

**The Global Health Engagement Initiative**

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## **Introduction**

The Global Health Engagement Initiative is a collaborative endeavor between the Consortium of Universities for Global Health (CUGH) and the Public Health Institute (PHI) to develop baseline research that can lead to programmatic changes within the infrastructure of the global health workforce that increases the visibility and participation of underserved minority populations within the field. Through the facilitation of three surveys to academic institutions, global health students, and early-career professionals, this initiative has illustrated a picture of the academic field of global health in the United States and the obstacles minority individuals and minority-serving institutions experience.

CUGH is a consortium of 100+ academic institutions all of whom are involved in global health. CUGH promotes mutually beneficial, long-term partnerships between universities in resource-rich and resource-poor countries to develop human capital and strengthen institutions' capabilities to address these challenges. The goal of this initiative is to understand barriers to participation in global health for individuals from minority populations and increase relationships between minority-serving institutions to address the lack of minorities in the global health workforce.

## **Purpose**

Currently there is a lack of aggregated information on the infrastructure of global health including basic knowledge of academic programs and the number of students enrolled in global health programs. This missing data greatly impacts the ability of global health professionals and leading organizations to identify deficits in the field specifically with the degree to which minority populations in the Global North have access to positions in global health. To date there have not been any assessments of the level of minority involvement in the field of global health, but anecdotal estimates of minorities have been questioned by administrative leaders of both CUGH and PHI sparking the need for appropriate investigations to determine the scope and barriers to participation.

The partnership between CUGH and PHI, referred to as the Global Health Engagement Initiative, is based on a shared concern for the lack of visible participation of minorities in the field of global health. A 24-week project with two interns was developed through funding from USAID and PHI to identify opportunities and obstacles that in- and prohibit minority participation in global health with a focus on institutions with the largest minority populations in the United States and its Territories. Minority-serving

institutions (MSIs) educate and provide opportunities for minority students and thus surveying this population provided key information regarding the infrastructure of global health in relation to MSIs.

## **Methodology**

The project focused on three aims: 1). Describe the academic infrastructure of global/public health in MSIs through identifying the opportunities and obstacles of such programs; 2). Illustrate from the perspectives of minority students and early-career professionals the challenges individuals from underserved populations face in the field of global health; and 3). Describe the academic infrastructure of global health through identifying programs at colleges and universities in the United States and its Territories.

Each aim was addressed using mixed methods of research including literature reviews, surveys, semi-structured interviews, and participatory observation throughout a period of 24 weeks. Based on the initial research conducted by week two, over 200 MSIs were identified in the US and its Territories including Tribal Colleges and Universities (TCUs), Historically Black Colleges and Universities (HBCUs), and Hispanic-Serving Institutions (HSIs). Of these, 164 were identified as having public health or other international or health-related disciplines. In addition to the 164 MSIs, the overall study sample size also included CUGH members, institutions with certified public health programs, members of the Association of Schools Programs of Public Health, members of the Association of Medical Colleges, and members of the Association of American Colleges and Universities (N= 770 institutions total).

Three surveys were developed using an online system (surveymonkey.com) to collect information via a link emailed to individuals with a personalized heading and letter from the CUGH Executive Director. The Global/Public Health Survey (Appendix 1) was sent to global/public health academic deans, department chairs, program directors, research professors, administrative assistants, and other key personnel. This survey was open for 17 weeks. The International or Health Survey (Appendix 2) was sent to health-related departments such as nursing, medicine, veterinary, health science, health education, and others, in addition to departments with international activities such as business, economics, anthropology, education, environmental sciences, agriculture, and political science. This survey was open for 14 weeks. The Student/Early Career Professional Survey (Appendix 3) was disseminated through various channels which are described below. This survey was available for 11 weeks.

### *Outreach & Communications Section*

Each institution received four or more attempts at establishing contact based on a Technical Assistance Guide (Appendix 4) developed in the early stages of the project. Deans, department chairs, program directors, key faculty members, and CUGH contacts were called and emailed multiple times to encourage the completion of the surveys.

