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Community of Hope: A comprehensive suicide prevention intervention at MIT

Kyra Patel
University of Kentucky, patelk@appstate.edu

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Kyra Patel, Student

Dr. Mark Swanson, Committee Chair

Dr. Corrine Williams, Director of Graduate Studies

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A comprehensive suicide prevention intervention at MIT

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Chair: Dr. Mark Swanson

Committee member: Dr. Corrine Williams

Committee Member: Dr. Kathryn Cardarelli

Abstract

Suicide is the second leading cause of death for most age groups in the United States. The current rate of suicide among college students is 7.5 per 100,000 with the rate remaining fairly steady over the past 30 years. While the rate is lower on college campuses, compared to the general population ages 18-24, the issue is still much larger on a college campus due to suicide bereavement or the number of people affected and to what degree they were impacted. As of 2015, MIT (Massachusetts Institute of Technology) had the highest suicide of all reporting colleges. The primary objective of this intervention is to increase knowledge of signs of suicidal ideation, increase perceived ability to intervene, and increase self-efficacy. This will be accomplished through the implementation of two evidence-based programs, QPR Gatekeeper Training and Kognito At-Risk for College Students. This intervention will allow us to evaluate the long-term effects of just the Kognito training, and the benefits of students completing both trainings. We will be utilizing the Gatekeeper Behavioral Scale to measure outcomes and will also collect student demographic data to analyze any relation between outcomes and demographics. We hope this intervention will provide a model for other college campuses that are yearning to do more in the field of suicide prevention.

Target Population and Need

Suicide is the second leading cause of death for college students, with the rate of college students who have experienced a severe suicidal thought has increased from 6.6% to 8% from 2012 to 2013. The national rate for college students who have died by suicide is approximately 7.5 per 100,000 students. [1]. The rate over the past 30 years has remained in the 6.5-8 per 100,000 students range. [1]While this rate is less than the rate among the general population for the same age range when taking suicide bereavement into effect and the effect that one suicide

has to students on a college campus, the number affected is much higher than it would be in the general population. Currently, QPR (Question, Persuade, Refer) Gatekeeper Training and Kognito At-Risk for College Students are the two evidence-based programs used on college campuses for suicide prevention. Although these trainings are well known in the suicide prevention community, there is very little research done on the long-term effects of the trainings, due to the dynamic population of a college campus. Although these programs are an option to implement on college campuses, there are still some schools that don't utilize both types of trainings. One of these schools is the Massachusetts Institute of Technology.

The Massachusetts Institute of Technology (MIT) is reported as having a suicide rate of 12.5 per 100,000, the highest in the nation [2]. According to a study conducted by the school, 77% of respondents felt agreed/strongly agreed with the statement "At my school, I feel that the academic environment has a negative impact on students' mental and emotional well-being". Of the respondents, 39% reported more than three days when asked how many days have you felt that emotional or mental difficulties have hurt your academic performance, in the past four weeks? Students were also asked questions about their perceptions of mental health and the stigma attached to it in order to better address stigma attached to help-seeking behaviors, a trait that this intervention will address.[3]

Background on MIT

Demographics

The student body of the technical institute is comprised of 11,376 students, 4,524 of them being undergraduate students. Of the undergraduate student body, 10.1% of the students are international students, 14.9% identify as being Hispanic or Latino, 5.9% are African American or

Black, 25.7% are Asian, and 34.8% of the students are white. Fifty-four percent of the student body is male and 46% are female. [4]

Clinical Student Support

There are currently nine psychiatrists on staff at MIT's counseling center. The center offers consultations, brief treatments (including medication), urgent care, and group counseling. They provide walk-in hours from 2:00-4:00 every day. [5]

In order to determine the need for expansion of suicide prevention and mental health services, we consulted with the counseling center at the Massachusetts Institute of Technology. We also found two news articles stating that MIT had the highest suicide rate out of all reporting college campuses. [2, 6]There are currently 11,376 students attending MIT with only 9 psychiatrists to serve that community. [5]While there is a presence of mental health providers on campus, psychiatrists are the only licensed professionals that can provide prescriptions to aid in the treatment of mental illnesses.

In order to best assist the current efforts being made at MIT, key stakeholders were interviewed to determine what they viewed to be the best ways to improve mental health services on campus. Stakeholders included employees from the counseling center, the dean's office, the Chancellor, and students who are currently involved in suicide prevention efforts. When interviewing the students, it was important to us to understand why they chose to become involved in the suicide prevention efforts at MIT, and how they felt about the efforts the school was making.

Student Initiatives

One student initiative is an anonymous texting hotline called "Lean on Me" that connects students with their peers. The app matched students who are familiar with the same personal

issues. In short, it helps students to know that no matter what they are going through, they are never alone. The app's creator was quoted saying, "If we can help even one person so that they feel like there is someone on campus who supports them — even if they don't know who that person is — they might feel better."[7]

MIT also has a chapter of Active Minds on its campus. Another student organization on campus is a group called Peer Ears, whose goal is to provide MIT's students with the tools to help their peers deal with stress. [8]There are approximately 20 mental health services surrounding MIT, not including any mental health services provided on the campus itself. Access to the resources will be determined by access to the bus system or to a car. The most convenient location for students is on-campus facilities. It is important to note that students using off-campus mental health resources may be utilizing them because they are no longer eligible for free sessions on campus due to reaching the maximum number of sessions provided to a student.

Program Approach

Given the high rates of suicide and suicide ideation at MIT, it offers an ideal laboratory to demonstrate the effectiveness of these evidence-based programs. This intervention will allow us to analyze the effectiveness of combing two interventions and allow us to disseminate this information to continue the work of suicide prevention on other college campuses.

