable a person to become more resilient and flourish. By all accounts, there are many examples of humans that have lived through great deficit and flourished (Neher, 1991; Seery, Holman, Silver & King, 2010). However, the majority of successes are based on ones ability to have basic needs satisfactorily and consistently met.

IHE in the United States have continuously been attractive to potential students for not only the quality of education provided, but also the services available (Yao, 2016). These services include but are not limited to dining, housing, social, and health. A

snapshot of a successful IHE in the US highlights the ability for institution to provide a quality and abundant experience by offering a comfortable, diverse, and safe living environment. Services that, in most cases, provide opportunities for lower deficits at the physiological, safety, and love/belonging layers. These are in addition to the academic services expected including; knowledgeable faculty, educational services, and diverse learning opportunities.

Another aspect of Maslow's Theory of Human Motivation is the idea of what constitutes a healthy person. A healthy person has properly supported D-values and has moved into cultivating the higher B-values. The goal is to settle in on B-Values by working to position oneself with proper D-Values. In regards to D-values, Maslow (1968) says "The needs for safety, belongingness, love relations, and for respect can be satisfied only by other people. Ie. only from outside the person. This means considerable dependence on the environment" (pg. 39). Regarding the B-Values Maslow (1968) says "The self actualizing individual, by definition, gratified in his basic needs, is far less dependent, far less beholden, far more autonomous and self directed. Far from needing other people, growth motivated people may actually be hampered by them" (pg. 40).

This research will focus on the support structure and resources available at the institution as they contribute to sense of safety and belonging which are both D-Values. It is interesting, however, to see the potential of providing for these properly to create experiences that promote the possibilities of B-Values. The important part here is for the institution to continuously evaluate their policies, procedures, and resource allocation to make sure its' members find them valuable (Schrecker, 2010). Outcome from this

research may help with identifying whether or not current allocation of resources towards sense of safety and belonging are a good investment.

### **Safety**

As Maslow (1943) states, safety concerns are the focus after physiological needs are satisfactorily met and properly maintained. Following the large scale traumatic event at Virginia Tech, there was emphasis placed on campus safety across the nation (Allen & Lengfellner, 2016). Additional resources were devoted to the creation and improvements to crisis management plans later named Emergency Operations Plans (EOP) (U.S. Department of Education, Office of Elementary and Secondary Education, & Office of Safe and Healthy Solutions, 2013). These plans included assessment of campus infrastructure, policies, and procedures. Vulnerabilities in campus safety plans were exposed. Survey data, collected nationally in 2008, found a comprehensive audit of campus safety plans resulted in changes at 9 out of 10 schools (Rasmussen & Johnson, 2008).

As safety concerns came to the forefront, campuses needed to remain places to feel secure for residential learning and growth (Bendici, 2017). The balance between innovative open learning spaces and places for comfortable refuge needed to remain creatively unchanged (Chekwa, Thomas, & Jones, 2013). On the surface, the infrastructure and policies were just enough to aid in the prevention of violence and restore normal campus activity when needed (Allen & Lengfellner, 2016). These plans were a visible and strategic effort to create a safe space for the university community to carry out its daily business. According to Orzek (1989):

A safe campus environment is one in which students, faculty, and staff are free to conduct their daily affairs, both inside and outside the classroom, without fear of physical, emotional, or psychological harm. Personal safety is a basic human need that must be preserved if the mission of the university is to be pursued. (p. 2)

Accurate and timely communication is paramount during and following large scale traumatic events. When an event considered to be a safety concern takes place, the proper amount of resources need to be allocated in a timely and appropriate manner to enable the members of the community to feel safe. This is done through innovative education, awareness, and violence prevention efforts (Langford, 2004). Feeling safe is important for learning and a safe campus is a measurable element in improving campus climate and the student experience (Mendoza, Suarez, & Bustamante, 2016). According to Rasmussen and Johnson (2008) there is no 100% guarantee the campus is “safe” since “safe” is a relative term. The important thing is for an institution to create a “safe as can be” environment with the resources available, while taking into account external factors such as community climate and the inability to control people at all times.

These EOP also focused heavily on preventative measures including; education for all community members about policy and procedures (Deisinger & Scalora, 2016), infrastructure enhancements (U.S. Department of Education, Office of Elementary and Secondary Education, & Office of Safe and Healthy Solutions, 2013), and communication upgrades (Gow, McGee, Townsend, Anderson, & Varnhagen, 2009).

### ***Emergency Operations Plans***

The large-scale traumatic event at Virginia Tech engaged all facets of the institution with great urgency to manage all the parts inherent in such an event (Booker,

2014). The reactionary nature of such events places a spotlight on the intricacies of the planning, maintenance, and effectiveness of an institutions' EOP (U.S. Department of Education, Office of Elementary and Secondary Education, & Office of Safe and Healthy Solutions, 2013). It also started a ripple effect throughout other IHE, causing them to take a closer look at their own emergency management strategies (Rasmussen & Johnson, 2008). Safety and security on college campuses were catapulted into the forefront, as the inherent openness of college campuses was questioned (Rasmussen & Johnson, 2008). Part of the purpose of universities is to remain open in terms of physical boundaries as well as intellectual.

A lack of physical boundaries, such as walls or gates, promote challenges for creating safe spaces. These emergency management strategies focus on infrastructure efforts and physical safety, and describe the efforts needed to ensure psychological and emotional safety (Gow et al, 2009). Placing importance on physical and emotional safety enables a campus community to feel comfortable in their space with the people around them, so they can focus on learning and thriving. With a goal of reaching their full potential. Maslow (1943) describes this as Self Actualization. These strategies have adapted to technological advances by adding emergency alert systems, mobile applications, communication enhancements, video cameras, and remote building lockdown capabilities (Gow et al, 2009).

Emergency alert systems involve infrastructure enhancements that improve communication (Gow et al., 2009). Strategically placed voice prompts are used, not only to broadcast an alert, but also to instruct people on campus what to do. Visual alerts are also incorporated and include lights and media feeds on monitors throughout the campus

environment. Proper placement, testing, and upgrades are important to ensure that systems remain an effective means of alert communication. Although these alert systems became a popular installation during this time, research shows that these systems are not perceived to be a noticeable value add for safety concerns (Chekwa et al, 2013). These systems also include centrally managed mobile applications and email/text alerts. Proper management is important to maintain an effective communication process (U.S. Department of Education, Office of Elementary and Secondary Education, & Office of Safe and Healthy Solutions, 2013). The challenge institutions face when planning, designing, and implementing these systems include allocation of proper resources not limited to time, financial, and human (Rasmussen & Johnson, 2008).

When considering emergency management, it is important to understand how it is defined through different lenses (Bendici, 2017). A counseling department may be looking closely at the mental health of the community (Shuchman, 2007) while law enforcement may be concentrating on the structure and function of the environment (Bendici, 2017). It is important for an organization to have a comprehensive plan that incorporates all the risks and considers all the perspectives (Rasmussen & Johnson, 2008). These risks are determined by a proactive mitigation plan that includes strategic evaluation of policies and procedures. These risks include:

1. The continuation of the “openness”, both physical and intellectual, of the campus environment.
2. Lack of physical security of residential and educational facilities.
3. Inclusive admissions process.
4. Continuous assessment of student well-being.

Although there is an expectation that university campuses are boundaryless in physicality, they need to remain places where its members feel safe from harm and have a sense of belonging. When the sense of safety and belonging risks are mitigated, it is more likely students will be able to reach their learning potential, and ultimately move through the Hierarchy of Needs (Maslow, 1948).

EOP focus heavily on infrastructure and physical safety although psychological and emotional safety are part of them. The tangible and easier to quantify areas of safety are an important part of the safety level that Maslow highlights, but are not the only aspects. The unique makeup of the IHE environment also makes creating a physically safe space a challenge. Innovative learning requires a level of openness does not allow for absolutes (e.g., not all buildings can be locked down, intellectual property needs to be shared).

### ***Infrastructure***

An important aspect of perceived campus safety are its infrastructure considerations (Rasmussen & Johnson, 2008). Residential institutions are not only places to learn and work but also need to take special care for those who call it home. The challenge in this environment is to create physical spaces that offer opportunities for innovation and openness, while still maintaining boundaries. Notification systems, including building and outdoor intercom systems, became important infrastructure additions after the large-scale traumatic event at Virginia Tech. The security of residential and academic buildings were placed under alert. Residential buildings were locked down with 24 hour card access (Rasmussen & Johnson, 2008). Video cameras

also became an important means to allow visual control over spaces, making it easier to monitor for potential hazards, deter potential incidents, and to improve investigations.

Since resources were allocated for infrastructure improvements many campuses saw an increase in law enforcement personnel, video cameras, and security phones. A study conducted by Chekwa et al. (2013) found 70% of respondents indicated safety is an important factor when choosing whether to enroll at an IHE. From an institutional reporting perspective, the Clery Act requires transparency of campus crime to the general campus community, as well as, to provide incident reports to the government for statistical purposes. According to research conducted by Jee and Good (2017), students perceive the Clery Act as being effective since behavior changes are often a result of public notifications of safety threats. However, these crime statistics do not play a significant roll in determining intent to enroll since the data is not easily accessible at time of application. Safety and security enhancements do not necessarily create a sense of safety. In a 2013 study, Chekwa et al. discovered through their research that the number one safety concern for college students on campus was a lack of law enforcement. Due to a small sample size these findings are not generalizable to the greater higher education community. Since a sense of safety is subjective, it is important to evaluate infrastructure and emergency operations plans continuously, to make sure members actually feel safe, and resources are being allocated appropriately. Evaluation and updates to EOP will keep them in a proactive state which makes them more effective if a traumatic event were to occur, whether on a large-scale or personal-level.

### **Sense of Belonging**

When a basic sense of safety is satisfactorily realized there is a need for sense of belonging (Maslow, 1943). Sense of belonging is defined as feeling accepted as a natural member of a group. Strayhorn (2012) describes sense of belonging for college students in particular as:

A basic human need and motivation, sufficient to influence behavior. In terms of college, sense of belonging, refers to students perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g., campus community) or others on campus (e.g., faculty, peers). It's a cognitive evaluation that typically leads to an effective response or behavior (p. 3).

Without a sense of belonging, Baumeister and Leary (1995), postulate that there are physical and mental repercussions realized. Research shows an increased sense of belonging is linked to better coping strategies (Baumeister & Leary, 1995). Proactively creating an environment that provides a sense of belonging creates pride and dedication to people, as well as place (Cicognani, Menezes, & Nata, 2011). Creating a sense of belonging for all campus members is important in order to sustain a community adequately supported to live, work, and thrive (Cicognani et al., 2011). It is particularly important for students since they are residing on campus, may be making a dramatic transition from living at home (Cicognani et al., 2011), and/or may be feeling out of their comfort zone (Countryman & Zinck, 2013). The ability to create such an environment requires many different areas to work together.

The feeling of belonging is defined differently for each person and this makes it a challenge to cultivate (Lambert et al., 2013). When trying to create a sense of belonging it is also important to take into account the opposite (Ostrove & Long, 2007). There is less research on the implications of creating a sense of belonging within specified groups without marginalizing the people who feel like they do not belong. There is a delicate balance between a state of belonging to a group and feeling like they do not belong to others (Ostrove & Long, 2007). This concept of feeling like an outsider has implications on the mental health of a student and can result in the inability to cope (Wilczynska, Januszek, & Bargiel-Matusiewicz, 2015), find meaning (Lambert et al., 2013), or be productive (O'Keeffe, 2013).

It is important that each individual sees that they are represented, which makes creating a sense of belonging a challenge. This increases the likelihood of a sense of belonging. These identities, described in more detail below, include but are not limited to:

1. Ethnic/racial
2. Gender/gender identity
3. Social class
4. Grade level
5. Differently-abled

### ***Ethnic/racial***

Ethnic/racial considerations are well represented in the research on sense of belonging in higher education. This research highlights that it is important for the ethnic minority to feel comfortable and fully integrated into the academic environment (Glass, Kociolek, Wongtrirat, Lynch, & Cong, 2015; Greenberger, 2012; Yao, 2016). Due in

part to cultural norms of their home country and the resources it took to get them there (Yao, 2016). The ethnic majority appears to value social aspects of sense of belonging more than those found in the classroom (Hausmann, Ye, Schofield, & Woods, 2009; Meeuwisse, Severiens, & Born, 2010). There is also research that supports having a culturally integrated environment that contributes to the sense of belonging to the community as a whole (Maramba & Museus, 2013; Museus, Yi, & Saelua, 2017). Challenges are revealed when there are limited resources to provide an environment that takes into account each culture/ethnicity/race in proper proportion to provide the opportunity for developing a sense of belonging. (Maramba & Museus, 2013; Museus, Yi, & Saelua, 2017; Yao, 2016). Inclusion may not always equate to a feeling of belonging. Programs that focus on diversity and inclusion must be evaluated periodically for perceived effectiveness. See table 2.1 for additional details on the research that focuses on ethnic/racial considerations for sense of belonging.