Minority students and early-career professionals were targeted through social media using Facebook, Twitter and Instagram and institutional reaches. This included social media campaigns using the hashtag phrase “#IamGHOPe @CUGHNews” on the front of a half-sheet of paper and a link to the survey on the back (Appendix 5). Specific events were targeted including the 2014 142<sup>nd</sup> Annual Meeting and Exposition of the American Public Health Association and the 2014 113<sup>th</sup> Annual Meeting of the American Anthropological Association to draw attention to the Global Health Engagement Initiative and CUGH. Individuals at these conferences were solicited to take a picture of themselves (e.g. Appendix 6) with the front of the half-sheet (this is referred to as “selfie”) and then upload the picture to any social media platform to highlight the initiative. The information on the back of the card gave instructions for completing this task along with other ways to get involved including joining CUGH and attending the annual CUGH conference. This information was also shared with all academic institutions in the sample size as a strategy to engage their student populations.

Meetings and events were other strategies used to increase participation in the surveys and gain valuable insight. Meetings were established to discuss ways the missions of each organization could coalesce. Meetings were held with: the Senior Director and Diversity Lead for the Association of Medical Colleges, the Diversity Lead for the Global Health Fellows Program II, the Deputy Director of the White House Initiatives on HBCUs, and the Dean, Assistant Dean and Internship Director/Global Health Liaison for Morgan State University. Events included the above mentioned conferences as well as the First Annual Latino Health Disparities Conference at George Washington's Milken Institute School of Public Health, the Congressional Black Caucus Foundation's panel of the future of HBCUs, the HBCU Story's annual conference and Idealist's Annual Graduate Fair.

This study involved a continuous process of outreach to minority-serving institutions to participate in the surveys. These institutions were contacted between three and ten times. Multiple departments were

targeted as well as connecting bodies were contacted to increase chances of responses such as the Consortium of African American Schools for Public Health and the Global Health Fellows Program II.

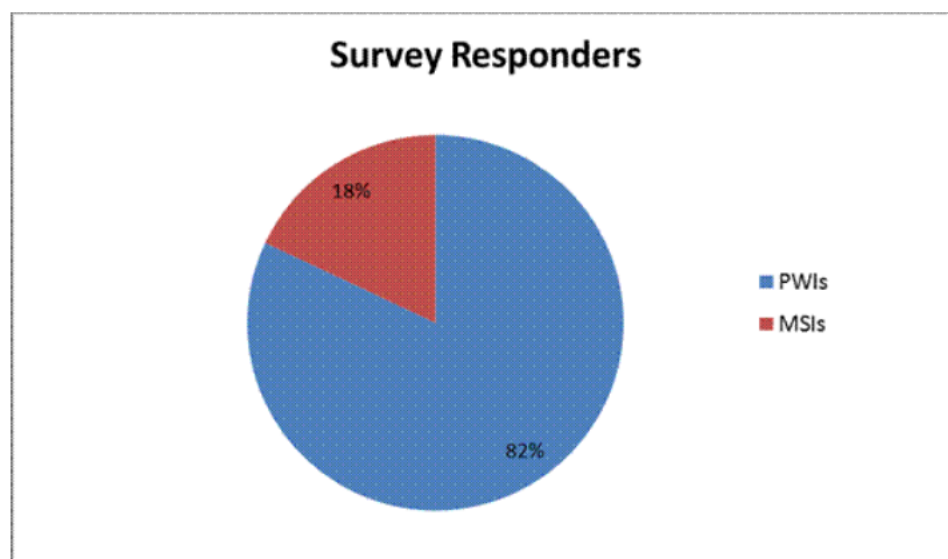
## Findings

There were 88 responses to both the global/public health and international/health surveys. This represents 11% of sample size. For this section, “program” refers to an academic course of study that results in a terminal degree. Research conducted outside of this study confirmed most CUGH members did not have global health degree programs, but instead had research and other services on campus that involved global health and therefore were applicable to membership. This survey focuses on academic programs in global health or with concentrations in the field. All other programs are categorized separately.

**Chart 1.1 depicts a summary table of the survey responses for the Global/Public Health and International or Health Surveys.**

Survey	# of Responders (n=770)	% of Sample Size
Global/Public Health	70	9%
International/Health	18	2%

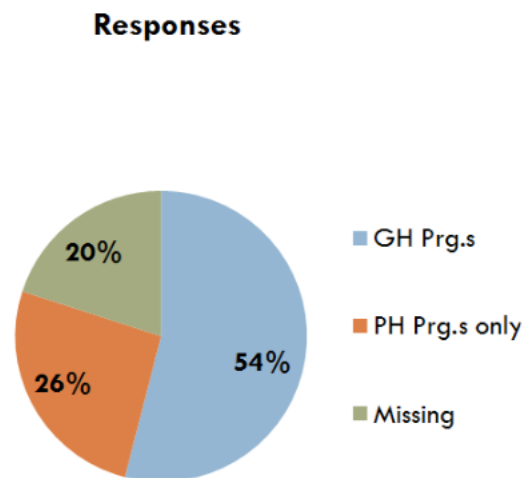
There were 18 responses from minority-serving institutions. Chart 1.2 depicts the percentage of survey responders.