We will be implementing an interpersonal level intervention. Because the student population changes each year, the intervention will be targeted to each year (freshmen through senior). We will implement two evidence-based interventions in order to reach the most students.

Describing the interventions

The first evidence-based program I will deliver is Kognito At-Risk for College Students. It is an online training focusing on (1) increasing knowledge of signs of suicidal ideation, and (2)

increasing confidence in students' ability to help connect another student in need with the right resources. The program includes an animated simulation that allows participants to practice conversing with someone about suicide. Though this training is self-paced, it usually lasts approximately 30 minutes. Results of the study demonstrated that the Kognito intervention was significantly correlated with an increase in preparedness in the following categories, compared to a control group: Preparedness to recognize fellow students in psychological distress ($p<.001$), preparedness (self-efficacy) to approach fellow students in psychological distress ($p<.001$), preparedness to refer fellow students in psychological distress ($p=.029$), likelihood of approaching and referring fellow students exhibiting signs of psychological distress ($p<.001$), and willingness to seek mental health counseling for self ($p=.047$).In the original article, the intervention was randomly assigned to individuals, with outcomes being measured at baseline, and after the intervention for both groups. [9]

As an adaption, this part of the program will be mandatory for all incoming students. We want them to be exposed to suicide prevention and prevention behaviors before starting school. The Kognito training will be mandatory for all students to avoid self-selection bias.

The second intervention included in our program is QPR Gatekeeper Training for Suicide Prevention. This 1-2 hour intervention is an in-person training that focuses on recognition of signs of suicidal ideation, with a role-playing aspect to tackle the difficulties of talking to someone about suicide. This training covers suicide statistics, myths and misconceptions surrounding suicide, suicide warning signs, and the major gatekeeper skills (question, persuade, and refer). The training also contains a video aspect that showcases stories of those who have been affected by suicide in families, schools, or communities. Studies of the effects of QPR Gatekeeper Training analyzed the following five outcomes: knowledge about suicide, gatekeeper

self-efficacy, knowledge of suicide prevention resources, gatekeeper skills, and diffusion of gatekeeper training information. We found two different studies that found a significant difference between the intervention and control groups. [10-12]

Two different interventions are being utilized in the suicide prevention efforts at MIT to allow students to have a deeper understanding of what it means to be a suicide prevention activist and active bystander. One adaption these interventions are using them at the same time. There is no current research done on concurrent suicide prevention trainings, however, to continue with the trend of multiple exposures to encourage the willingness to intervene, both are being offered. We will not make the QPR training mandatory for all students, because of the understanding that it is not realistic to require all students to devote 1-2 hours of their time.

Implementing in multiple groups (Settings)

In order to reach the most students, we will implement this intervention to multiple groups. First, we will require all incoming students to complete the Kognito online training before they register for their first semester of classes. This will ensure that freshmen, transfer students, and English-speaking international students will all complete this training before arriving on campus. Next, we will target students in major leadership positions on campus, such as Residential Assistants, Teaching Assistants, Resident Directors, and any other student or staff members who may work directly with other students. The QPR training will be required for these students/staff members in order to maintain their leadership roles/positions, with incentives for them to repeat the training multiple times in order for the students to reinforce learned behaviors, be that additional funding for hall programs or competition between organizations. These students are a direct resource for students in need and can connect students with support on campus. QPR will also be incorporated into the freshman communication course requirement.

The freshman course is based on the humanities, arts and social sciences (HASS). By incorporating this class for all students, we are avoiding some self-selection bias of only requiring student leaders to participate in QPR.

The final group will comprise any student, staff, or faculty not included in the first two groups. This group may access the QPR training throughout the school year when it will be offered at multiple time points. This open course could be an extra credit option for students or be marketed as a competition between student organizations to see which can have the most members complete the QPR training. The training will be mandatory for any staff member who acts as a resource for students. These staff members will include anyone in student life or academic affairs (i.e. counselors, case managers, academic advisors, residence life).Faculty teaching relevant topics in relation to mental health will be encouraged to make the QPR training a mandatory assignment for their classes.

All trainings will be offered through the Student Support Services office in conjunction with the counseling center. Training will be conducted by the Suicide Prevention Program Coordinator and her staff. They will be working out of the Student Support Services Office.

Community Advisory Board

A community advisory board will be formed to monitor the progress of the intervention regarding the reach of the QPR intervention, and suggest ways we can better improve the accessibility of the QPR training to the student body. The board will consist of nine to ten members with representatives from housing, Student Support Services, a Student Organization representative, an off-campus services representative, a representative from the International Office, and Counseling services, health services, and any other key stakeholders doing work in suicide prevention on campus.

They will discuss marketing strategies and promotional tactics as well. Working from the "bottom-up" we would like to include a student from residential life. The purpose of including this student they interact with many students on a daily basis and are the first person a student may turn to when facing a crisis. They are also the bridge between students and support staff on college campuses. We would also include representatives from student organizations that work with mental health such as the Active Minds Chapter at MIT. All students must be recommended to the Prevention Program Coordinator. She will select the students will be asked to participate on the board. Next, we will invite a representative from Student Support Services to participate in the board. Many staff members in the office have worked with community mental health and college counseling services. They also work one-on-one with students who request an extended absence for medical and psychiatric needs. They help these students throughout the entire process, from submitting the request to their return to school.