**Table 2.1: Ethnic/racial considerations for sense of belonging**

<b>Author</b>	<b>Year</b>	<b>Method</b>	<b>Sample</b>	<b>Conclusion/implications</b>
Glass et al.	2015	Interview	n=40	Importance of faculty creating an intentional inclusive academic environment while fostering meaningful formal relationships with minority students
Yao	2016	Phenomenological orientation-lived experience interviews	n=21 all ethnic minority	Despite prevalence of Chinese students at US IHEs they are still feeling marginalized. Specifically in the residential environment
Hausmann et al.	2009	Survey With experimental component	n=365 220 ethnic majority 145 ethnic minority	Sense of belonging had direct positive effect on students institutional commitment and willingness to persist.  Strategies for creating sense of belonging may be different for majority and minority students
Meeuwisse et al.	2010	Survey	n=523 145 ethnic minority 378 ethnic majority	Formal relationships including faculty/student interaction increased sense of belonging in ethnic minority students  Informal relationships with peers increased sense of belonging for ethnic majority students
Maramba & Museus	2013	Survey	n=143 all ethnic minority	Higher interactions with diverse peers is more likely to foster a sense of belonging among ethnic majority students
Museus et al.	2017	Survey	n=499 134 ethnic majority 365 ethnic minority	Focus placed on perceived campus environment and how these perceptions influence sense of belonging.

### *Gender and Gender Identification*

To understand gender-based sense of belonging a person needs to have an understanding of what gender means. Defined differently through a cultural, ethnic, and racial lens, it is a social and fluid construct. Due to the complexities of gender and sense of belonging, it is difficult to categorize with certainty (Guramatunhu-Mudiwa, 2015). Research on gender-based sense of belonging focuses on the under representation of women and those who identify as women in STEM fields (Kissinger, Campbell, Lombrozo, & Wilson, 2009; Le, LaCost, & Wismer, 2016). Although by 2013, women comprised 57 percent of the college students in the United States there are still some fields that are mostly men including math, engineering, and sciences (Rose, 2015). These fields, with their underrepresentative nature, fail to tap in to the possibilities of a diversified population (Dehdarirad, Villarroya, & Barrios, 2014).

Gender-based sense of belonging has historically been an effort of the fraternity/sorority system that is multifaceted in its ability to create such an environment for its members. Although disputed for its perceived anti-democratic, selective, and anti-intellectual tendencies, the fraternity/sorority system has persevered and remains an entity in higher education environments today (Komives & Woodward, 2003). Despite bias against this system, sense of belonging emerged as an important result of involvement with community service activities, specifically when these opportunities are created by a fraternity or sorority (Soria, Troisi, & Stebleton, 2003).

Athletics is another area that creates opportunities for gender based sense of belonging. The development of Title IX over 40 years ago made it illegal to discriminate on the basis of gender creating a measurable increase in women in sports and in higher

education in general (Iram, 1997; Rose, 2015). Collegiate athletics create an environment with shared goals, teambuilding, and a shared experience as well as other factors, contribute to a sense of belonging. See table 2.2 for additional details on the research that focuses on gender/gender identification considerations for sense of belonging.

**Table 2.2: Gender considerations for sense of belonging**

<b>Author</b>	<b>Date</b>	<b>Method</b>	<b>Sample</b>	<b>Conclusion/implications</b>
Guramatunhu-Mudiwa	2015	Qualitative	N= 807 267 Male 540 Female	More women than men enrolled in IHE due to change in global economic climate and perceived value of higher education
Kissinger et al	2009	Survey	N= 117 102 Male 15 Female	Importance of female students studying engineering to have meaningful relationships with the faculty. Isolation is the main reason for attrition of female students in a historically male dominated discipline
Le et al	2016	Phenomonological interviews	Purposive sampling N=7  All female	A sense of belonging contributed to increased self confidence, helped them grow. Emphasis placed on relationship with professors and academic support staff
Dehdarirad et al.	2014	Content analysis	N/A	Increase in focus on gender and minority disparity in science disciplines in higher education. Inequality in higher education the most common theme found in most recent content
Soria et al.	2003	Survey	n=99,810 40,922 Male 58,887 Female	Involvement in fraternity or sorority fostered a sense of belonging through a shared experience of community service.

### *Social Class*

As determined by Ostrove and Long (2007), social class background has a large impact on a students' sense of belonging. Students who self-identify as a certain social class, and those who are defined objectively by their circumstances, are more likely to search for others that fall into the same class as them. Being defined by low socioeconomic status (SES) can enable a feeling of shame and impose perceived limits (Loveday, 2016). These perceived limits perpetuate a cycle of inferiority and deficiency (Loveday, 2016). From the other perspective, having a high SES can put students at an unfair advantage. Starting out with more resources, they are able to move through challenges more efficiently. Tam and Jiang (2014) describe the unfair advantage of the Standardized Aptitude Test (SAT) IHE have historically relied on for admissions criterion. A more diverse admissions process will enable a wide range of applicants. Although this does not always equate to a diverse admitted population, it does open up the applicant pool while maintaining a competitive process, and adhering to some standards of admission (Tam & Jiang, 2014).

Another SES that impacts a students ability to succeed in higher education is whether their parents attended and attained their baccalaurate degree from a post secondary institution (Stephens, Hamedani, & Destin, 2014). Research shows first generation students are often not prepared for the higher education experience due to a number of factors. These factors include; a lack of conversation about continuing education, lack of knowledge of the process, minimal resources, and/or a negative opinion about further education (Stebleton, Soria, & Huesman, 2014).

Other factors low SES students may have are; a delayed entry into college, english as their second language, cultural and ethnic considerations, and being more likely to live off campus or at home. These factors indicate a more challenging transition into college and more likelihood of drop out or non-success (Stebbleton, Soria, & Huesman, 2014). See table 2.3 for additional details on the research that focuses on social class considerations for sense of belonging.

**Table 2.3: Social class as related to sense of belonging**

<b>Author</b>	<b>Date</b>	<b>Method</b>	<b>Sample</b>	<b>Conclusion/implications</b>
Ostrove & Long	2007	Survey	Random n=324	Social class background strongly related to feelings of belonging which in turn is a predictor for social and academic success indicators
Loveday	2016	Phenomonological Narrative style interveiws	NA	Being victims of classism/genderism causes shame and the feeling of deficiency
Stephens et al	2014	Intervention & Survey	Convenience sampling N=147	Through intervention first-generation students learned that people with different backgrounds can succeed
Stebleton et al.	2014	Survey	N=55,551 40,253 Non-first generation 15,298 First generation	Importance of university services, specifically mental health, to be available to first-generation students due to their unique circumstances

*Grade Level*

Research on grade-level as it relates to sense of belonging, focuses on the experience of first-year students and their motivation to continue into year two. First year students make up a vulnerable population due to the high level of attrition into year two (Countryman & Zinck, 2013; Hoffman, Richmond, Morrow, & Salomone, 2003; Johnson, et al., 2007; Marshall, Zhou, Gervan, & Wiebe, 2012; Morrow & Ackermann, 2012; Soria & Stubblefield, 2015). The feeling of belonging is a good indicator they will continue into year two. IHE are not only concerned about enrollment, but retention numbers are also important to remain competitive. Special consideration for first year students must not be minimized. Research conducted by Johnson, et al. (2007) shows importance of creating a welcoming, diverse, and inclusive environment. Particularly important for the first year to help make the transition into college more successful. Johnson, et al. (2007) also claims that the importance of creating a diverse and tolerant environment in residence halls, and the classroom, is important when creating a sense of belonging, especially for the ethnic/racial minority. See table 2.4 for additional details on the research that focuses on grade level considerations for sense of belonging.

**Table 2.4 Sense of belonging as it relates to grade level**

<b>Author</b>	<b>Date</b>	<b>Method</b>	<b>Sample</b>	<b>Conclusion/Implications</b>
Countryman & Zinck	2013	Survey	n=38	Students gain sense of belonging by being part of an organized community of learners through a first-year experience program. Program shows to increase motivation to persist past year 1
Hoffman et al.	2003	Focus groups Survey	n=205	Sense of belonging attributed to quality student/peer relationships as well as quality student/faculty relationships
Johnson et al.	2007	Survey	n=2,967	Sense of belonging improves motivation to persist past year 1 Social interaction the most important determination in sense of belonging Important to focus on residence hall environments to foster a sense of belonging
Marshall et al.	2012	Survey Interviews Narrative	n=977 n=14 interviews	Sense of belonging is uncertain. That a single factor can aid in one student's sense of belonging and not in another
Morrow & Ackermann	2012	Survey	n=156	Significance found with sense of belonging as it relates to student/faculty relationships Increase in quality student/faculty relationships improves motivation to persist past year 1
Soria & Stubblefield	2015	Survey	n=1,421	Sense of belonging for students was significantly associated with their awareness of their strengths.

*Disabled*

An Increase in services and technological advances on campuses has made it more accessible to a large range of abilities. Sense of belonging for those with mental, physical, and learning disabilities is important to keep a balance of abilities on campus (Jones, Brown, Keys, & Salzer, 2015). Sense of belonging may be particularly important for this group since their disability may enable them to feel left out in many situations.

The research conducted by Supple and Abgenyega (2011) on disability and higher education, points to a need for awareness and teaching opportunities for the faculty and staff. Instructional design considerations including providing resources to faculty for proper creation of course content. This is important to ensure an effective learning environment for all students. A negative attitude from faculty is a deterrent for students with disabilities to get help (Murray, Lombardi, Wren, & Keys, 2009).

Students with diverse abilities often arrive at the higher education environment having had services provided for them. This creates a challenge to provide the proper number of services. Although section 508 of the Americans with Disabilities Act states institutions must provide reasonable accommodations to ensure equal educational opportunities, it is still up to the student to disclose and be willing to seek out such help (Bodaghi & Zainab, 2013).

Although technology and innovation has partially bridged the gap between those considered disabled and those who are not, there is still a long way to go. General barriers to educational as well as social opportunities include physical limitations to the environment (Morgado, Cortes-Vega, Lopez-Gavira, Alvarez, & Morina, 2016), limitations due to lack of effective services (Hadjikakou & Hartas, 2008) , social justice,

and inequality implications (Riddell, Tinklin, & Wilson, 2005), as well as changing stigma and bias (Hutcheon & Wolbring, 2012). Universal Design is a framework for creating learning environments that build in inclusivity from the start (Burgstahler, 2001). The concept of Universal Design is not just about instruction, it also includes infrastructure and environmental considerations. Creating an environment by Universal Design is a great way to add opportunity for a sense of belonging for the abled and disabled alike. It allows for a more welcoming environment right from the start, so those who may need help are not singled out (Burgstahler, 2001). See table 2.5 for additional details on the research that focuses on students with disabilities and sense of belonging.

**Table 2.5: Consideration of disabilities in relation to sense of belonging**

<b>Author</b>	<b>Date</b>	<b>Method</b>	<b>Sample</b>	<b>Conclusion/implications</b>
Jones et al.	2015	Survey	n= 386 psychiatric disorders	Highlighted the importance of student relationships with other students that contributed most to sense of belonging
Supple & Abgenyega	2011	Interviews	Not specified	Sense of belonging created through intentional inclusion by the institution
Murray et al.	2009	Survey	n= 198 faculty	Showed evidence that disability-focused training for faculty improved the environment for disabled students
Bodaghi & Zainab	2013	Lived experience	n= 18 visually impaired students	Safety and security provided through having a physical space designed for these students made them “feel at home” and belong.
Morgado et al.	2016	Focus groups Interviews	n= 44	Lack of knowledge of staff produces unsatisfactory learning environments contributing in a lack of sense of belonging
Hadjikakou & Hartas	2008	Focus groups Interviews	n= 10 students with disabilities n= 4 tutors n= 10 heads of schools	Multiple perspectives on the quality of services offered. Increase in services created in increase in sense of belonging for students with mental/physical disabilities
Hutcheon & Wolbring	2012	Interviews	n=8	The important role of policies in creating a sense of belonging within and outside the classroom- Inclusion created from the institutional level

## **Resilience**

Critics of Maslow's Theory of Human Motivation (1943) counter his idea that growth happens in the absence of deficiency. In fact, there are many success stories based on the adaptation to deficiencies and one's ability to gain resilience from their experience (Neher, 1991; Seery, Holman, Silver & King, 2010; Winston, 2016). This, however, is not considered the norm. IHE are expected to inhibit deficiencies by providing a safe and comfortable environment while still providing an experience that enables its students to flourish in the face of uncertainty and change, also known as resilience. Resilient individuals and organizations are marked by similarities that include being able to adapt to change and problem solve, realize and use resources efficiently, quickly make changes and manage effectively in the face of uncertainty (SchWeber, 2008).