### *Global Health Institutions*

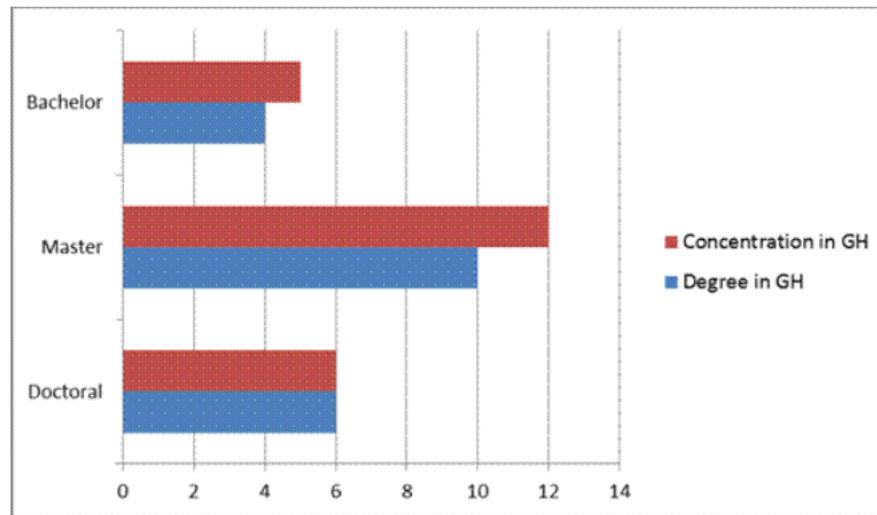
There were 70 responses to the global/public health survey: Over half of the responses to the survey were from global health programs (54%, n=38), 26% were from institutions with public health only (n=18), and 20% of the data was missing (n=14). Of the 38 institutions that responded, 63% are research universities (n=24), 34% teaching universities with some research (n=13), and only one is a private institution with minimal degree programs (3%). Ninety-two percent of the institutions are predominantly white institutions.

**Chart 1.3 demonstrates the types of institutions with global health programs.**

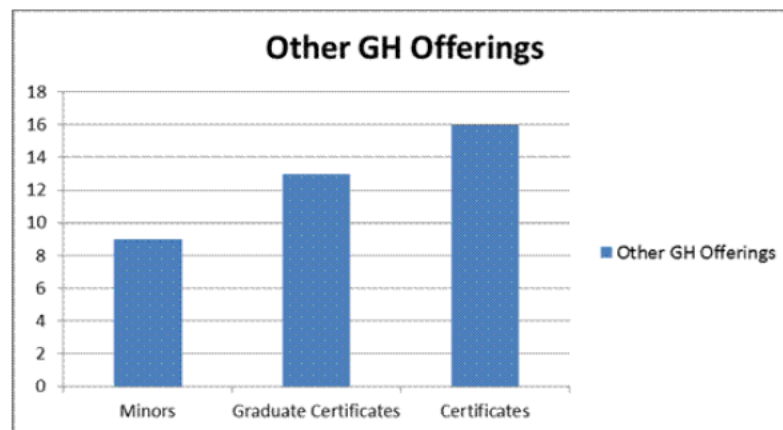


A third of global health academic programs at these institutions are certificates in global health. Graduate master's and undergraduate bachelor's and minors represent 27% and 22% of the degree programs offered, respectively. Only 14% of the degree offerings are from doctoral programs in global health or doctoral degrees in public health with a concentration in global health