The Student Counseling Center and Student Health Services will each select one representative to serve on our community advisory board. These trained professionals possess years of experience in working with students through many crises. We would also invite a representative from the International Students Office. The office currently serves approximately 3,600 students. We will utilize this representative to understand any barriers international students may face when seeking help or resources. A representative from the ISO will help ensure that the program is adequately addressing cultural barriers.

We would invite representatives from the off-campus counseling services that students may be referred to if they need more sessions or help than MIT Counseling Center can offer. Lastly, we would ask the key stakeholders previously mentioned if they know of any students currently involved in suicide prevention efforts, but do not fall into any of the previously listed

categories. These students are building one-on-one connections with their peers and input from them and what their peers want to see changed on implemented on the campus would be very valuable to our project.

Recruiting and retaining

Through the process of these programs, we will be reaching individuals from various sub-populations across MIT's campus. To begin, we will be reaching all incoming students, including freshmen, transfers, and international students. This past academic year, there were 1,115 first-year students with that number remaining relatively steady over the prior three years. The QPR training will be required in order to obtain a leadership role on campus. Leaders on a college campus are those who work to improve various aspects of student life. For the purpose of this intervention, QPR will be required of all student workers in advising, the counseling center, student support services, housing, and orientation. As this number is constantly changing, we do not have an exact number of students who would fall into this category. Lastly, as hiring for staff is done yearly, we will obtain exact numbers based on office. We will include staff members of the counseling center, health services, student wellness offices, student support services, and the international office. All employees at these offices will be required to complete the QPR training yearly. All student data will be obtained from the registrar's office yearly, and all staff data will be obtained through their college deans.

Participants will not be recruited in the general sense because the varying trainings will be a requirement. Students have to complete the kognito training in order to be allowed to register for classes. Prior to the starting the Kognito training, they will be prompted to fill out a pre-assessment and will be asked to fill out a post-assessment immediately after. Some of the questions in the survey can be seen in the evaluation section. This will be required of them

during their first and third years in school in order to reacquaint them with the topic. Since these time points were chosen arbitrarily, they can be adjusted based on how students respond to these time points. We will consult with the advisory board if they need to be adjusted at a later point. Kognito is currently required for incoming students prior to orientation. An adaptation for this intervention is the repeated kognito training in the third year of schools. Student leaders will be required to complete the QPR training as a job requirement. The staff that works directly with students will complete QPR yearly in order to meet one on one with students. We expect this to be successful because this program is needed by participants to continue on with their college career.

We are not concerned with lack of retention because both Kognito and QPR are required for all students to participate in. We are concerned with the number of students completing surveys. As they will be given before and after trainings, as well as every six months, we want to ensure they are well incentivized. Students who complete the survey will be eligible to win prizes. We will utilize focus groups of students to determine what prizes students will respond best to.

Adaptations and Fidelity

The fidelity and quality of these interventions will be monitored through a post-intervention survey to ensure that we are still seeing the desirable outcomes we get without any adaptations, looking at the campus trends as a whole, rather than individual students. We will be providing surveys immediately after the interventions, as well as during the mid-point of the school year. All QPR trainers will be trained to follow the correct guidelines when presenting the training to the campus. These include but are not limited to showing the full video, using proper language, and allowing adequate time for role-playing activities. During our monthly meetings

with the stakeholders across campus, we will discuss the results of the survey, and make further adaptations as necessary. We will also have the QPR instructors fill out post-training checklists to ensure that all material has been covered. Another option is having some of the sessions observed as an objective fidelity check.

To ensure that the interventions are non-stigmatizing and inclusive, we will be providing additional resources to students, faculty, and staff about appropriate language when discussing suicide. We will be utilizing resources made available by the American Association of Suicidology, as they have guidelines for appropriate messaging when talking about suicide.

Sustainability

In order to fully sustain this intervention once federal funding has ended, we will focus on the role and position of the Suicide Prevention Program Coordinator. We will assist them in the collection of data to demonstrate the effectiveness of the intervention. Then, using the data, we will convince funders to continue the program. Finders include the MIT Alumni Association, federal agencies (such as SAMHSA) and state agencies.

This can also be tied to the challenges we may face during the intervention. Because of the nature of the intervention and the target population, it may take longer to see any actual change, a decrease in the overall suicide rate among MIT students. Since the results are not immediate, we must rely on continued funding through the prevention coordinator, once the initial funding is over (3 years). The goal of the program, during the three years, is to see evidence of behavior change in the student body, in regards to awareness and self-efficacy.

Dissemination

In order to raise awareness for this program and its outcomes, we will be utilizing multiple methods of dissemination, including publishing our results and speaking at conferences.

The main goal of dissemination is allowing other colleges to adapt our program to eventually lower the national suicide rate for college students. We hope to share the results of this program at a variety of public health conferences such as the American Public Health Association (APHA) In addition to public health conferences, we will also be presenting at conferences for suicide prevention and awareness such as the annual American Association of Suicidology Conference.

Lastly, we will also present our findings at conferences for higher education, with the hope that attendees will implement this program at their own campuses. In order to disseminate the results of this program among key stakeholders at MIT, we will hold meetings with them on a semester basis to discuss the outcomes and progress of the programs. We will also keep stakeholders informed on a number of trainings completed by students, staff, and faculty through monthly reports. Through our semester discussions, we will discuss best methods for communications if the results of this program.

Some potential challenges we may encounter are the ability to control for other factors influencing the suicide rate. These may include other events on the campus aimed toward suicide prevention or student initiatives. Since there is no way to control for student initiatives on the campus, we will collect data on which students attended other suicide prevention events on the campus. We can then compare this list to students who have also done the QPR training and the results of their Gatekeeper Behavior Scale, compared to those who only attended the training. We will hopefully be able to see if these other events are well attended and could also ask the students which events or trainings they found to be the most helpful. We can utilize these results through our dissemination of results to show the effect of the trainings on the lowering of the suicide rate at MIT.