Characteristics of institutional resilience focus on effectively managing a crisis so operations can resume as quickly and efficiently as possible. Several principles are involved in this process, these include:

- Remain creative under pressure. Using resources available in the most efficient and sometimes unconventional manner.
- Expand the possibility for resources.
- Quick decision making that includes the right amount of people at the right time with the right amount of expertise.
- Manage resources effectively during situations of uncertainty (SchWeber, 2008; Van de Walle, 2014; Weick, 1979).

The integrated approach described by Berkes and Ross (2013) aligned closely with the aspects of higher education. This approach to developing a model of intergrated organizational resiliency contained multiple dimensions which are

1. Social networks
2. Community infrastructure
3. Diverse and innovative economy
4. Leadership
5. Knowledge, skills, and learning
6. Engaged governance
7. People place relationships
8. Positive outlook
9. Values and beliefs

Resiliency is developed over time or discovered in the wake of a sudden event. In regard to personal resilience, the students come to campus with varying life experiences and perspectives. By learning where deficiencies lie ahead of an urgent event, can enable people and places to be able to react more effectively and efficiently, thus providing a streamlined use of resources (McCrea, Walton, & Leonard, 2014). From an organizational standpoint there are ways in which a community can collectively gain resilient qualities. There is an opportunity to learn by evaluating how other organizations have developed resiliency through traumatic events (SchWeber, 2008 ; Eckert, 2010). However, can true resilience be realised in the absence of such an event that enables a community and it's members, to face the urgency of the shared experience? This is where having a better understanding of personal resilience becomes important.

The characteristics of organizational resiliency, as well as, an integrated approach, can inform how individuals might exhibit resilient behavior and contribute to the strength of the community (Berkes & Ross, 2013; SchWeber, 2008; Van de Walle, 2014; Weick, 1979). The resilience of organizations is dependent on the resilience of its members. Both organizations and individuals must be able to use resources effectively and think creatively in the face of adversity (Hawdon & Ryan, 2011). Both must also rely on social networks, a positive outlook, and knowledge/skills from learned experience (Wildman, 2008). IHE have an opportunity to examine personal resilience and how it effects a students motivation to persist, access their own happiness, and develop coping skills for use into the future.

### ***Large-scale Shared Trauma and Organizational Resiliency***

The urgency of a large scale traumatic event can shed light on areas of an organization that are vulnerable; it can also highlight areas of strength and resolve. The challenge is to create a resilient community in the absence of urgency. This can be done by examining in detail what other, similar organizations have done that experienced such urgency (Eckert, 2010; Hawdon & Ryan, 2011; Wildman, 2008). Many large-scale measurable changes have happened due to tragedies on campus (Midwestern Higher Education Compact, 2008).

Bendici (2017) quotes Michael Dorn, executive director of Safe Havens International a non-profit campus safety organization as saying:

There have been a great number of successes in the higher ed arena since Virginia Tech, says Dorn. It's tragic but sometimes it takes an event like that to effect change. We are in a much better place since that time. (p. 46)

Policies and procedures focused on safety and security were tightly examined and updated. Infrastructure was adapted to enhance effective communication and crisis management (U.S. Department of Education, Office of Elementary and Secondary Education, & Office of Safe and Healthy Solutions, 2013). IHE channeled resources to these areas in hopes they would be able to withstand such an event if one were to happen. The risks of ignoring these necessary updates were too high. No risk can be mitigated 100% since an institution will not have complete control over all the variables. Institutions can only provide resources that create an environment that is as safe as possible (Midwestern Higher Education Compact, 2008). The concept of safety is also subjective since current attitudes and perceptions related to safety are not fixed. As an example, a student may feel safer surrounded by gun carrying community members while other students may find this terrifying (Price et al., 2014).

Along with these large scale changes there were also more subtle changes found upon careful observation. Due to sensitivity of such an event it was important to take into consideration even the smallest of items. Hawden and Ryan (2011) discovered creative placement of proper events was important for solidarity. They learned through experience the urge to cancel all events should be stifled. Common experience and bonding helps a community bounce back from such an event. Although simple, the idea of putting members first during a traumatic event is very important. Trust, history of working together, making meaning, and capturing the collective voice, are all paramount in instilling faith in the community (Wildman, 2008). These attributes also create a gentle sense of empowerment enable a community to thrive following a traumatic event.

Taking into consideration the intricacies of human motivation, as it relates to managing deficiencies in feeling safe and having a sense of belonging, is difficult to pinpoint all the areas that need care and vigilance. Research supports there is value in learning from others experiences (Eckert, 2010). When an institution finds deficiencies in these areas, and devotes resources to improve them, there can be value added to the overall experience by creating and fostering a resilient and growth minded environment. Returning back to “normal” operations is very important (Hawdon & Ryan, 2011). The importance of higher education to the local and global community creates momentum to continue to re-evaluate, re-envision, and re-create how higher education defines a positive, worthwhile experience. The proper alignment of resources provide an experience enables students to remain adaptable and flourish both inside and outside the confines of the residential environment (Midwestern Higher Education Compact, 2008).

### ***Trauma and Personal Resilience***

An examination of resilience and higher education is heavily focused on the institution as a whole and the systems it holds as described through the work of Eckert (2010), Price et al. (2014), and Bendici (2017). Systems within the institution are created and maintained through proactive and reactive efforts to provide the best learning environments and are put to the test following a shared large-scale traumatic event (Hawdon & Ryan, 2011).

Getting the institution back to working order is very important, but what lies within the community are stories of personal narratives of trauma and resilience, that are also necessary to understand to create an environment for success (Bonanno, 2004; Robbins, 2018; Wibroski, 2007). In the absence of a large-scale traumatic event shared

by the members of the community, personal narratives become even more important. If an institution remains stale towards these personal narratives it runs the risk of overgeneralizing importance of certain resources and wasting efforts resulting in a potential devaluation of the entire system (McDonald, 2002).

### **Summary**

The majority of the research on sense of belonging in higher education environments focuses on gender/gender identification, grade level, ethnic/racial, social class, and the differently-abled. Safety is generally evaluated from an infrastructure and physical capacity rather than an emotional/psychological one. Additional research needs to be done on the sense of belonging as it is perceived from different groups represented on campus. Groups not limited to lesbian, gay, bisexual (Longerbeam, Inkelas, & Lee, 2007), as well as others minimally represented such as those with shared interests (ie. student clubs and organizations) (Sule, 2016).

When the intention is to create and maintain environments to allow for a heightened sense of safety and belonging, it is essential to recognize every individual and what they identify as and find interesting (O'Keeffe, 2013). However, creating a perfect environment for each individual is impossible, especially with fixed resources. Critics of the modern day higher education experience proclaim, among other things, creating an environment with the intention of making each member comfortable all the time, inherently decreases resilience (Newfield, 2008; Seery, Holman, Silver & King, 2010). The balance of creating spaces that allow for optimal learning and growth, without sacrificing the potential to acquire essential resiliency, is a challenge of IHE.

This research may offer some insight into the importance of the social interaction of shared experiences within extra-curricular activities in the form of student organizations, volunteer opportunities, as well as, club and varsity sports. An abundant collection of student organizations may offer students the opportunity to see themselves represented, and thus have a heightened sense of safety and belonging. This may identify strategies that equate to the world outside higher education and possibly increase perceived value. Alternatively, offering a safe and representative space may provide a false sense of security that will not allow for resilient behavior after the student graduates.

Another theme emerges from this content might allow for a different outcome. Maslow, in his Theory of Human Motivation, describes the idea when humans move through the D-Values on the Hierarchy of Needs to the B-Values they rely less on external factors for coping which could support resiliency (Maslow, 1968). This idea highlights the possibility there is potential in creating a temporary space that offers a “safe and inclusive as possible” environment (IHE), which allows for optimal learning and acceleration into a B-Value existence. As described by Maslow self-actualized people are, among other things, more accepting, autonomous, and creative, which makes them more adaptable to change and stressors. They trust themselves more which allows for more spontaneity which can lead to a more satisfactory life (Maslow, 1970).

Informed by the research of organizational resilience after a large-scale shared traumatic event, this study may help to determine if sense of safety and belonging create

a measurable level of personal resilience. Due to the research being heavy in the area of physical safety and organizational resilience on a macro level this research will focus on the mental health perspective at a personal micro level.

### **Chapter 3**

#### **Methods: Design for Action**

##### **Overview of Purpose**

This research is focused on determining the importance of mental health as defined by sense of safety and belonging on a student's ability to recover after a traumatic event (resilience) measured by depressive/anxiety disorders and or substance abuse and them feeling safe. Taking into consideration the reported decline of perceived value in higher education over the past several decades, it is imperative to the success of an institution to create a space that is conducive to learning and allow students to define what success means to them. This research will be done quantitatively using secondary data.

##### **Methodology**

Consideration of data collection in determining if there is a relationship between involvement in extra-curricular activities and sense of safety and belonging and/or likelihood of resilient behavior following a personal traumatic event, was based on several factors. It was important to find data aligned with overall goals and would test all the variables. It is important to find measurable value in the secondary data. Smith, Ayanian, Covinsky, Landon, McCarthy, Wee, and Steinman (2011) describe secondary data as data collected by someone else for another primary purpose but could be used to inform other research. The use of secondary data for research purposes has its advantages and disadvantages.

Advantages include saving resources, such as time and money, on survey creation and distribution (Connelly, 2010). Disadvantages are realized with the inability of the

researcher to create the survey that directly relates to the research and not knowing the data set. This can add more time and energy to the data analysis process and also requires the researcher to have a level of trust in the data integrity (Gonzalez, 2011).

### ***Research Questions and Theoretical Framework***

The research questions are focused on the ability of the institution to provide the environment for an abundant sense of safety and belonging using current infrastructure and programs. However, just because these aspects are considered in place by the institution do not equate them to a perception. This is where this quantitative study of secondary data can add value. If the efforts are focused in the proper area and produce the desired results, then evaluation on a consistent basis is the main focus. If, however, the efforts are there without desired results, then the institution has more work to do, with regard to assessment and development. It is important for this cycle of assessment and evaluation to happen regularly.

Using Maslow's Theory of Human Motivation (1943) and his structure of The Hierarchy of Needs (1968) a perceived sense of safety and belonging, in combination with a traumatic event, an individual would exhibit resilience (lack of depressive/anxiety disorder and/or substance abuse and feeling safe). This is a simplistic hypothesis and can exist on a continuum. If basic D-Values are realized for a majority of the time then B-Values can happen with higher probability (Maslow, 1968). Critics of Maslow would postulate that resilience can happen and does either way (Neher, 1991; Seery, Holman, Silver & King, 2010; Winston, 2016). Although resilience can and does happen this research may help support the resource allocation to evaluate and increase the efforts towards a safe and welcoming environment.

## **Characterizing the Secondary Data Source for this Research**

### ***Acquisition of Data***

The brief report on the data was found by doing an internet search on mental health and higher education. The data set was acquired through communication with a researcher from the Vermont Department of Health. Following an official request for the data it was provided in different formats. IRB approval was attained for unique analysis of secondary data with an exempt review since data was not publicly available.

### ***Survey Details***

In 2016 the Vermont Department of Health created the College Health Survey to collect data on the students within the Vermont state higher education system. This survey was an adaptation of The National College Health Assessment (NCHA) administered by the American College of Health Association in 2014. The goal of the survey in 2016 was to add questions to make it more sustainable and representative of current environments and demographics. Data from both was included in the report for comparison.

**Institutional characteristics.** Students at 20 schools (N= 14,843) were sent the survey electronically using Survey Gizmo. A sample (n) equaled 2510 usable surveys for data analysis. See table 3.1 for sample characteristics. Out of the 20 schools invited to participate, nine schools ultimately turned in surveys that represented 3-39% of the student population at these institutions. Students from 2 and 4-year institutions participated.

Survey topics that aligned with the research questions included: campus climate and safety, general health and wellbeing, personal safety and violence, interpersonal

dating violence, and sexual violence. Also included in survey were questions about involvement in extra-curricular activities including athletics (varsity and club), student organizations, and volunteer experience (see Appendix A). Table 3.1 shows the characteristics of the sample population (n).