**Figure 1.4 lists the number of global health programs for each degree type.**



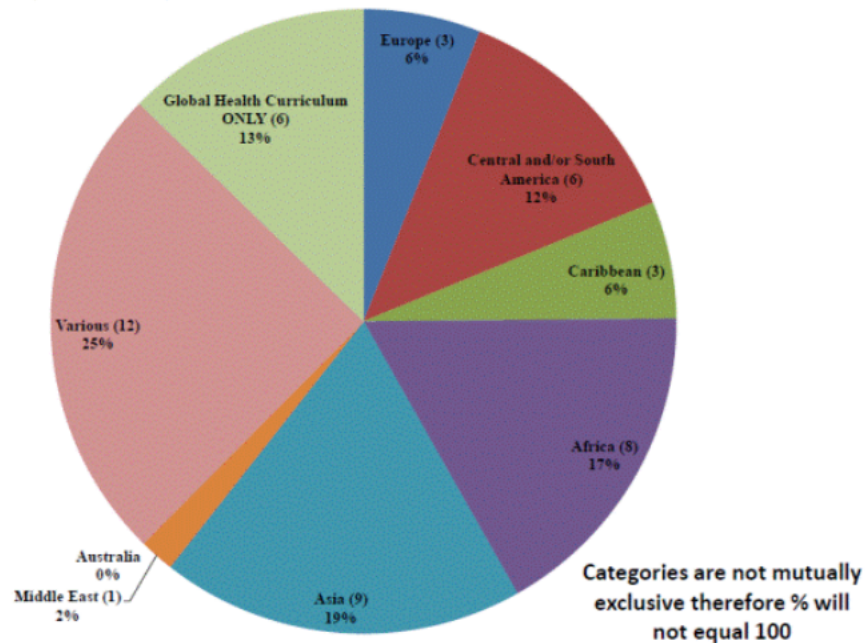
**Figure 1.5 lists the number of global health programs for certificates and minors.**



The majority of institutions involved in global health have multiple international sites predominantly in Asia and Africa. These continents represent 59% of the global health efforts of US institutions that participated in this survey. When combined with Central and South America, 80% of global health programs establish research sites in these locations.

Chart 1.6 displays the global sites many institutions have global health programs and research.

**Global Sites for Global Health Programs**  
33 sites on 5 continents

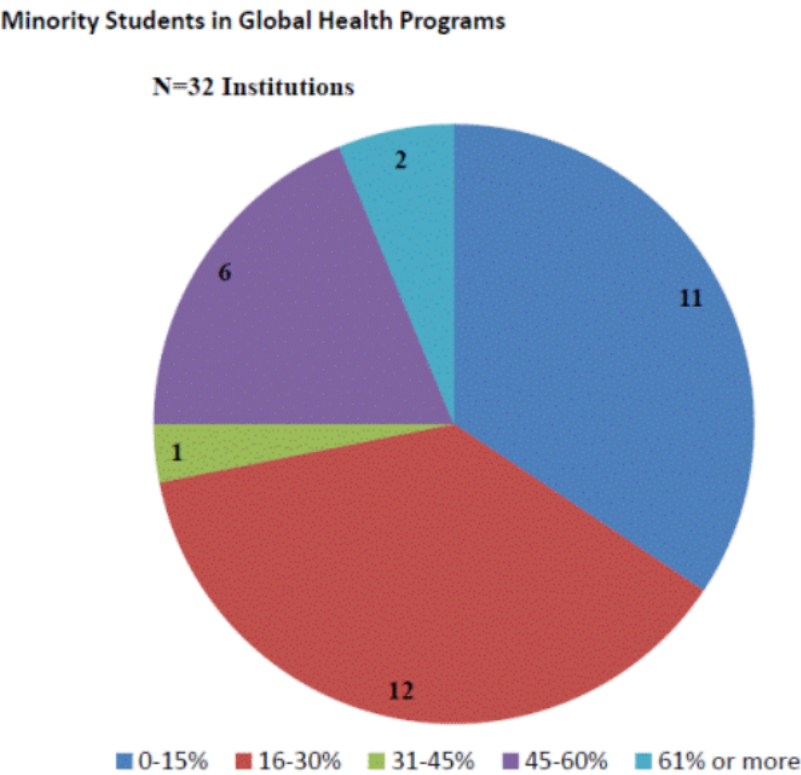


The majority of institutions (86%) face financial obstacles. Half of the global health programs indicated they experience obstacles involving developing and sustaining international sites for students to participate in. There are a number of laws, regulations, and other institutional complications that make these processes difficult. This includes a multitude of players from the global health program's institution to the international site's governmental agencies. Managing all of these relationships and protocols can deter faculty from establishing programs that offer exposure abroad for many students.

Lack of faculty and staff were not obstacles mentioned by global health programs (Please note these surveys were completed by faculty or administrative staff). The total number of faculty involved in global health for 34 institutions was 1,250 ( $\mu = 37$ ) and there were 4,471 global health students ( $\mu = 135$ ) enrolled in these institutions as of fall 2014. This is a 3:1 ratio with one faculty member available for three students indicating this may not be an obstacle for global health programs although smaller programs may experience the reverse.