Study Design

In order to best evaluate the effects of the QPR Gatekeeper training and Kognito online training on the MIT population, we will be utilizing an open cohort with repeated measures study design. We will collect data from the student body during the fall and spring semester of the first year of the study, this data will form our baseline, as MIT will serve as both intervention and control group. Once the intervention is implemented, during its second and third year, we will collect data from the student body during the fall and spring semesters of both years.

A strength of the open cohort study is that we can track the behaviors of the entire population, but because information is tied to student IDs, we can also look at differences between graduating classes, and by demographic information. Additional strengths are that we don't have to worry about randomizing our study population and that this study is also relatively cheap in regards to collecting and analyzing data. This study design is the strongest quasi-experimental design for analyzing long-term effects of an intervention.

One of the weaknesses of utilizing this intervention is that there is no control group, We decided against using another school as a control because there could be other factors confounding the data, such as the control school's policies and programs regarding suicide prevention services. Furthermore, it can be considered unethical to withhold suicide prevention resources to some students. Another weakness is that we have a dynamic population. Every year, we can lose students and gain students in each graduating class.

Program Approach and Evaluation

The overall objective of this intervention is to decrease the stigma attached to suicide, the stigma of help-seeking behaviors, and increase perceived willingness to intervene. We will do this by evaluating the effectiveness of the already implemented Kognito online-training in

addition to the newly implemented QPR (Question, Persuade, Refer) Gatekeeper training (See logic model in appendix)We are evaluating the QPR program and the already implemented Kognito-training to determine if the Kognito training is best for this specific population or if having a combination of the two trainings would increase intervening behavior in students and decrease stigma regarding mental health services and suicide.

Since all students are required to complete the Kognito training prior to orientation, we will conduct a baseline survey before the training. Surveys will be sent out every six months (see Gantt chart in Appendix). We will be utilizing the Gatekeeper Behavioral Scale (GBS). [13]The scale is designed to measure preparedness to engage in gatekeeper behaviors, likelihood to engage in gatekeeper behaviors, and perceived confidence in engaging in gatekeeper behaviors (self-efficacy). All items in the original survey with the term student will be changed to fellow student since the trainings are geared towards students intervening in their peers' behaviors. Below are categories and corresponding items for the scale.

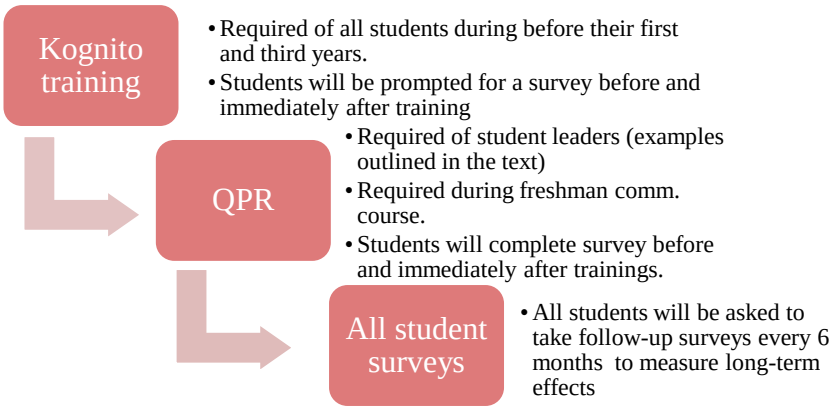
Category	**Item number**	**Question**	**Scale**
		How would you rate your preparedness to:	
Preparedness	1	Recognize when a student's behavior is a sign of psychological distress	1 - Very Low 2 - Low 3 - Medium 4 - High 5 - Very High
	2	Recognize when a student's physical appearance is a sign of psychological distress	
	3	Discuss with a student your concern about the signs of psychological distress they are exhibiting	
	4	Motivate students exhibiting signs of psychological stress to seek help	
	5	Recommend mental health support services (such as the counseling center) to a student exhibiting signs of psychological distress	

Likelihood	6	How likely are you to discuss your concerns with a student exhibiting signs of psychological distress?	1 - Very Unlikely 2 - Unlikely 3 - Likely 4 - Very Likely
	7	How likely are you to recommend mental health/ support services (such as the counseling center) to a student exhibiting signs of psychological distress?	
Self-efficacy	8	I feel confident in my ability to discuss my concern with a student exhibiting signs of psychological distress	1 - Strongly Disagree 2 - Disagree 3 - Agree 4 - Strongly Agree
	9	I feel confident in my ability to recommend mental health support services to a student exhibiting signs of psychological distress	
	10	I feel confident that I know where to refer a student for mental health support	
	11	I feel confident in my ability to help a suicidal student seek help	

This scale was found to have a high reliability of α=.93. The authors found that there was a statistically significant increase in scores between the pre- and post- training completion of the survey with a p-value of less than .01, criterion validity and convergent validity were also found to be significant at the .01 level.1 Therefore we know that this measure is analyzing what is intended by the researchers who developed the scale.