**Table 3.1: Sample Characteristics (n = 2,510)**

	n	%
<b>Sex</b>		
Male	1,004	40
Female	1,255	57
Transgender/Other	251	3
<b>Age</b>		
18-20	1,154	46
21-22	728	29
23+	628	25
<b>Race/Ethnicity</b>		
White Only	2,209	88
Non-White or Multi-Racial	301	12
Hispanic	100	4
<b>Sexual Orientation</b>		
Asexual	100	4
Bisexual	176	7
Gay/Lesbian	75	3
Queer	50	2
Questioning	50	2
Heterosexual	2,008	80
Other Orientation	50	2
<b>Place of Residence</b>		

In-State (VT)	1,606	64
Out-of- State (US)	853	34
International	50	2
<b>Year in School</b>		
1 <sup>st</sup> yr. undergraduate	703	28
2 <sup>nd</sup> yr. undergraduate	678	27
3 <sup>rd</sup> yr. undergraduate	577	23
4 <sup>th</sup> yr. undergraduate	452	18
5 <sup>th</sup> yr. undergraduate or more	75	3
<b>1<sup>st</sup> Generation College Student/Pell Grant Eligible</b>		
Yes	1,029	42
No	1,230	49
Don't know/not sure	251	10

## **Research Design**

### ***Data Analysis Plan***

To incorporate the range of variables that were a part of the dataset, the secondary analysis will be carried out through multivariate logistic regression. This test is defined as having multiple dependent variables analyzed with a single independent variable. An initial determination of traumatic event will be used to create the sample (n=2,174). This research is limited to those that have experienced emotional, physical, or sexual abuse in the last 12 months and does not take into account earlier traumatic events. The survey had defined a trauma as one experienced within the past year. To analyze the data for sense of safety and belonging two models will be executed using multiple controls. Analysis will be adjusted by taking into consideration the clusters around the larger universities.

**Independent variable.** For this study there are four categories that make up the independent variable of participation in extra-curricular activities. These categories are

participation in varsity sports, club sports, student organizations, and volunteering.

Participation in varsity sports is dichotomous where 0=no and 1=yes. Participation in club sports is dichotomous where 0=no and 1=yes. Participation in student organizations is dichotomous where 0=no and 1=yes. Participation in volunteering is dichotomous where 0=no and 1=yes. (Cronbach's alpha = .755) This supports the high reliability between variables. Participation in at least one of these activities yields a yes for the independent variable. Participation in none of them yields a no.

**Table 3.2 Descriptive statistics of independent variable**

Type of activity	Mean	Std. Dev	Min	Max
Varsity sports	.1166316	.3210484	0	1
Club sports	.1326316	.3392476	0	1
Student organizations	.603313	.4893167	0	1
Volunteering	.3542857	.4784015	0	1

**Dependent Variables.** For model one there is one dependent variable for feeling safe on campus. Safety is dichotomous where 0=no/neutral and 1=yes.

**Table 3.3 Descriptive Statistics of Dependent variable for safety**

Variable	Mean	Std. Dev.	Min	Max
Safety	.55127	.4974815	0	1

For model two there are two dependent variables which are *depression/anxiety* and *substance abuse*. *Depression/anxiety* is dichotomous where 0=no and 1=yes. *Substance abuse* is dichotomous where 0=no and 1=yes. Answering yes to either depression and/or substance abuse is categorized as yes=1. Answering no to both is categorized as no=0. (Cronbach's alpha = .781) This supports the high reliability between variables. For the purposes of this survey, indication of depression was indicated by

answering questions from the Patient Health Questionnaire – 9 (PHQ9) (Kroenke, Spitzer, Williams, 2001).

**Table 3.4 Descriptive Statistics of dependent variables for sense of belonging**

Variable	Mean	Std. Dev.	Min	Max
Depression/anxiety	.2384702	.4262679	0	1
Substance use	.0214085	.1447824	0	1

**Controls.** Each model will have controls set for *year in school*, *sexual orientation*, *gender* and *living on/off campus*. These controls were set through the availability of data in the dataset. The literature supports the idea these controls effect a sense of safety and belonging. Controlling for these will help determine if the independent variables are actually effecting change in the dependent variable. Year in school and gender are dummy variables. Year in school is defined as 0= first year, 1=second year, 2=third year, 3=fourth year, and 4=anything greater than 4 years. Sexual orientation is defined as 0=heterosexual and 1=non-heterosexual. Gender is defined as 0=female, 1=male, and 2=other. Living on campus is defined as 0 and living off campus is defined as 1.

**Table 3.5 Descriptive statistics of controls**

Control	Mean	Std. Dev.	Min	Max
Year in school	2.382463	1.164008	0	4
Sexual orientation	.214095	.4103026	0	1
Gender	.7756328	.5754848	0	2
Living on/off campus	.5071489	.500054	0	1

### Limitations

The secondary nature of this data presents some limitations. The decision to use secondary data eliminated the researchers control over the questions asked in the survey. It also did not allow for the researcher to define the terms. Data collected was at a single

point in time known as cross-sectional data. A major limitation of cross-sectional data collection is its difficult to determine whether an outcome was caused by the exposure or the exposure was caused by the outcome. Perceived limitation of the data is the amount of time that has lapsed since the survey. At the time of this analysis the data is ~6 years' old, which is common for data collection of this kind in social sciences, due to the resources it requires to carry out.

### **Summary**

The purpose of the chapter was to explain the methods used to analyze the possible relationships between participation in extra-curricular activities with depressive/anxiety disorders and/or substance use, as well as, a possible relationship between participation in extra-curricular activities and perceived sense of safety. Using multivariate logistic regression to find the relationship between multiple dependent variables and one independent variable when the variables are defined dichotomously with a yes or no outcome. This quantitative study on secondary data could help indicate the effectiveness of campus efforts, in regard to, sense of safety and belonging.

## Chapter 4

### Results of Data Analysis

The statistical interpretation of the results of the multivariate logistic regression test are reported below. This chapter will provide results of the test based on the association to the research questions discussed in chapter 1.

RQ1 In which ways, if any, does participation in extra-curricular activities instill a measurable sense of safety and belonging?

RQ2 In which ways, if any, does a sense of safety and belonging increase resilience in students experience with a personal traumatic event?

Based on the logistic model regression performed using STATA, the probability of the dependent variables (depression/anxiety, substance abuse, and feeling safe on campus) occurring, given the independent variable (participation in extra-curricular activities), was analyzed for statistical significance ( $p < .05$ ) and a 95% confidence interval (CI). Coefficients are also discussed to determine if the independent variable was more or less likely to predict the dependent variable and at what magnitude. Since these statistics are based on estimates, the standard error for the coefficient is discussed, in order to understand the predictability of the sample to the population. The relevant data for research model 1, discussed in chapter 3, which was analyzed to show a possible association between participation in extra-curricular activities and sense of safety is reported in Table 4.1. The relevant data for research model 2, also discussed in chapter 3, which were analyzed to show the possible association between participation in extra-curricular activities and sense of belonging is reported in Table 4.2.

Furthermore, it is important to note because the data are clustered among 20 universities across Vermont, robust standard errors are provided, specifically the Huber-White Sandwich. By providing the robust standard errors and accounting for clustering it allows the analysis to relax its independent errors assumption in a limited way, this is important because errors may be correlated within subgroups or clusters of the data (Hamilton, 2009). In other words, the analysis is taking into account inter-university variability and intra-university variability.

### **Reliability and Generalizability**

It is important to point out this data analysis did not support a statistically significant ( $p < .05$ ) relationship between the independent and dependent variables, and thus cannot rule out other factors. However, as discussed further in chapter 5, this study does provide a starting point for further research since the review of literature produced minimal focus on shared experience/interests in predicting mental health outcomes including sense of safety and belonging. Due to the limitations of the cross-sectional nature of the data collection it cannot predict that the dependent variables, in fact, did not influence the independent variable. This will also be discussed more in depth in chapter 5.

Although this analysis did not show statistical significance with  $p < .05$  for a relationship between participation in extra-curricular activities and sense of safety and belonging, controlling for the dependent variable did produce statistically significant outcomes as well as others that are used for further discussion in chapter 5. Taking into consideration the homogenous nature of the sample characteristics, it is difficult to infer the generalizability of this research to other populations. Adjusting the variables for

reliability with Cronbach's alpha values of  $>.70$  allows for inter variable reliability and consistency (Salkind, 2015). Reliability can also be found in the choices made with the creation of the survey. Although, the use of secondary data for analysis removed the researchers control over such reliability it was proven through calculating the Cronbach's alpha. This type of reliability will be discussed further in chapter 5.

### **Data Analysis for Model 1**

In the first model analyzed, to find a potential relationship between participation of extra-curricular activities and sense of safety students living off campus, were 36% less likely to participate in extra-curricular activities than those living on campus. This is statistically significant which makes it representative of the greater sample (N). The year in school analysis produced some interesting results. Compared to the reference category (freshman) sophomores were 1% more likely to participate in extra-curricular activities, However, this value was not statistically significant and cannot be generalized. For juniors and seniors, there was a statistically significant output, of 1.52 and 1.88 times respectively for a positive association. Juniors participated in extra-curricular activities 1.52 times the rate of freshman and seniors were even more represented in extra-curricular activities with a rate of 1.88 times that of freshman. For the year in school control those attending college for 4+ years are 80% less likely to participate in extra-curricular activities than freshman. Females were also less likely to participate in extra-curricular activities by a rate of 72% compared to males. The sample population reporting to be non-heterosexual were 1.34 times more likely to participate in at least one extra-curricular activity.

**Table 4.1**

*Summary of multivariate logistic regression test results for individuals who have experiences a traumatic event with the last 12 months for participation in extracurricular activities and sense of safety*

Variable	Coefficient (S.E.)	Odds Ratio	95% Confidence interval
<b>Living</b>			
On Campus (Ref)			
Off Campus	-1.010(.186)	.364*	.253 - .525
<b>Year in School</b>			
Freshman (Ref)			
Sophomore	.075 (.134)	1.077	.828 - 1.402
Junior	.419 (.145)	1.520*	1.143 - 2.022
Senior	.629 (.136)	1.882*	1.438 - 2.451
4+	-.226 (.298)	.798	.445 - 1.431
<b>Gender</b>			
Male (Ref)			
Female	-.335 (.095)	.715*	.593 - .863
Other	-.378 (.501)	.685	.257 - 1.829
<b>Sexual Orientation</b>			
Heterosexual (Ref)			
Non-heterosexual	.289 (.105)	1.335*	1.086 - 1.642
<b>Safety</b>			
No/neutral (Ref)			
Yes	.015 (.089)	1.015	.851 - 1.211

\*p<0.05

### Data Analysis for Model 2

For the second model, the same sample, independent variable, and controls, were all used to control for different dependent variables (See table 4.2). Categories showing statistical significance in the first model also showed as such in the second. The values were slightly different which is due to the questions answered for each dependent variable. Controlling for depression/anxiety and/or substance abuse a very similar output as sense of safety. Since a statistically significant relationship was not found between participation in extra-curricular activities and depression/anxiety (DV), and/or substance abuse (DV), this next paragraph will serve to report out only the outcomes for the controls and how they relate to the independent variable.

When controlling for DV for model 2, the odds were 38% lower for off campus students to participate in extra-curricular activities than their on-campus peers. Juniors and seniors were more likely than freshman to participate in extra-curricular activities by 1.52 and 1.88 respectively. Those with 4+ years were 74% less likely to participate. Based on this data, males were 70% more likely to participate than their female peers. Participants that identified as non-heterosexual were 1.37 more likely to participate in at least 1 extra-curricular activity.