Chart 1.7 denotes the number of institutions and the percentage of minority students that are enrolled in global health programs.



**Percentage of minority students in Global Health Programs**

There is a smaller percentage of minority students at these global health institutions. Seventy-five percent of these institutions global health programs where less that 45% of the students were minorities, 98% of the programs have less than 60% minority students. Only two institutions have 61% or more minority students in their global health programs (University of Arizona and California State University-Fullerton). These figures may suggest minority students are not in global health programs at these institutions. Despite a lack of minority students, most institutions offer scholarships (89%) and graduate fellowships to minority students (70%) in an effort to increase diversity.

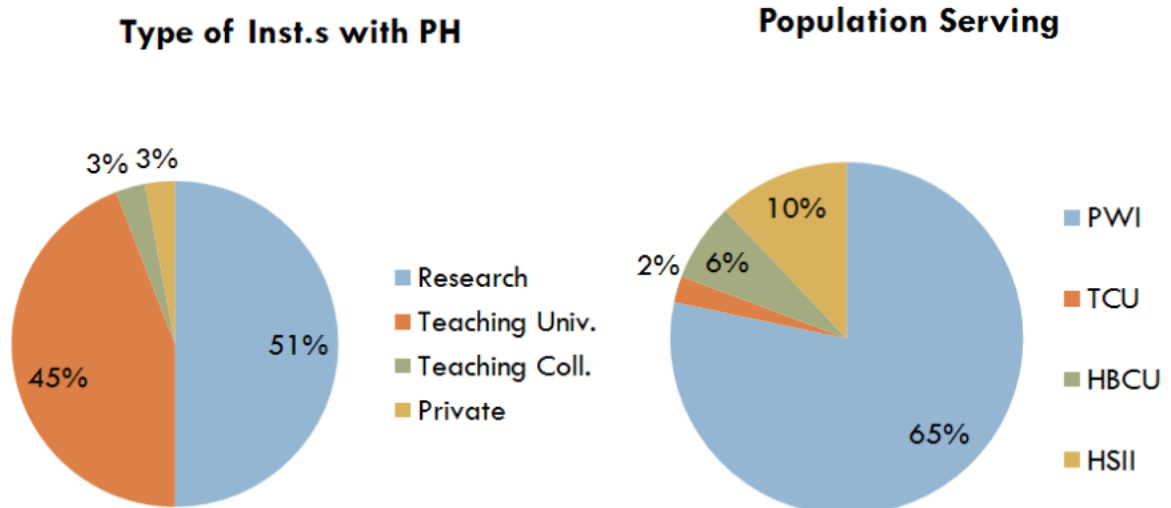
Other data collected from this survey includes topics for webinars and interests in the CUGH Program Advisory Service (PAS), a mentorship-based program that links individuals at institutions with a growing global health program to individuals at other institutions with an established a global health program. This survey asked responders if they were interested in this service and 38% were interested in becoming a mentor, 32% prefer to be mentored, and 29% were not interested. The CUGH Education

Officer was sent a list of these individuals for the Education Committee's discretion. Two of the institutions interested in mentorships are minority-serving institutions.

### *Public Health fosters Global Health Implementation*

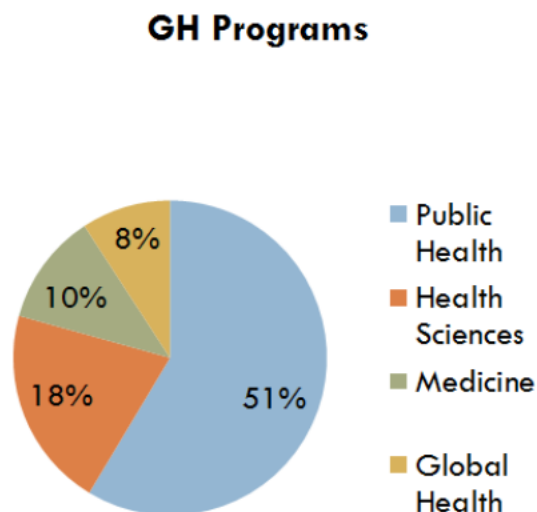
A quarter of the responses were from institutions with public health programs only (n=18) and 79% of institutions with global health also have public health. In total, 49 institutions (70% of the responders) have public health programs of which 51% are research universities, 45% are teaching universities with some research, and 65% are predominantly white institutions.