In order to follow cohorts of students, initial baseline surveys will also include demographic information linked to their student ID. Demographic information will include race/ethnicity, age, gender, state/country they are from, major(s), and if they have ever had any previous suicide prevention training. We would like to see if there is a relationship between any demographic information and the results of the GBS survey. We will also include questions about other suicide prevention efforts on campus. If we find that there is a significant difference between gatekeeper skills and uptake of the QPR, we can adjust our efforts in the future to target

additional programs to those specific demographics. All students will have follow-up surveys with the GBS scale every six months in order to assess the long-term effectiveness of the kognito online training. Students who complete both trainings (online Kognito and QPR) will undergo the same process as the prior groups. As they are all linked to student ID, we will be able to track who has completed one or both of the trainings as well as results of the GBS scale for each entrance year. (See Gantt chart for more information). Multiple surveys are being utilized throughout the year in order to determine if repeated exposure to prevention trainings causes an increase in gatekeeper skill and the overall utilization of mental health resources. In order to maintain survey participation, we will provide survey incentives, such as raffles for iPads.



Formative:

The initial post-training surveys for students who have completed both Kognito and QPR will contain additional questions regarding their likes and dislikes or the training, in an open-ended format. This will ensure adjustments can be made based on student needs. Answers could range from how the training was administered to how often trainings were available for students to participate in. We will also utilize focus groups for specific populations such as international students, non-traditional students, and diverse students. Students who participate in focus groups will receive $20 for participating. They will provide us with more in-depth information as to how

we can reach more students, such as through different marketing techniques, and their experience with the training.

Process:

In order to determine if the program is being delivered as intended, we will randomly record QPR training. We will be doing this in order to ensure presents are effectively delivering the training, and are discussing all required topics. The program coordinator will also sit in on some of the trainings to see how the program is being delivered. In the post-survey for QPR, we will ask students how they felt about how the training was delivered (i.e. do they feel they need more time for the role-playing activity).

Summative:

All surveys for all participants, regardless of which interventions they participated in, will contain the GBS questionnaire (See Gantt Chart for more detailed timeline) This will allow us to see if there are long-term effects of this intervention, and which groups showed the most increase in the categories from GBS, as well as how long effects lasted. This will allow us to make changes in the future about what parts of the intervention were actually effective in this setting and which parts will need to be adjusted. This data will allow us to see if students score differently based on demographic information, such as international vs. domestic students. We can look at the overall score of students, and also scores for specific outcomes (preparedness, self-efficacy, and likelihood to intervene). This will also allow us to see hoe how students respond to training and identify areas in which adjustments can be made to enhance the effectiveness of the training. As these are both well-established programs, we would change the manner in which the program is being implemented and marketed to students. We can also use

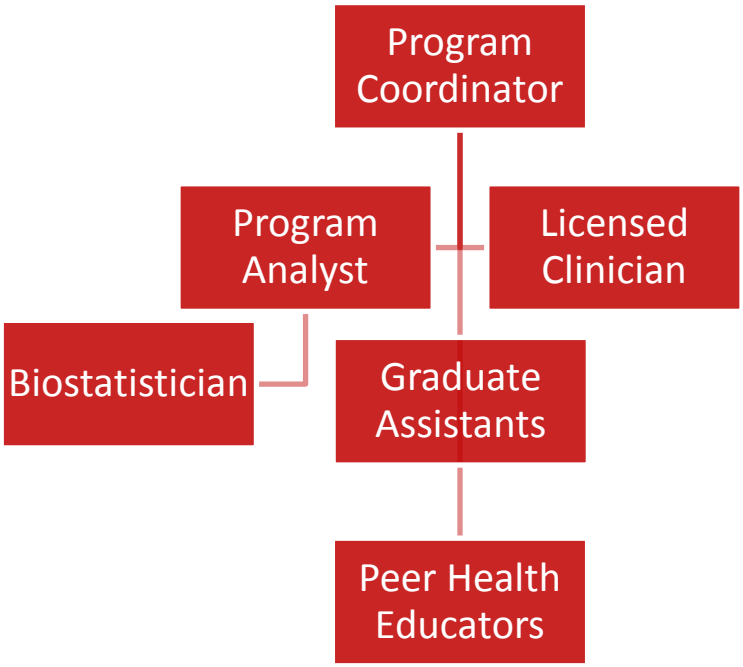
this information to assist in suicide prevention efforts at other schools with similar demographics of their student bodies, in order to disseminate our findings.

Project Management

The program will be under the supervision of the Suicide Prevention Program Coordinator, Kyra Patel, a recent graduate of the University of Kentucky, earning her Master's in Public Health in the Health, Behavior & Society concentration, with a certificate in Biostatistics. She will be responsible for the implementation of this program and will be seeking staff and student employees to implement the program. She will hire two graduate assistants and the peer health educators within the second month of the grant period. They will all be given the opportunity to be trained to be an instructor for the QPR training. Prior to the school year starting, the surveys will be created to ensure they will be available to students before classes begin. The program coordinator, with input from the student employees, will purchase incentive items for survey completion for the post surveys.

During all three years of the grant period, the QPR training will be delivered at least once a month to the general student body and by request to specific organizations on campus, such as fraternity and sorority life. Each semester, surveys will be sent out with the Gatekeeper Behavior scale and other items (see evaluation section). Two focus groups will be conducted during each year of the grant period. These will be conducted by the program analyst. Each semester, graduate assistants will compile the results of the RedCap surveys, comparing the results of the pre-assessment surveys with the post-assessment surveys. They will look at the relationship between demographic and the results of the GBS, and the effects of the Kognito training alone vs. both Kognito training and QPR.

Once a year, the community advisory board will meet at the end of year grant year, the end of June to discuss the results or the assessments and to discuss focus groups. They will determine if the way the program is being implemented and how the program can be improved upon. See Gantt chart in the appendix below for more detailed timeline.