**Table 4.2**

*Summary of multivariate logistic regression test results for individuals who have experienced a traumatic event with in the last 12 months for participation in extracurricular activities and sense of belonging*

Variable	Coefficient (S.E.)	Odds Ratio	95% Confidence interval
<b>Living</b>			
On Campus (Ref)			
Off Campus	-.979(.198)	.378*	.256 - .556
<b>Year in School</b>			
Freshman (Ref)			
Sophomore	.088 (.137)	1.095	.837 -1.424
Junior	.456 (.129)	1.520*	1.222 - 2.033
Senior	.419 (.145)	1.878*	1.456 - 2.424
4+	-.299 (.301)	.741	.411 - 1.337
<b>Gender</b>			
Male (Ref)			
Female	-.363 (.088)	.696*	.592 - .818
Other	-.493 (.520)	.610	.220 - 1.693
<b>Sexual Orientation</b>			
Heterosexual (Ref)			
Non-heterosexual	.283 (.100)	1.327*	1.089 - 1.615
<b>Depression/anxiety</b>			
No (Ref)			
Yes	-.077 (.089)	.926	.777 - 1.102
<b>Substance abuse</b>			
No (Ref)			
Yes	.215 (.361)	1.239	.611 - 2.515

\*p<0.05

**Summary**

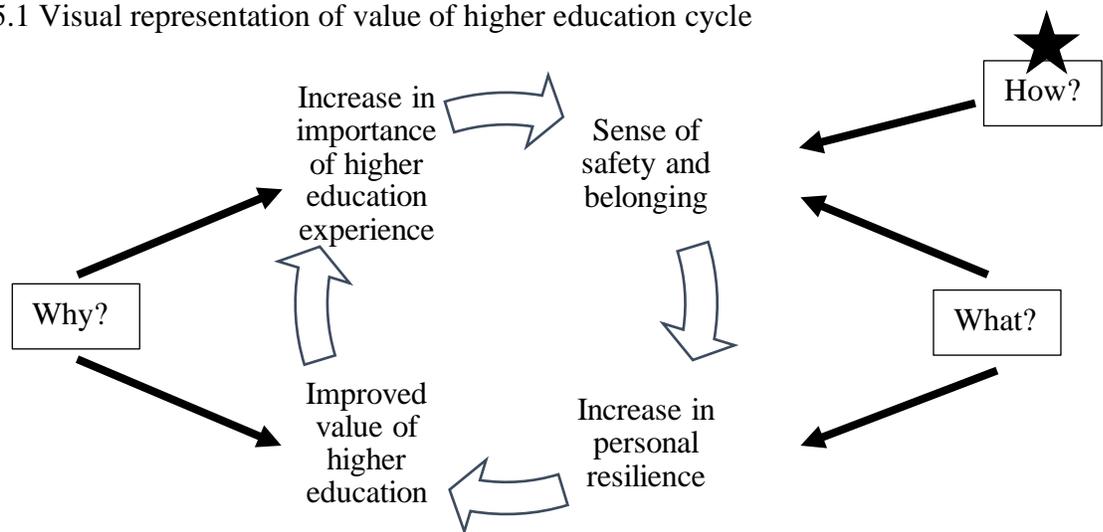
Although, there was no statistical significance found between participation in extra-curricular activities (IV) and sense of safety and belonging, depression/anxiety, and substance abuse, this data set provided an interesting look at the odds of certain groups on campus participating in such activities. This data analysis showed those who identified as off campus and/or female were significantly less likely to participate in extracurricular activities. It also showed those who identify as male, junior or senior, and non-heterosexual were significantly more likely to participate. In chapter 5, the story interpretation of these numbers and their importance to further research, will be discussed.

## Chapter 5

### Discussion and Further Research

Given the limitations and failure in finding statistical significance in this particular data analysis it will be important to create a broader understanding of the possible implications of this research, and how it relates to research question three (R3): How can an Institution of Higher Education be proactive in the development of a community that enables a sustainable and measurable sense of safety and belonging and, ultimately, why does it matter? Figure 5.1 is a visual representation of the how, what, and why of this cycle.

Figure 5.1 Visual representation of value of higher education cycle



Note: Author created

The parts of this cycle interweave the concepts discussed throughout this study including; the importance of sense of safety and belonging on personal resilience, discussed in detail through the theoretical framework of Abraham Maslow (1943), improved value of higher education through psychosocial means (McMahon, 2009), and the possibilities that exist for increasing the importance of the higher education experience. These concepts exist on a continuum to allow for a constant cycle. An

institute of higher education that focuses efforts on creating a measurable and sustainable sense of safety and belonging increases the likelihood of a resilient population, which can improve the value of higher education, and in turn, increase the importance of the experience.

### **The Story in the Data**

This research does not directly associate participation in extra-curricular activities and a sense of safety and belonging, however, it does not eliminate the possibilities for research on the importance of a shared experience. The size of the sample in this research with  $n=2,174$  is sizable, however, due to the demographic limitations of this sample, it would be interesting to see if the relationship between shared experience/interests and sense of safety and belonging, would be different with a more representative sample.

This data shows students living off campus are less likely to participate in extra-curricular activities. This output is predictable when taking into consideration the profile of the average off-campus student. Many attributes associated with an off-campus student vary from those living on campus, but the need for a sense of safety and belonging are important to both populations. The opportunity of an IHE is to create a safe and welcoming environment that takes into account both on and off-campus students by acknowledging the unique perspectives of the two groups. On-campus students may be more likely to base their sense of safety on how they feel after dark, while an off-campus student may not have the same perspective because they might not be on campus during that time. A sense of belonging for on-campus students might be based on residential opportunities to connect, while an off-campus student may be finding their sense of

belonging in their home environments. This presents a challenge to discover how and at what degree the IHE allocates resources based on these particular groups.

The regression output of *year in school* showed an increase in participation as grade level increased. This statistically significant value for an increased percentage of participation for junior and seniors could be attributed to an increase in comfort among other variables. Research shows that acclimation to environment for freshman is based in part by a sense of belonging (Countryman & Zinck, 2013; Hartley, 2011; Hoffman et al., 2003; Johnson et al., 2007; Leece, 2014; Means & Pyne, 2017; Morrow & Ackermann, 2012).

Research on gender and sense of belonging shows the importance of a balance in opportunities for all gender identities (Dehdarirad et al., 2014; Cheng & Yang, 2015; Kissinger, 2009; Le et al., 2016; Loots & Walker, 2015; Loveday, 2016; Maddrell et al., 2016; Rose, 2015). The research is focused on the inherent imbalance of the experience of male versus other gender identities. This research showed a significant difference in the participation of females compared to males which is in alignment with the prior research. Females being significantly less likely to participate in extra-curricular activities.

Although sexual orientation is not heavily represented in past research, it was interesting to see the output. There was an increase in likelihood those survey participants who identified as non-heterosexual had an increased percentage of participation in extra-curricular activities over those who identified as heterosexual. This could be attributed to the groups longing for a sense of belonging and seeking out these opportunities, or the

universities level of outreach to this particular group (Dentato et al., 2014; Longerbeam, 2007).

### *The Importance of Perspective*

Following the mass trauma at Virginia Tech there was a marketable increase in the importance of building safe and secure spaces for learning (Rasmussen & Johnson, 2008). Focus was placed on evaluating current infrastructure and policy surrounding safety. Physical safety such as; locked buildings, increased law enforcement, and improved communication services, were placed into the spotlight. Financial, time, and human resources were allocated in large portions with the assumption that these would allow people to feel safer on campus or at the very least create the picture of a safe space (Allen & Lengfellner, 2016; Bendici, 2017; Deisinger & Scalora, 2016; Fruchtnicht et al., 2014; Gow et al., 2009; Kaminski et al., 2010; Langford, 2004; Midwestern Higher Education Compact, 2008; Office of Safe and Drug-Free Schools, 2010).

The massive influx in resource allocation for safety mitigation on campus also fueled the importance to assess these strategies for the “perception” of safety. Do these improvements in physical space and policy really do what they are supposed to do? Which is to improve the collective sense of safety. These improvements are made around and “for” the campus population with the assumption they are a valuable way to utilize limited campus resources. The value is found in the perspective of the campus population not solely based on the existence of the infrastructure and policies and without constant evaluation could be a waste of resources (Jee & Good, 2017).

Although the outcome of this research does not show statistical significance for sense of safety and participation in extra-curricular activities, there may be value in

assessing the opposite. Does sense of safety increase the likelihood of participation in extra-curricular activities? Due to this data being collected only once, there could be a relationship where the dependent variable effects the independent variable, which would be interesting to see. This could be the reason why participation increases with grade level. As students move through the grade levels, they feel safer and more confident in their space, thus venturing out to be involved more fully in the college experience. Whether or not participating in extra-curricular activities encourages a sense of safety, or the inverse, sense of safety, is important to realize resilience and success (Maslow, 1943).

The theme of perspective is also important when looking into the value of belonging and how to create proper spaces to encourage it. According to Maslow (1943), a sense of belonging is important to realize resilient behavior and success. IHE, especially those residential in nature, offer countless opportunities to participate. Contrary to the safety infrastructure is built around and “for” the population, these opportunities are offered, and it is the prerogative of the individual to participate. However, the perception of belonging is not based on whether the activities such as varsity sports, club sports, student organization, and volunteer opportunities are offered, but rather if the student chooses to find value in the experience and participate (Soria & Stubblefield, 2015; Soria, Troisi, & Stebleton, 2003)

This research did not find a statistical significance with participation in extra-curricular activities and depression/anxiety or substance abuse. Thinking broadly about this, there could be a relationship between these variables, but the sensitive nature and possible implications for answering these truthfully, might be perceived as vulnerable or grounds for disciplinary action (Harrison, 1997; Pryor, 2004). This hesitancy to be

forthcoming could have skewed the results to form a non-significant relationship when an assumption is that with increased participation there is a higher degree of sense of belonging, support from others, and decreased need for unhealthy coping strategies. (Baumeister & Leary, 1995; Hartley, 2011; Lambert, et al., 2013; Lyons, Fletcher, & Bariola, 2016; Soria & Stubblefield, 2015; Strayhorn, 2012 ).

### *Accessing Perspective*

As discussed throughout this dissertation, importance is placed on creating the infrastructure and policies for a safe space, activity options for participation, the understanding that these efforts are producing valuable results. This value is found in the perspective of the ones they affect the most, those who live, learn, and thrive on campus. An effective way to access perspective is to administer effective climate surveys. Although there are other ways to collect data on perspective the dataset for this research was collected via climate survey and discussed here.

**The Effective Climate Survey.** There are pros and cons to using a survey to collect data. Survey use can assist in the collection of more data in a shorter amount of time with less resources (Hurtado, 2008). However, surveys can also create response bias due to survey fatigue and can result in incomplete data when participants exit the survey prematurely. Climate surveys often include data collection on sensitive topics. When sensitive topics are added to a survey, there is risk of making the participant feel uncomfortable and/or causing them to discontinue the survey. To mitigate risk, the survey needs to be marketed as anonymous and the participant pool need to be reminded of this periodically to maintain a sense of trust with the data collectors (Harrison, 1997; Pryor, 2004).

Climate surveys need to be representative of the population. There is an increased likelihood of survey completion when the participant sees themselves in the survey. An example of this is to be inclusive as possible with gender identity terms and religious affiliations. When a person sees themselves in the survey, they are more likely to answer truthfully and help ensure accurate and reliable results. Increasing the likelihood of completion is also important for a larger and generalizable sample (Rankin, 2018).

Due to the secondary nature of the analysis done for this research the researcher did not have control over terms or questions asked. However, an evaluation of the tool showed reliability by adding an inclusive list for the purpose of demographic collection. This survey tool also showed reliability in the questions by asking questions in different ways and appeared to be strategic in the questions asked to increase the potential for usable information. Although the data collected was not found to be statistically significant, the tool contains a degree of generalizability, and could be used as an example for other institutions climate surveys (Hurtado, 2008).

In addition to creating an effective survey and distributing it in a timely and efficient manner, it is also very important to market the survey properly. The potential survey participants need to understand the importance of such a survey, how it can directly affect them, and that collected data will be analyzed and used in valuable ways. These ways could include; creating programs, products, and services, as well as, creation and organization of institutional policies. In other words, What's in it for me?. Best practices in survey creation and distribution can increase the likelihood of reliable, representative, and generalizable data collection by creating a trust relationship between survey creator and participant (Rankin, 2018).

Climate surveys, such as the one used in this research, should be done on a regular basis. When done properly, climate surveys are considered an important part of an institutions efforts to remain viable, by highlighting the value of resource allocation and policy maintenance and creation (Hurtado, 2008). Climate surveys can add a unique perspective into the internal perception of the institution which is where the value lies.

### **Further Research**

Due to the lack of prior research on shared experience/interests and sense of safety and belonging there is room for further study. This research did not uncover a significant relationship between the variables of interest, but due to the limitations of the dataset it does not eliminate a possible relationship either. Future studies could analyze the effect of sense of safety and depression/anxiety and substance abuse on participation in extra-curricular activities.

There also might be valuable information found in the population that chooses not to participate. This may expose an area for the institution to focus on. Relating this theme to the data collected for this research might reveal the potential for mental health services to ensure a baseline of wellbeing, so the population is more likely to feel safe and participate, and ultimately create the potential of an improved sense of belonging.