**Chart 2.1-2.2 illustrate the distribution of types of institutions and populations served.**



Most of the programs for global health were housed in the departments of public health (51%). Other departments included schools of medicine (10%), health sciences (18%), global health (8%) and a few are located in healthcare, nursing, science, kinesiology, anthropology, and environmental science.

Figure 2.3 depicts the percentages of global health programs in various academic departments.



The majority (69%) of their degree offerings are master's level with less than half doctoral or bachelor degrees. Key obstacles for these programs are financial (78%) and awareness of program (54%). There were 16, 439 public health students as of fall 2014 but a majority of those students are not minority students. Seventy percent of institutions have less than 45% of minority students in their public health programs and 86% of institutions have less than 60% of minority students. Only six institutions have 61% or more minority students in their public health programs (Dine College, University of Hawaii, Jackson State University, Langston University, Ponce School of Medicine, and Meharry Medical College- all MSIs).

Public health programs have slightly more minority students than global health programs and the opportunities for diversity remain are similar. Eighty-six percent of institutions have scholarships and 60% have graduate fellowships. Like with global health, post-graduation opportunities diminish.

#### *Other programs leading to global health*

There were 18 responses to International or Health Survey and 50% are from minority-serving institutions. One university that caters to the Jewish population participated in the survey, along with two HBCUs and three HSIs. These universities and colleges have programs in nursing, medicine, anthropology,

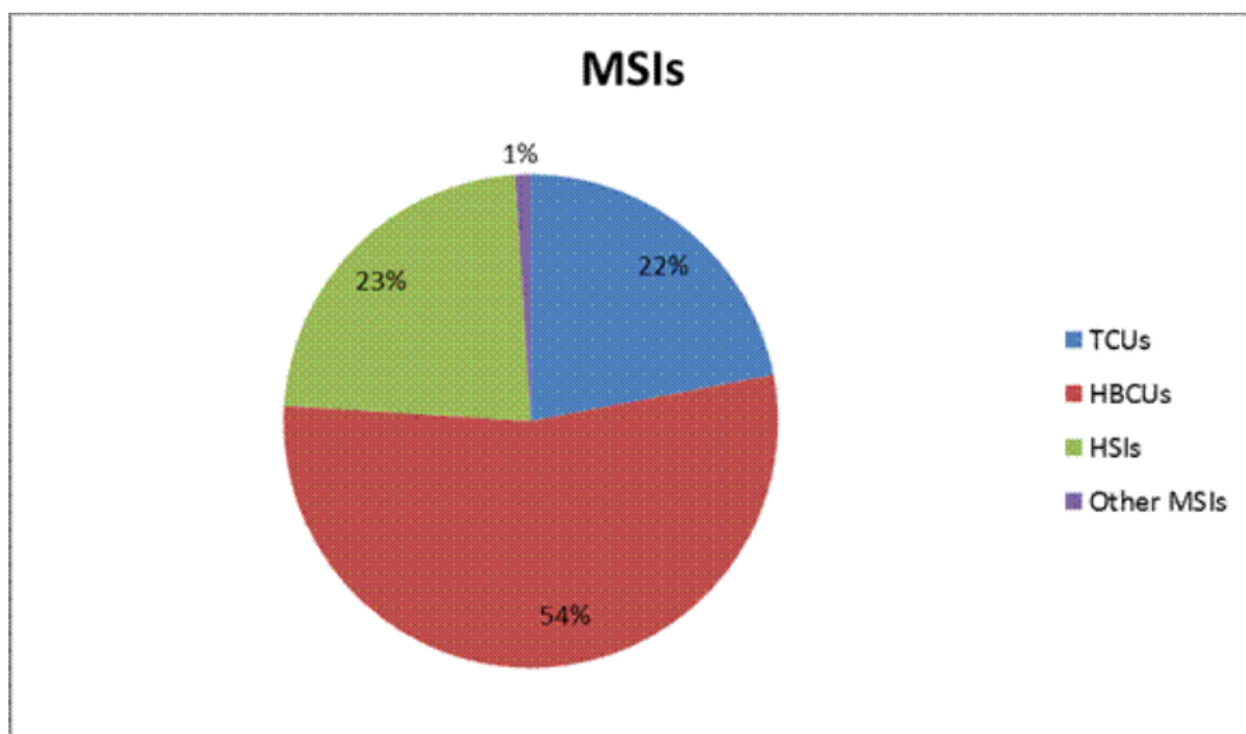
business, economics, sociology, and health education. Many also coordinate their programs with their Study Abroad departments to offer students opportunities to travel internationally. 80% of these institutions face obstacles that include a lack of funding for their programs, 70% have a lack of financial support for students, and 50% have a lack of resources. Despite these obstacles, 90% offer scholarships to increase diversity. Graduate fellowships (20%), mentorships (30%), and other opportunities (40%) are offered in less frequency. Many of these institutions are interested in global health (71%) by developing their own program or partnering with another institution.