Capacity

Since this grant programs implemented by this grant will be conducted through Student Support Services we will have the resources and capacity to implement evidence-based programs on a large scale due to them being a member of MIT's Wellness Unit. This unit includes resources for Violence Prevention and Alcohol & Drugs. Programs through each of these divisions are geared toward the student body at large, with smaller presentations and educational material conveyed in a smaller setting such as a club/organization meeting or a residence hall, similar to what we want to do with the grant. Our target population is the entire MIT student

body, but will slowly disperse information through smaller settings in the form of trainings. The Wellness Unit has connections to resources for students on and off campus, providing an already established resource network for us to be a part of, and use to help students address suicide and the stigma attached to it.

The purpose of this intervention clearly aligns with the mission of Student Life mission statement.

> *"We are here for Students. We come together for a common educational purpose: to help our diverse community of students thrive intellectually, physically, spiritually, and personally"*

They mention that they fulfill their mission through key partnerships with a variety of individuals on campus, including students, faculty, and staff in order to promote the holistic well-being of its students. Our goal through this intervention is to focus on the mental health aspect of student health and well-being, which is included in the mission of this organization.

Student life has created a three-year plan to improve upon MIT's current efforts to improve student life through a holistic wellbeing approach. Since this grant is being implemented through Student Support and Wellness, the goals of the intervention line-up with the goals outlined in the three-year plan outlined by Student Life. We will follow MIT's nondiscrimination policy which states "The Massachusetts Institute of Technology is committed to the principle of equal opportunity in education and employment. The Institute prohibits discrimination against individuals on the basis of race, color, sex, sexual orientation, gender identity, religion, disability, age, genetic information, veteran status, or national or ethnic origin in the administration of its educational policies, admissions policies, employment policies, scholarship and loan programs, and other Institute administered programs and activities; the Institute may,

however, favor US citizens or residents in admissions and financial aid.*" Our program will follow the same nondiscrimination policy.

Partnerships and Collaboration

As stated previously, our community advisory board will consist of key individuals across campus. We will utilize previously established networks to determine which representative from resources need be involved in the community advisory board. We will also be partnering with specific organizations off-campus that will not be part of the advisory board but will provide some feedback on the intervention and how it is being implemented, and how we can connect students to additional resources.

In order to ensure key stakeholders are included on and off-campus, we will be utilizing an internal community advisory board, and an external resource network The internal advisory board will include members of key offices on campus, while the external will include resources for students off campus such as clinics, hospitals. Our community advisory boards will meet separately once a semester and combined once a year. This will be done because we want input from a variety of stakeholders, but want to ensure all voices are being heard.

Internal Advisory Board

All members of this board will serve as key partners in the implementation of this program on a college campus. We will include representatives from Wellness, Housing, the Priscilla Gray Center, Greek Life, and Student Government, and academic life. The board will consist of not only staff and faculty but also students. We will also collaborate with the counseling center and health services. All organizations listed above have done large-scale programming and their insights will prove to be extremely valuable. As all of these organizations

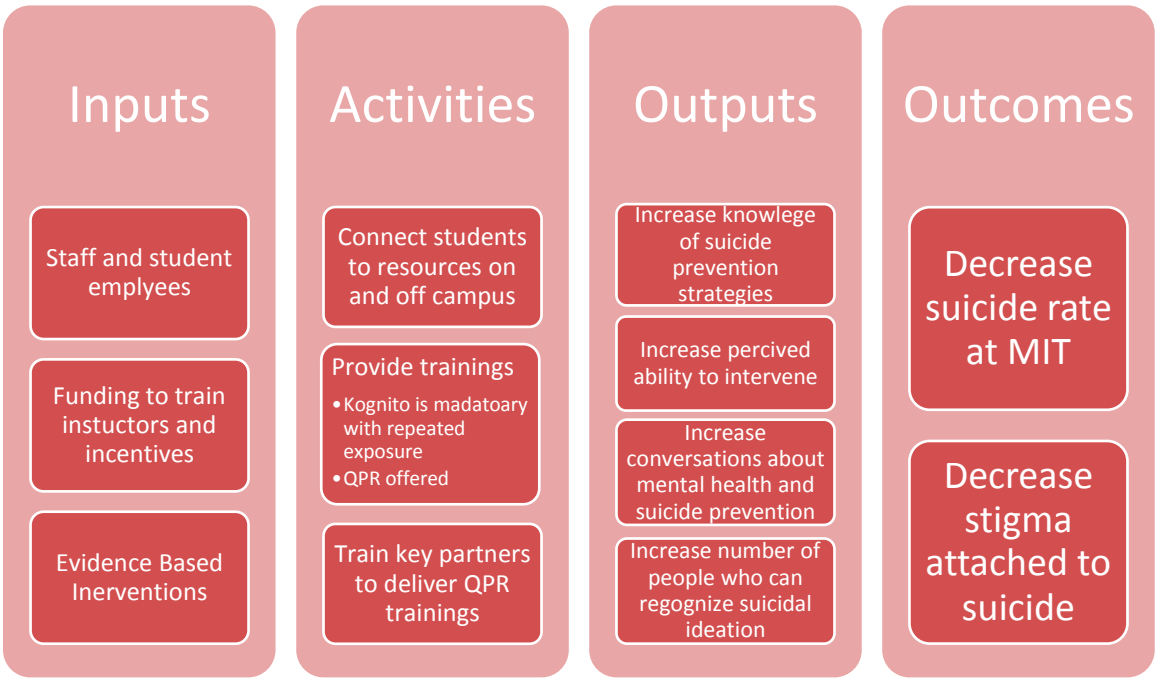
currently work together in different capacities, we foresee no problem in assembling representatives for this initiative.