### **Conclusion**

Although this particular study did not show a statistically significant relationship between participation in extra-curricular activities and sense of safety and belonging, it did expose themes not known by the researcher prior to this endeavor. The review of literature highlighted the importance of safety and sense of belonging. Research on safety is focused on infrastructure and physical space but is very limited on whether these

efforts are actually making the campus population feel safe. Sense of belonging included many groups but was very limited in the shared experience/interest area.

The questions that this research attempted to answer were as follows:

1. In what ways, if any, does participation in extra-curricular activities instill a measurable sense of safety and belonging?
2. In what ways, if any, do sense of safety and belonging increase resilience in students' experience with a personal traumatic event?
3. How can an Institution of Higher Education be proactive in the development of a community that enables a sustainable and measurable sense of safety and belonging and, ultimately, why does it matter?

Although this research could not definitively answer these questions it did support the importance of sense of safety and belonging in higher education. Based on Maslow's Theory of Human Motivation (1943), safety and belonging are essential to realize success based on heightened self-confidence/esteem and overall increased sense of wellbeing. The resilient nature of humans who are able to satisfactorily move through Deficiency Values (physiological, safety, and belonging) into Being Values (self-confidence/esteem and actualization) supports the importance of an additional value add for the higher education experience.

The value of higher education has been under fire for its steady increase in cost and its perceived lack of skilled graduates (Fain, 2019). Although the value of higher education is on the decline, the importance of the higher education experience cannot be understated as research shows this experience is directly related to an increase in innovation, including medical and technological advancements. Although there are

outliers, a college educated person has a higher likelihood to make more money and contribute more to the local and global communities (Fain, 2017).

An institution that values social capital creates a temporary environment has the potential to enable a student to feel taken care of, safe, and that they belong. Ultimately, improving their sense of self, relying less on others, and trusting themselves in most cases, creates resilience (Maslow, 1971). Resilient humans are more likely to weather a storm, both physical and/or emotional, by utilizing resources with more efficiency, understanding the importance of gratitude, and being more involved with their communities (McMahon, 2009). The braiding together of these values creates a picture of a healthy and thriving community, relying less on financial resources, and more on the importance on human interaction.

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**APPENDICES**

**Appendix A**

## Sample Instrument

2016 Vermont College Health Survey

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## 2016 College Health Survey: Background

1) What college or university do you attend?

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2) What year are you in school?

- 1st year undergraduate
- 2nd year undergraduate
- 3rd year undergraduate
- 4th year undergraduate
- 5th year undergraduate or more
- Graduate or professional program
- Not seeking degree
- Other

3) What is your current enrollment status?

- Full time
- Part time
- Other

4) Where do you currently live?

- Campus residence hall
- Campus wellness house or substance-free house
- Other college / university housing

- Parents / guardians home
- Other off campus housing
- Other

5) Are you a first generation college student or a Pell grant recipient?

- Yes
- No
- Don't know

6) In the last 12 months, have you participated in organized college athletics at any of the following levels?

(select ALL that apply)

- Varsity
- Club sports
- Intramurals
- None of the above

7) In a typical week during the current semester, how many hours a week do you:

	None	1-9 hours	10-19 hours	20-29 hours	30-39 hours	40 +
Work for pay	<input type="checkbox"/>					
Participate in extracurricular activities such as sports, band, clubs, and community groups	<input type="checkbox"/>					
Volunteer (do NOT count activities for which you receive course credit)	<input type="checkbox"/>					

8) In the last 12 months, how would you describe your grades in school?

- Mostly A's
- Mostly B's
- Mostly C's
- Mostly D's or F's

9) What is your current age?

10) What sex were you assigned at birth, such as on an original birth certificate?

- Male
- Female

11) Which term do you use to describe your gender identity?

**Gender identity** refers to a person's internal sense of themselves (how they feel inside) as being male, female, transgender, or another gender. This may be different or the same as a person's assigned sex at birth.

- Male
- Female
- Trans male / Trans man
- Trans female / Trans woman
- Genderqueer or Gender Non-Conforming
- Another identity

12) How would you describe your general health?

- Excellent
- Very good
- Good
- Fair
- Poor
- Don't know

The following questions ask about your level of physical activity.

Moderate-intensity physical activities cause a noticeable increase in heart rate. You can talk, but not sing, during the activity include activities such as walking briskly (3 miles per hour or faster, but not race-walking), water aerobics, bicycling slower than 10 miles per hour, or ballroom dancing.

Vigorous-intensity physical activities cause a noticeable increase in heart rate. You will not be able to say more than a few words without pausing for a breath include activities such as race walking, jogging, or running, swimming laps, singles tennis, aerobic dancing, hiking uphill or with a heavy backpack.

Muscle-strengthening activities include exercises that overload the muscles, making them do more work than they are accustomed to doing. Exercises should work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms). Strength training or weight training are common activities. Other examples include resistance training with bands or one's own body weight.

Flexibility exercises enhance the ability of a joint to move through its full range of motion.

Flexibility is specific to each joint. Examples include yoga, using a roller, and stretching.

13) On how many of the past 7 days did you perform:

	<b>0 days</b>	<b>1 days</b>	<b>2 days</b>	<b>3 days</b>	<b>4 days</b>	<b>5 days</b>	<b>6 days</b>	<b>7 days</b>
Moderate intensity exercise for at least 30 minutes	( )	( )	( )	( )	( )	( )	( )	( )
Vigorous intensity exercise for at least 20 minutes	( )	( )	( )	( )	( )	( )	( )	( )
Exercises to strengthen your muscles (8-10 exercises each for 8-12 repetitions)	( )	( )	( )	( )	( )	( )	( )	( )
Activities to increase your flexibility or range of motion	( )	( )	( )	( )	( )	( )	( )	( )

14) During the past seven days how many times did you:

	<b>I did not have any</b>	<b>1 to 3 times during the past seven days</b>	<b>4 to 6 times during the past seven days</b>	<b>1 tim e per day</b>	<b>2 time s per day</b>	<b>3 + time s per day</b>
Eat fruit	( )	( )	( )	( )	( )	( )
Eat vegetables	( )	( )	( )	( )	( )	( )
Drink a can, bottle, or glass of soda, pop, or a sugar sweetened beverage	( )	( )	( )	( )	( )	( )

Drink a mug, bottle, or glass of a caffeinated beverage (such as coffee, tea but not including energy drinks)	( )	( )	( )	( )	( )	( )
Drink a can, bottle, or glass of an energy drink (such as Red Bull, Jolt, or Monster Energy)	( )	( )	( )	( )	( )	( )
Drink a bottle or glass of plain water (including tap, bottled, or unflavored sparkling water)	( )	( )	( )	( )	( )	( )

15) How would you describe your weight?

- ( ) Very underweight
- ( ) Slightly underweight
- ( ) About the right weight
- ( ) Slightly overweight
- ( ) Very overweight

16) Are you trying to do any of the following about your weight?

- ( ) Stay the same weight / not trying to do anything
- ( ) Lose weight
- ( ) Gain weight

Campus Climate and Personal Safety

17) How safe do you feel:

	<b>Not safe at all</b>	<b>Somewhat unsafe</b>	<b>Somewhat safe</b>	<b>Very safe</b>
On your campus during the day	( )	( )	( )	( )

On your campus at night	( )	( )	( )	( )
In the community surrounding your school during the day	( )	( )	( )	( )
In the community surrounding your school at night	( )	( )	( )	( )

18) Within the last 12 months have you been: (select ALL that apply)

- Physically assaulted
- Verbally threatened
- Stalked
- None of the above have happened to me

19) During the last 12 months, have you been hazed or bullied?

**Bullying** occurs when someone or a group of people do something to another person to make fun of, tease, embarrass, or scare him/her. Bullying occurs when someone or a group of people purposefully exclude him/her. It also occurs electronically through email, chat rooms, instant messaging, websites, or texting.

**Hazing** is any situation created to cause embarrassment, harassment, or ridicule and risks emotional and/or physical harm to members of a group or team, regardless of the person's willingness to participate. Hazing is not always intended to or perceived to cause harm.

- Yes
- No

20) Have you been in an intimate (coupled/partnered) relationship that was:

	<b>No, this has never happened to me.</b>	<b>Yes, but NOT within the last 12 months.</b>	<b>Yes, this has happened to me during the past 12 months</b>
Emotionally abusive (e.g., called derogatory names, yelled at, ridiculed)	( )	( )	( )
Physically abusive (e.g., kicked, slapped, punched)	( )	( )	( )
Sexually abusive (e.g., forced to have sex when you didn't want it, forced to perform an unwanted sexual act)	( )	( )	( )

2016 College Health Survey: Campus Climate and Personal Safety

21) Please indicate how true each of the following statements is of you:

	<b>Not at all true</b>	<b>Not true</b>	<b>Somewhat true</b>	<b>True</b>	<b>Very much true</b>
I don't think sexual violence is a problem at this college / university	( )	( )	( )	( )	( )
I don't think alcohol use / drinking is a problem at this college / university	( )	( )	( )	( )	( )
I don't think drug use is a problem at this college / university	( )	( )	( )	( )	( )
I am aware of the alcohol, tobacco, and other drug policies at this college / university	( )	( )	( )	( )	( )
If a friend or I were sexually assaulted, I know where to get help on campus	( )	( )	( )	( )	( )
I understand what happens when a student reports a claim of sexual assault at this college/university	( )	( )	( )	( )	( )

If a friend or I were sexually assaulted, I know where to go to make a report of sexual assault	( )	( )	( )	( )	( )
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22) Please indicate to which extent you agree or disagree with the following:

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>
If a crisis happened here, the college / university would handle it well	( )	( )	( )	( )	( )
College / university officials would handle incidents such as a sexual assault report, in a fair and responsible manner	( )	( )	( )	( )	( )
The college / university does enough to protect the safety of students	( )	( )	( )	( )	( )
The college / university would take a sexual assault report seriously	( )	( )	( )	( )	( )
The college / university would take action to address factors that may have led to the sexual assault	( )	( )	( )	( )	( )
The college / university would maintain the privacy and safety of the person making the report such as one of sexual assault or harassment	( )	( )	( )	( )	( )
If requested by the victim, the college / university would forward an on-campus incident report to criminal investigators (e.g. police)	( )	( )	( )	( )	( )
The alcohol and other drug policies are strictly enforced by the college / university	( )	( )	( )	( )	( )

2016 College Health Survey: Alcohol, Tobacco, and Other Drugs

The following section asks about alcohol, tobacco, and other drug use.

It includes questions about both legal and illegal use. For questions about alcohol, one drink of alcohol is defined as a 12 oz can or bottle of beer or wine cooler, a 4 oz glass of wine, or a shot of liquor (straight or in a mixed drink).

For more information about substance use, click on a link below.

Vermont Alcohol and Drug Abuse Programs

23) Within the last 30 days, what percent of students at your school used cigarettes? State your best guess.

24) Within the last 30 days, what percent of students at your school used alcohol? State your best guess.

25) Within the last 30 days, what percent of students at your school used marijuana? State your best guess.

26) Within the last 12 months, to what extent has your use of the following changed?