### *Minority-serving institutions and global/public health*

MSIs differ in relation to their classifications as minority-serving. Based on federal guidelines, a minority-serving institution serves 25% or more of a student population from one minority or underserved community identified in the United States. This definition applies specifically to the qualification guidelines for Hispanic-Serving Institutions (HSIs). Historically Black Colleges and Universities (HBCUs) are African American serving institutions developed after the Civil War and given special designation through the Higher Education Act of 1965 protecting their continuation and growth. Tribal Colleges and Universities (TCUs) are designated as such if they are operated by a particular tribe and predominantly serve this population. This information makes each type of institution unique and affects the development of new programs (e.g. global health) and the existence of current academic programs (e.g. public health).

Initial research identified 164 institutions with programs in public health, medicine, nursing, environmental science, agriculture, anthropology, life sciences, international business, economic, political science, natural resources, health sciences, international/global studies and study abroad. It was presumed through these departments that the potential for developing a global health discipline, study, or program was possible. Of these institutions, 22% are TCUs (n=36), 54% HBCUs (n=89), 23% HSIs (n=37), and 1% other MSIs (n=2).

Chart 3.1 illustrates the percentage of MSIs contacted in this project.

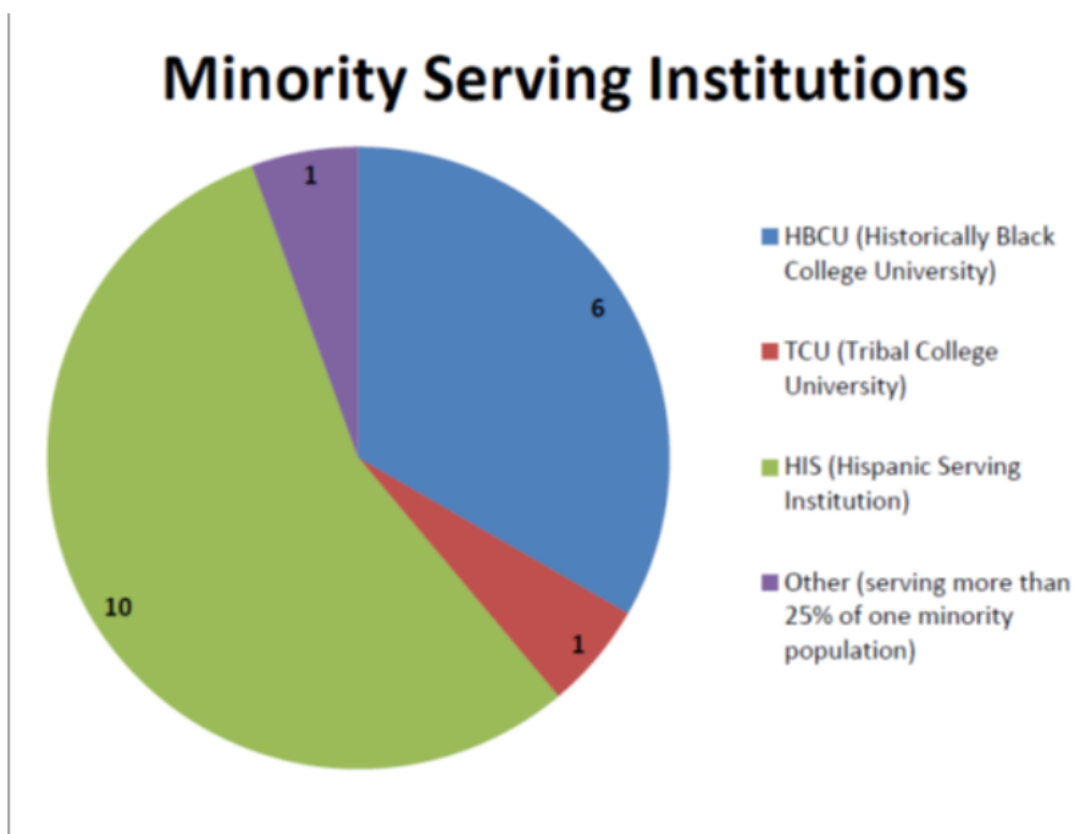


Eight responders to the global/public health survey identified as minority-serving institutions although only three (California State University-Fullerton, San Diego State University, and University of Arizona) were confirmed as MSIs. This represented 8% of the total institutions with global health and 35% of institutions with public health. Other institutions that are minority-serving have public health programs. Although MSIs have more public health programs than global health, the survey indicates a vast majority of institutions with global and public health programs have a predominantly white student body.