External Network

All members of the external network will have an interest in the mental health and wellbeing of students. We will include representatives from hospitals, law enforcement and EMS, faith-based organizations, off-campus support groups. We will also consult with the QPR Institute, the American Association of Suicidology, SAMHSA, and Kognito. The input from these larger organizations are being included because they will be key in the dissemination of materials and can use the results of the intervention to further improve the programs and make adaptions for college students.

Appendix

1. Logic Model



Gantt Chart

GANTT CHART

Task	Description	Month	J18	2	3	4	5	6	7	8	9	10	11	12	J19	14	15	16	17	18	19	20	21	22	23	24	J20	26	27	28	29	30	31	32	33	34	35	36
1	Build all surveys in RedCap and link to Kognito traing																																					
1.1	Purchase incentives																																					
1.2	Train students to deliver trainings																																					
2	Program Implimentation																																					
2.1	Disperse pre-assessment for kognito training to incoming students																																					
2.2	Monthly QPR training availbale																																					
2.3	Semester survey sent to students																																					
2.4	Post QPR sent to students who have completes it																																					
3	Assessment																																					
3.1	Develop reports every semester based on pre- and post- assessments																																					
3.2	Conduct focus groups																																					
3.3	Present findings to separate CABs																																					
3.4	Present findings to full CAB																																					
3.5	Make adaptions to implimentation techniques																																					

*J18 = July 2018

Budget Justification
Project Title: Analyzing the effects of re-exposure to suicide prevention trainings and the benefits of various simultaneous trainings

Time Period: 7/01/2018 – 6/30/2021

A. Salaries and Wages

Year 1					
Position Title	**Annual Salary**	**%FTE**	**Salary Requested**	**Fringe Requested**	**Total Requested**
Program Coordinator	$70,000	70%	$49,000	$17,934	$66,934
Program Analyst	$55,000	75%	$41,250	$16,824	$58,074
Graduate Assistant	$41,000	50%	$20,500+stipend = $22,500	$4,491	$26,991
Graduate Assistant	$41,000	50%	$20,500+stipend = $22,500	$4,491	$26,991
Biostatistician	$100,000	10%	$10,000	$3,199	$13,199
Licensed Clinician	$50,000	25%	$12,500	$1,106	$13,606
Peer health Educator *5	$10,000	100%	$10,000	-	$10,000
Total Personnel			**$157,750**	**$48,045**	**$223,795**
Year 2					
Position Title	**Annual Salary**	**%FTE**	**Salary Requested**	**Fringe Requested**	**Total Requested**
Program Coordinator	$72,100	70%	$50,470	$18,472	$68,942
Program Analyst	$56,650	65%	$36,823	$15,018	$51,841
Graduate Assistant	$41,000	50%	$20,500+stipend = $22,500	$4,491	$26,991
Graduate Assistant	$41,000	50%	$20,500+stipend = $22,500	$4,491	$26,991
Biostatistician	$103,000	10%	$10,300	$3,295	$13,595
Licensed Clinician	$51,500	25%	$12,875	$2,389	$15,264
Peer health Educator *5	$10,000	100%	$10,000	-	$10,000
Total Personnel			**$155,468**	**$48,156**	**$203,624**

Year 3					
Position Title	**Annual Salary**	**%FTE**	**Salary Requested**	**Fringe Requested**	**Total Requested**
Program Coordinator	$74,263	70%	$51,984	$19,026	$71,010
Program Analyst	$58,350	90%	$52,515	$21,419	$73,933
Graduate Assistant	$41,000	50%	$20,500+stipend = $22,500	$4,491	$26,991
Graduate Assistant	$41,000	50%	$20,500+stipend = $22,500	$4,491	$26,991
Biostatistician	$106,090	10%	$10,609	$3,394	$14,003
Licensed Clinician	$53,045	25%	$13,261	$2,424	$15,685
Peer health Educator *5	$10,000	100%	$10,000	-	$10,000
Total Personnel			**$173,369**	**$55,245**	**$228,614**

***Tuition is requested for both graduate assistants with a $200 a week stipend with the understanding that they will each work 20 hours a week.*

Kyra Patel MPH – Kyra Patel will serve as the Suicide Prevention Program Coordinator. She will oversee all operations to ensure the program is following the intended program approach as closely as possible and making adaptations as necessary. She will work closely with the community advisory board to ensure the programs are serving students to the best of their ability. She will be responsible for present data in regards to the effectiveness of the intervention to the community advisory board and will be responsible for the dissemination of the results to other schools, to assist them in their suicide prevention efforts. She will attend professional conferences to share the results of the intervention. She will be responsible for hiring all staff including the program analyst, the graduate assistants, peer health educators, and the biostatistician. She will be responsible for locating a clinician to serve as an advisor for this program. She will be responsible for obtaining more funding for this project following the end of the three year grant period.

Program Analyst- the Program Analyst will be responsible for ensuring the trainings are being delivered as intended. They will randomly monitor training for process evaluation purposes. They will assist the program coordinator in making any additional adaptations to how the programs are being implemented on campus, based on the responses from the community advisory board and focus groups.

Two Graduate Assistants- Graduate Assistants primary responsibilities will include coordinating presentation schedules for the QPR trainings and assist the Program coordinator in any way possible.

Graduate Assistant 1: The first graduate assist will focus on assessment through the utilization of RedCap and will assist in monitoring participation in surveys and trainings.