	<b>Increased</b>	<b>About the Same</b>	<b>Decreased</b>	<b>NA / I have never used</b>
Alcohol	( )	( )	( )	( )
Marijuana	( )	( )	( )	( )
Tobacco products including electronic vapor products	( )	( )	( )	( )
Other Illegal drugs	( )	( )	( )	( )

27) How often have you used:

	<b>Never used</b>	<b>I have used it but not within in last 12 months</b>	<b>I have used it in the past 12 months</b>	<b>I have used in the last 30 days</b>
Synthetic drugs (e.g., synthetic marijuana, bath salts, K2 , spice, cloud nine, white lightening)	( )	( )	( )	( )
Cocaine (e.g., crack, rock, blow, freebase)	( )	( )	( )	( )
Methamphetamine (e.g., meth, crystal, ice, crank)	( )	( )	( )	( )
PCP	( )	( )	( )	( )
LSD, or Acid	( )	( )	( )	( )
Heroin (e.g., Opiates, smack, H)	( )	( )	( )	( )
MDMA (e.g., Molly, Ecstasy)	( )	( )	( )	( )
Other club or illegal drugs	( )	( )	( )	( )

28) How often have you used:

	<b>Never used</b>	<b>I have used it but not within the last 12 months</b>	<b>I have used it in the past 12 months</b>	<b>I have used in the last 30 days</b>
Cigarettes	( )	( )	( )	( )
Cigars, little cigars, clove cigarettes	( )	( )	( )	( )
Smokeless tobacco	( )	( )	( )	( )

Electronic vapor products (E-cigarettes, e-pipes, vaping pens, vape pens, e-hookahs or hookah pens such as blu, NJOY, or Starbuzz)	( )	( )	( )	( )
Alcohol	( )	( )	( )	( )
Marijuana	( )	( )	( )	( )

29) Within the last 30 days, on how many days did you use:

	<b>1-2 days</b>	<b>3-9 days</b>	<b>10 -19 days</b>	<b>20-29 days</b>	<b>Used daily</b>
Cigarettes	( )	( )	( )	( )	( )
Cigars, little cigars, clove cigarettes	( )	( )	( )	( )	( )
Smokeless tobacco	( )	( )	( )	( )	( )
Electronic vapor products (E-cigarettes, e-pipes, vaping pens, vape pens, e-hookahs or hookah pens such as blu, NJOY, or Starbuzz)	( )	( )	( )	( )	( )
Alcohol	( )	( )	( )	( )	( )
Marijuana	( )	( )	( )	( )	( )

**Logic: Show/hide trigger exists. Hidden unless: Question "Alcohol" is one of the following answers ("I have used in the last 30 days")**

30) During the last 30 days, how did you get your alcohol? (select ALL that apply)

I bought it at a store, such as a liquor store, convenience store, or grocery store

I bought it at a restaurant or bar

I bought it at a public event such as a concert or sporting event

My parent or guardian gave it to me or bought it for me

A friend or someone I know gave it to me or bought it for me

- Someone I don't know gave it to me or bought it for me
- It was available at a social gathering (such as a party or wedding)
- I took it from my parents' home or someone else's home
- I took it from a store without paying for it
- I bought it in Canada
- I got it some other way

**Logic: Hidden unless: Question "During the last 30 days, how did you get your alcohol?**

**(select ALL that apply)" #30 is one of the following answers ("I bought it at a store, such as a liquor store, convenience store, or grocery store", "I bought it at a restaurant or bar", "I bought it at a public event such as a concert or sporting event", "I bought it in Canada")**

31) During the past 30 days when you bought alcohol, did you obtain alcohol (Select ALL that apply)

- Using a fake / altered ID
- Using a false ID (someone else's)
- Because you were not asked for ID
- Using my own ID

**Logic: Hidden unless: Question "Marijuana" is one of the following answers ("I have used in the last 30 days")**

32) During the past 30 days, in which ways did you use marijuana? (select ALL that apply)

- Smoked marijuana
- Vaped marijuana
- Dabbed marijuana
- Consumed a food or drink product that contained marijuana (e.g., brownies, energy bars, candies, gum, or sodas)

**Logic: Hidden unless: (Question "Alcohol" is one of the following answers ("I have used it in the past 12 months", "I have used in the last 30 days") OR Question "Marijuana" is one of the following answers ("I have used it in the past 12 months", "I have used in the last 30 days"))**

33) When you used alcohol or marijuana in the last 12 months, what were the most important reasons for using it? (select ALL that apply)

	Using marijuana	Drinking alcoholic beverages
To fit in / I did not want to stand out from the group	<input type="checkbox"/>	<input type="checkbox"/>
I was bored / there was nothing else to do	<input type="checkbox"/>	<input type="checkbox"/>
I was curious or wanted to experiment	<input type="checkbox"/>	<input type="checkbox"/>
My friends expect me to	<input type="checkbox"/>	<input type="checkbox"/>
To deal with frustration or anger	<input type="checkbox"/>	<input type="checkbox"/>
To deal with anxiety or depression	<input type="checkbox"/>	<input type="checkbox"/>
To experience feelings more or less intensely	<input type="checkbox"/>	<input type="checkbox"/>
To forget my problems, "get away" or "check out"	<input type="checkbox"/>	<input type="checkbox"/>
To get high / drunk	<input type="checkbox"/>	<input type="checkbox"/>
To get through the day	<input type="checkbox"/>	<input type="checkbox"/>
To have a good time	<input type="checkbox"/>	<input type="checkbox"/>
To help me become more outgoing or be more social	<input type="checkbox"/>	<input type="checkbox"/>
To help me sleep	<input type="checkbox"/>	<input type="checkbox"/>

To increase or decrease effect of other substances	<input type="checkbox"/>	<input type="checkbox"/>
To relax	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>
Did not use in the last 12 months	<input type="checkbox"/>	<input type="checkbox"/>

**The following question refers to the use of prescription medicines not prescribed to you or not taken as prescribed and over-the-counter (OTC) medicines not used as the manufacturer intended.**

34) How often have you used the following prescription drugs or over-the-counter (OTC) medicine not as indicated:

	Never used	I have used it but not within the last 12 months	I have used in the last 12 months	I have used in the last 30 days
Prescription Antidepressants (e.g., Celexa, Lexapro, Prozac, Wellbutrin, Zoloft)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prescription Painkillers or Opioids (e.g., OxyContin, Vicodin, Codeine also known as oxy, OC, happy pills, percs, vikes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prescription Sedatives (e.g., Xanax, Valium also known as depressants, zombie pills, barbs, downers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prescription Stimulants (e.g., Ritalin, Adderall also known as skippy, the smart drug, bennies, uppers, Vitamin R)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Over-the-Counter Cough Syrup or Cold Medicine (to help you sleep, get high or drunk)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(e.g. Robitussin, Nyquil also known as DXM, robotripping, tussin, skittles, candy)				
Methadone or Buprenorphine (e.g., Suboxone, Subutex)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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35) On average during the past 12 months when you partied or socialized, over how many hours did you typically drink alcohol with your friends?

- 0 hours
- 1-2 hours
- 3-5 hours
- 6-9 hours
- 10 or more hours

36) How many drinks of alcohol did you have the last time you "partied"/socialized?

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**Logic: Hidden unless: (Question "Alcohol" is one of the following answers ("I have used in the last 30 days") AND Question "What sex were you assigned at birth, such as on an original birth certificate?" #10 is one of the following answers ("Male"))**

37) During the last 30 days, how many times have you had five or more drinks of alcohol at a sitting?

- None
- 1 time
- 2 times
- 3 times
- 4 times
- 5 times
- 6 times
- 7 times
- 8 times
- 9 times
- 10 or more times



40) During the last 12 months, when you "partied" or socialized how often did you:

	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Most of the time</b>	<b>Always</b>
Alternate non-alcoholic beverages	( )	( )	( )	( )	( )
Avoid drinking games	( )	( )	( )	( )	( )
Choose not to drink alcohol	( )	( )	( )	( )	( )
Chug alcohol	( )	( )	( )	( )	( )
Determine not to exceed a certain number of drinks	( )	( )	( )	( )	( )
Drink to "out drink" or "keep up" with others	( )	( )	( )	( )	( )
Eat before/during drinking	( )	( )	( )	( )	( )
Hold a drink so people stop bothering you about drinking	( )	( )	( )	( )	( )
Keep track of how many drinks you've had	( )	( )	( )	( )	( )
Pace drinks to 1 or less per hour	( )	( )	( )	( )	( )
Start drinking before going out (e.g., pre-game)	( )	( )	( )	( )	( )
Stay with same group of friends while drinking	( )	( )	( )	( )	( )
Use a designated driver	( )	( )	( )	( )	( )
Don't drink so you can serve as a designated driver	( )	( )	( )	( )	( )
Prevent a friend from driving under the influence of alcohol	( )	( )	( )	( )	( )

41) During the last 12 months, when drinking alcohol, how often did you:

	<b>Never</b>	<b>1 time</b>	<b>2 to 4 times</b>	<b>5 + times</b>	<b>Every time</b>
Forget where you were or what you did	( )	( )	( )	( )	( )
Do something you later regretted	( )	( )	( )	( )	( )
Get into an argument or say something you later regretted	( )	( )	( )	( )	( )
Have unprotected sex	( )	( )	( )	( )	( )
Physically injure yourself	( )	( )	( )	( )	( )
Get nauseated or vomit	( )	( )	( )	( )	( )
Have a hangover	( )	( )	( )	( )	( )
Miss class	( )	( )	( )	( )	( )

42) During the last 12 months, have you experienced any of the following when drinking alcohol?

(select ALL that apply)

Got in trouble with the police (including campus security or local community authorities)

Vandalize or damage property

Had sex with someone without my giving consent

Had sex with someone without their consent

Physically injure another person

Seriously consider suicide

Attempt suicide

None of the above



Cigars, little cigars, clove cigarettes	( )	( )	( )	( )	( )	( )	( )
Smokeless tobacco	( )	( )	( )	( )	( )	( )	( )
Electronic vapor products (E-cigarettes , e-pipes, vaping pens, vape pens, e-hookahs or hookah pens such as blu, NJOY, or Starbuzz)	( )	( )	( )	( )	( )	( )	( )
Alcohol	( )	( )	( )	( )	( )	( )	( )
Marijuana	( )	( )	( )	( )	( )	( )	( )

45) How many drinks of alcohol do you think the typical student at your school had the last time he/she "partied" or socialized?

\_\_\_\_\_

**The following question refers to the use of prescription medicines not prescribed to you or not taken as prescribed and over-the-counter (OTC) medicines not used as the manufacturer intended.**

46) How often do you think the typical student has used the following prescription drugs or over-the-counter (OTC) medicine not as indicated:

	Never used	Has used it but not within the last 12 months	Has used it in the last 12 months	Has used in the last 30 days
Prescription Antidepressants (e.g., Celexa, Lexapro, Prozac, Wellbutrin, Zoloft)	( )	( )	( )	( )
Prescription Painkillers or Opioids (e.g., OxyContin, Vicodin, Codeine)	( )	( )	( )	( )

Prescription Sedatives (e.g., Xanax, Valium)	( )	( )	( )	( )
Prescription Stimulants (e.g., Ritalin, Adderall)	( )	( )	( )	( )
Over-the-Counter Cough Syrup or Cold Medicine (to help you sleep, get high or drunk) (e.g. Robitussin, Nyquil also known as DXM, robotripping, tussin, skittles, candy)	( )	( )	( )	( )
Methadone or Buprenorphine (e.g., Suboxone, Subutex)	( )	( )	( )	( )

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2016 College Health Survey: Sexual Health and Behavior

The following questions ask about sexual health and sexual behaviors.

47) What term best describes your sexual orientation? (Select ALL that apply)

- Asexual
- Bisexual
- Gay
- Lesbian
- Queer
- Questioning
- Straight / heterosexual
- Another orientation

48) Have you ever engaged in:

	<b>I have never done this activity</b>	<b>I have done this activity but not within the last 3 months</b>	<b>I have done this activity within the last 3 months</b>	<b>I have done this activity in the last 30 days</b>
Oral sex	( )	( )	( )	( )
Vaginal intercourse	( )	( )	( )	( )
Anal intercourse	( )	( )	( )	( )

**Logic: Hidden unless: ((Question "Oral sex" is one of the following answers ("I have done this activity but not within the last 3 months","I have done this activity within the last 3 months","I have done this activity in the last 30 days")) OR Question "Vaginal intercourse" is one of the following answers ("I have done this activity but not within the last 3 months","I have done this activity within the last 3 months","I have done this activity in the last 30 days")) OR Question "Anal intercourse" is one of the following answers ("I have done this activity but not within the last 3 months","I have done this activity within the last 3 months","I have done this activity in the last 30 days"))**

49) During your life, have you had sexual partner(s) who were: (select ALL that apply)

Female

Male

Trans woman

Trans man

Queer

Other

2016 College Health Survey: Sexual Health and Behavior

50) Within the last 3 months, how many partners have you had:

	1	2	3	4	5	6 or more
Oral sex	<input type="checkbox"/>					
Vaginal intercourse	<input type="checkbox"/>					
Anal intercourse	<input type="checkbox"/>					

51) Within the last 3 months, how often did you or your partner(s) use a condom or other protective barrier (e.g., male condom, female condom, dam, glove) during:

	Never	Rarely	Sometimes	Most of the time	Always
Oral sex	<input type="checkbox"/>				
Vaginal intercourse	<input type="checkbox"/>				
Anal intercourse	<input type="checkbox"/>				

**Logic: Hidden unless: Question "Vaginal intercourse" is one of the following answers ("I have done this activity within the last 3 months", "I have done this activity in the last 30 days")**

52) What method of birth control did you or your partner use to prevent pregnancy the last time you had vaginal intercourse:

No method was used

Birth control pills

- Birth control shot such as Depro-Provera, patch or cervical ring
- Birth control implants or Intrauterine device (IUD)
- Condoms
- Fertility awareness (e.g., calendar, mucous, basal body temperature)
- Withdrawal
- Other method

**Logic: Hidden unless: Question "Vaginal intercourse" is one of the following answers ("I have done this activity within the last 3 months", "I have done this activity in the last 30 days")**

53) Within the last 12 months, have you or your partner become pregnant?