Graduate Assistant 2: The second graduate assistant will focus on marketing and promotion of the QPR training with the assistance of the peer health educators. They will coordinate when

trainings will occur, including the number of students participating in the training and reserving locations for the training to be held.

Peer Health Educators - A peer health educator's primary responsibilities will include marketing and promotion for the QPR training and for any participation incentives for organizations with the higher participation percentages for the QPR training. They will also assist in delivering the QPR training. They will become an instructor during their first two months in this position and will shadow the program coordinator and graduate assistants until they feel comfortable delivering presentations on their own.

Biostatistician- the biostatistician will be a member of the statistics department at MIT. They will have years of experience with program analysis. Their primary responsibility will be assisting in analyzing the results of the assessments and determining if there are associations between the demographic information and results of the Gatekeeper Behavior scale and to see a trend in survey results over time.

Licensed Clinician- the clinician will be a member of the MIT counseling center, or from a local private practice. They will have experience working with college students, and be trained to work with suicidal clients.

Fringe Benefits **$36,360**

Please note that personnel fringe costs vary based on the following benefits schedule, which can also be found at http://www.research.uky.edu/ospa/info.html. Fringe benefits are escalated as described in the table below. Fringe benefits are requested as prorated based on the percentage of salary/wage support requested, as described above.

Benefit	Faculty	Staff	Post Doc	Hourly Employees
Retirement	10.00%	10.00%	N/A	N/A
Social Security	7.65%	7.65%	7.65%	7.65%
Other Fringe	3.4%	3.7%	0.8%	0.8%
Total Percent	21.05%	21.35%	8.45%	8.45%
PLUS Prorated Amount for Health and Life Insurance Multi-Year Projects include a 10.5% increase in insurance per year. Amounts shown below are for the '14-'15 year.				
Employee	$5,592	$5,592	$5,592	N/A
Employee+Children	$7,272	$7,272	$7,272	
Employee+Spouse	$8,712	$8,712	$8,712	
Employee+Family	$10,224	$10,224	$10,224	
Life Insurance	$3/month	$3/month	$3/month	N/A

B. Supplies

Item Requested	Number Needed	Unit Cost	Year 1 Amount	Year 2 Amount	Year 3 Amount
Promotional flyers	**100**	**$3**	**$300**	**$300**	**$300**
Laptops	**2 each**	**$1,000**	**$2,000**	**-**	**-**
Incentives	**-**	**-**	**$6,000**	**$6,000**	**$6,000**
Trainings (QPR)	**9**	**$500**	**$4,500**	**$3,500**	**$3,500**
Trainings (Kognito)	**1**	**$6,000**	**$6,000**	**$6,000**	**$6,000**
Total			**$8,300**	**$6,300**	**$6,300**

We request funds for laptops for the graduate assists to develop and manage RedCap surveys and assist in the dispersion of surveys to students. Incentives and promotional items are based on estimated costs. We will be providing incentives based on organizations with the highest percentage of participants having completed both the QPR and Kognito online training. Competitions will be health yearly; with prizes given to the top three student organizations Students who participate in focus groups will receive $20 on compensation for their time. Students who complete surveys can be eligible for prizes and can be entering into a raffle for a free iPad. Additional incentives will be discussed with the peer health educators and focus groups, to ensure incentives line up with student needs. There will also be incentives for students who participate in focus groups. We have included the cost of the program coordinator, analyst, graduate assistants, and all health educators to be trained during the first year, and for everyone but the two staff members to be trained during subsequent years.

Travel **Total: $10,000 (tax included)**

Out of state travel: We request $10,000 per year in travel funds to support the cost of the program coordinator, both graduate assistants and the program analyst to attend the Mental Health conference for NASPA.

2 nights lodging x $250/night = $500
Airfare = $400
Registration = $700
3 days per diem x $75/day = $225
Ground transportation = $100
Baggage ($50 per trip for r/t flight) = $50
Parking at airport = $50 Total
TOTAL: $2,025 per person

Resources

1. *Suicide among College and University Students In the United States*. 2014, Suicide Prevention Resource Center.
2. Rocheleau, M., *Suicide Rate at MIT higher than national average*, in *Boston Globe*. 2015: Boston.
3. MIT, *The Healthy Minds Study 2015 Results*. 2015, MIT.
4. *Student Body Diversity*. 2017 [cited 2017.
5. *Mental Health & Counseling*. [cited 2017.
6. Pohle, A. *After a tough year of suicides on campus, MIT aims to imporve mental health culture*. 2015 2017].
7. Tate, A.T., *MIT Students Use their Coding Skills for Suicide Prevention*, in *NBC News*. 2016, NBC.
8. *Group Resources- Student Group List*. [cited 2017.
9. Rein, B.A. and D.W. McNeil, *Evaluation of an Avatar-Based Training Program to Promote Suicide Prevention Awareness in a College Setting.* 2018: p. 0.
10. Hangartner, R.B., et al., *Benchmarking the "Question, Persuade, Refer" Program Against Evaluations of Established Suicide Prevention Gatekeeper Trainings.* Suicide and Life-Threatening Behavior. **0**(0).
11. Teo, A.R., et al., *Brief gatekeeper training for suicide prevention in an ethnic minority population: a controlled intervention.* BMC Psychiatry, 2016. **16**: p. 211.
12. Isaac, M., et al., *Gatekeeper Training as a Preventative Intervention for Suicide: A Systematic Review.* The Canadian Journal of Psychiatry, 2009. **54**(4): p. 260-268.
13. Albright, G.L., et al., *Development and Validation of the Gatekeeper Behavior Scale.* Crisis, 2016. **37**(4): p. 271-280.