- No
- Yes
- Don't know

**Logic: Hidden unless: Question "Vaginal intercourse" is one of the following answers ("I have done this activity within the last 3 months", "I have done this activity in the last 30 days")**

54) Within the last 12 months, have you or your partner(s) used emergency contraception ("morning after pill")?

- No
- Yes
- Don't know

**Logic: Hidden unless: Question "What sex were you assigned at birth, such as on an original birth certificate?" #10 is one of the following answers ("Male")**

55) Have you . . . (select ALL that apply)

	Yes	No
Performed testicular self-exam in the last 30 days	( )	( )
Ever been tested for Human Immunodeficiency Virus (HIV) infection	( )	( )

**Logic: Hidden unless: Question "What sex were you assigned at birth, such as on an original birth certificate?" #10 is one of the following answers ("Female")**

56) Have you . . . (select ALL that apply)

	Yes	No
Performed breast self-exam in the last 30 days	( )	( )
Had a routine gynecological exam in the last 12 months	( )	( )
Ever been tested for Human Immunodeficiency Virus (HIV) infection	( )	( )

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2016 College Health Survey: Campus Climate

**exit logic:** optional module

The following section asks about sexual situations including nonconsensual or unwanted sexual contact you may have experienced. The person with whom you had the unwanted sexual contact could have been a stranger or someone you know, such as a family member or someone you were dating or going out with. These questions ask about unwanted sexual contact including: forced touching of a sexual nature (forced kissing, touching of private parts, grabbing, fondling, rubbing up against you in a sexual way, even if it is over your clothes) oral sex sexual intercourse anal sex sexual penetration with a finger or object situations not involving physical touching such as sexual harassment, someone exposing sexual parts of their body to you, being seen by a “peeping Tom”, or someone sharing sexual photos or movies with you.

*This is a sensitive topic. These questions are very descriptive in nature and may be difficult for some people. Keep in mind that you are in no way responsible for an assault that occurred, even if you had been drinking or using drugs. Numbers and information about organizations that can provide help and referrals for these issues is available at the end of the survey or by clicking on the link below.*

For hotlines and screening tools related to sexual violence or domestic abuse,

Right click a link below or call call 2-1-1 in Vermont for live person-to-person information and referral assistance

For statewide hotlines related to sexual violence visit the Vermont Network against domestic and sexual violence or call 800-489-7273

*Please keep in mind that you are in no way responsible for an assault that occurred, even if you had been drinking or using drugs*

57) Please indicate if any of the following incidents have happened to you:

	<b>No, this has never happened to me</b>	<b>Yes, this happened to me more than 12 months ago</b>	<b>Yes, this has happened to me during the past 12 months</b>
Someone had sexual contact with you by using physical force or threatening to physically harm you	( )	( )	( )
Someone attempted but did not succeed in having sexual contact with you by using or threatening to use physical force against you	( )	( )	( )
Someone had sexual contact with you when you were unable to provide consent or stop what was happening because you were passed out, drugged, drunk, incapacitated, or asleep.	( )	( )	( )

You suspected that someone had sexual contact with you when you were unable to provide consent or stop what was happening because you were passed out, drugged, drunk, incapacitated, or asleep.	( )	( )	( )
Someone exposed you to unwanted sexual situations that did not involve physical touching.	( )	( )	( )

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**Page entry logic:** This page will show when: (((Question "Someone had sexual contact with you by using physical force or threatening to physically harm you" is one of the following answers ("Yes, this happened to me more than 12 months ago", "Yes, this has happened to me during the past 12 months") OR Question "Someone attempted but did not succeed in having sexual contact with you by using or threatening to use physical force against you" is one of the following answers ("Yes, this happened to me more than 12 months ago", "Yes, this has happened to me during the past 12 months"))) OR Question "Someone had sexual contact with you when you were unable to provide consent or stop what was happening because you were passed out, drugged, drunk, incapacitated, or asleep." is one of the following answers ("Yes, this happened to me more than 12 months ago", "Yes, this has happened to me during the past 12 months"))) OR Question "You suspected that someone had sexual contact with you when you were unable to provide consent or stop what was happening because you were passed out, drugged, drunk, incapacitated, or asleep." is one of the following answers ("Yes, this happened to me more than 12 months ago", "Yes, this has happened to me during the past 12 months"))) OR Question "Someone exposed you to unwanted sexual situations that did not involve physical touching." is one of the following answers ("Yes, this happened to me more than 12 months ago", "Yes, this has happened to me during the past 12 months"))

**Page exit logic:** Skip / Disqualify Logic **IF:** Question "Did the incident occur while you were a student at your college or university?" #60 is one of the following answers ("No") **THEN:** Jump to page 21 - 2016 College Health Survey: Mental Health and Wellbeing

*Please keep in mind that you are in no way responsible for an assault that occurred, even if you had been drinking or using drugs*

The questions below ask the time someone had unwanted sexual contact with you or you were in an unwanted sexual situation. If you had more than one experience, please pick the most serious incident or most recent experience and answer the questions below.

58) Who did the unwanted behavior involve?

- A stranger
- A college faculty or staff
- A family member
- An acquaintance or non-romantic friend
- A casual or first date
- An employer/supervisor or coworker
- A current or former romantic partner
- Other
- Not sure

59) Just prior to the incident:

*(Keep in mind that you are in no way responsible for the assault that occurred, even if you had been drinking or using drugs)*

	Yes	No	Not Sure
Had you been drinking alcohol?	( )	( )	( )

Had you been using any drugs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had you been given a drug without your knowledge or consent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Logic: Show/hide trigger exists.**

60) Did the incident occur while you were a student at your college or university?

Yes

No

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*Please keep in mind that you are in no way responsible for an assault that occurred, even if you had been drinking or using drugs*

**Page exit logic:** Skip / Disqualify Logic **IF:** Question "Did the incident occur while you were a student at your college or university?" #60 is one of the following answers ("No") **THEN:** Jump to page 21 - 2016 College Health Survey: Mental Health and Wellbeing

**Logic: Hidden unless: Question "Did the incident occur while you were a student at your college or university?" #60 is one of the following answers ("Yes")**

61) Where did the incident occur?

Dorm / Residents Hall

On-campus apartment

Off campus apartment or home

Other home or residence

Other

**Logic: Show/hide trigger exists. Hidden unless: Question "Did the incident occur while you were a student at your college or university?" #60 is one of the following answers ("Yes")**

62) Who did you tell about the incident? (Select ALL that apply)

- No one
- Campus Counselor or Wellness / Health Center staff
- Off-campus counselor or medical professional
- Roommate or close friend
- Faculty or staff
- Residence hall staff
- Police
- Parent / guardian or other family member
- Romantic partner
- Other

**Logic: Show/hide trigger exists. Hidden unless: Question "Who did you tell about the incident? (Select ALL that apply)" #62 is one of the following answers ("Campus Counselor or Wellness / Health Center staff", "Off-campus counselor or medical professional", "Residence hall staff", "Police")**

63) Did you use a formal procedure, such as reporting it to campus police or your campus wellness / health center, to report the incident(s)?

- Yes
- No

**Logic: Hidden unless: Question "Did you use a formal procedure, such as reporting it to campus police or your campus wellness / health center, to report the incident(s)?" #63 is one of the following answers ("Yes")**

64) Did your school's procedures or policies help you deal with the problem?

- Didn't help me at all
- Helped me a little
- Helped, but could have helped more
- Helped me a lot

**Logic: Hidden unless: Question "Who did you tell about the incident? (Select ALL that apply)" #62 is one of the following answers ("No one")**

65) If you did not tell anyone, why? (Select ALL that apply)

- Ashamed / embarrassed
- It is a private matter; I wanted to deal with it on my own
- Concerned others would find out
- Didn't want the person to get in trouble
- Feared the person who did it would try to get back at me
- Feared not being believed
- I thought I would be blamed for what happened
- Didn't think others would think it was serious or important
- Felt like it was an admission of failure
- Didn't know how to report it on campus
- Feared that I or another person would be punished for infraction or violations on campus (such as underage drinking)
  - I didn't feel the campus leadership would help or solve the problem
  - I feared others would harass me or react negatively toward me
  - I thought nothing would be done
  - Didn't want others to worry about me
  - Wanted to forget it happened

Had other things I needed to focus on (worried about classes, work)

Other

**Logic: END OPTIONAL MODULE—all students complete**

2016 College Health Survey: Mental Health and Wellbeing

The following section asks questions about mental health and well-being.

For hotlines and screening tools related to mental health and suicide prevention: [right click a link](#) below or call [call 2-1-1](#) in Vermont for live person-to-person information and referral assistance

66) Over the last two weeks, how often have you been bothered by any of the following problems?

	<b>Not at all</b>	<b>Several days</b>	<b>More than half the days</b>	<b>Nearly everyday</b>
Little interest or pleasure in doing things	( )	( )	( )	( )
Feeling down, depressed, or hopeless	( )	( )	( )	( )
Trouble falling or staying asleep, or sleeping too much	( )	( )	( )	( )
Feeling tired or having little energy	( )	( )	( )	( )
Poor appetite or overeating	( )	( )	( )	( )
Feeling bad about yourself or that you are a failure or have let your family down	( )	( )	( )	( )
Trouble concentrating on things, such as reading the newspaper or watching television	( )	( )	( )	( )

Moving or speaking so slowly that other people could have noticed. Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual	( )	( )	( )	( )
Thoughts that you would be better off dead, or of hurting yourself in some way	( )	( )	( )	( )
Overwhelming amounts of stress	( )	( )	( )	( )

67) Within the last 12 months, have any of the following been distressing or very difficult for you to handle: (select ALL that apply)

- Academics
- Career related issues
- Health issues or the death of a family member or friend
- Family problems
- Problems with a friend, roommate, partner or other relationship
- Finances / Financial Aid
- Personal health issue
- None of the above

**Logic: Show/hide trigger exists.**

68) Within the last 12 months, have you (select ALL that apply)

- Done something to purposefully hurt yourself without wanting to die, such as cutting or burning yourself on purpose
- Made a plan about how you would attempt suicide
- Attempted suicide

None of the above

**Logic: Hidden unless: Question "Within the last 12 months, have you (select ALL that apply)" #68 is one of the following answers ("Attempted suicide")**

69) If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a medical professional?

Yes

No

70) Within the last 12 months, have you been treated by a professional or diagnosed with any of the following:

	No	Yes, but not currently receiving treatment or taking medicine	Yes, and currently receiving treatment or taking medicine
Eating disorder, disordered eating, or issues with body image	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anxiety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attention Deficit and Hyperactivity Disorder (ADHD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bipolar Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obsessive Compulsive Disorder (OCD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Panic Attacks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Substance abuse or addiction (alcohol or other drugs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other substance abuse or mental health condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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71) Have you ever received psychological or mental health services from any of the following:

	No	Yes
Counselor/Therapist/Psychologist	<input type="checkbox"/>	<input type="checkbox"/>
Psychiatrist	<input type="checkbox"/>	<input type="checkbox"/>
Other medical provider (e.g., physician, nurse practitioner)	<input type="checkbox"/>	<input type="checkbox"/>
Minister/ Priest / Rabbi /Other clergy	<input type="checkbox"/>	<input type="checkbox"/>
College / University Counseling or Health Center	<input type="checkbox"/>	<input type="checkbox"/>

72) If in the future you were having a personal problem that was really bothering you, would you consider seeking help from a mental health professional?

No

Yes

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Participation in extracurricular activities (e.g. clubs, athletics) or work schedule	<input type="checkbox"/>					
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2016 College Health Survey: Demographics

78) Without your shoes on, what is your current height and weight

Feet

- 4                       5                       6                       7

Inches

- 0                       3                       6                       9  
 1                       4                       7                       10  
 2                       5                       8                       11

**Pounds:** \_\_\_\_\_

79) What is your relationship status?

- Not in a relationship
- In a relationship but not living together
- In a relationship and living together
- Married / partnered

80) How do you define your race? (select ALL that apply)

- American Indian or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander

White

Multiracial

Other

81) Are you Hispanic or Latino(a)?

Yes

No

82) What is your place of permanent residence?

Vermont (in-state)

USA (out-of- state)

County outside of the USA (International)

83) What is you're the highest level of education completed by your mother?

Attended some high school or less

Completed high school

Attended some college

College degree or higher

Not sure

84) Are you currently or have you been a member of the United States Armed Services (Active Duty, Reserve, or National Guard)?

Yes

No

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Thank you for completing the College Health Survey!

We value your opinions and appreciate your participation.