The MSIs with global health are HSIs and state universities. Hispanic-serving institutions are not historical universities developed out of the segregation of American populations. Both HBCUs and TCUs are institutions established to educate a minority population that could not legally or socially attend public schools. Because the Hispanic population has a different history with the US, it also has significant differences in relation to US institutions. Each of the three MSIs with global health programs were given the designation as Hispanic-serving in the last decade because the attending population is majority Hispanic. Subsequently, many of the students enrolled in global health at these institutions are a reflection

of the campus. Both the University of Arizona and California State University-Fullerton have 61% or more of its global health students from a minority population.

Chart 3.2 shows the number of MSIs that responded to all surveys.



Of the 164 MSIs contacted, only 11% responded to the surveys (n=18). The responses include six HBCUs, one TCU, ten HSIs, and one institution serving more than 25% of one minority population (University of Hawaii). Over half of the responses are from HSIs although significant outreach targeted HBCUs and TCUs. The partial explanation for this is that HSIs are large institutions which due to location become Hispanic-serving. Thus many institutions of these sizes are already involved in global and public health and have the resources and personnel to participate in consortiums and complete information. With many HBCUs and TCUs, there is often only one individual who is responsible for all programming in multiple areas. The survey may have conflicted with the use of their time.

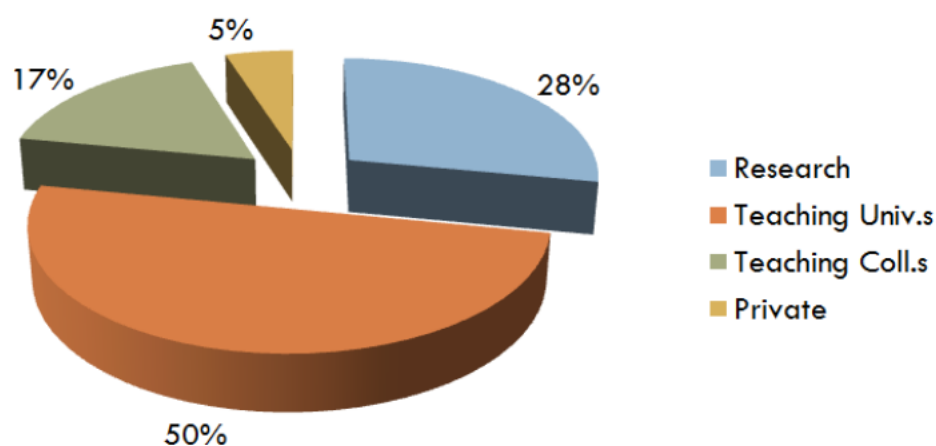
The MSIs that responded are research universities (28%), teaching colleges with some research (17%) and one private institution with minimal degree programs (5%). Half of these institutions are



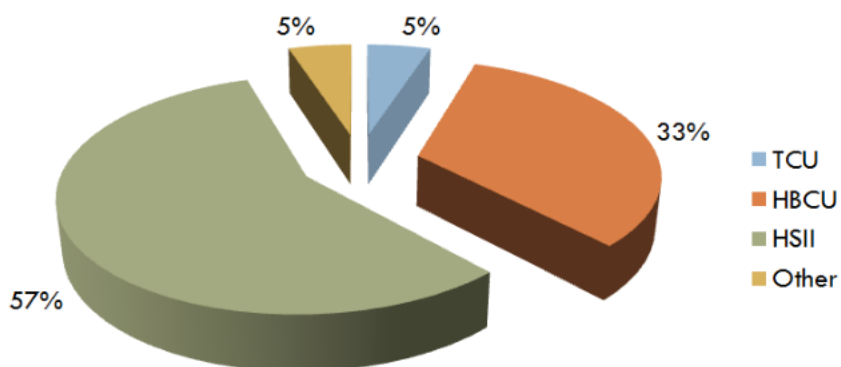
teaching universities with some research which affects the ability of faculty to pursue and acquire grants as time and focus of the institution often conflict.

Chart 3.3-3.5 showcase the types of minority-serving institutions that responded to all surveys.

### 3.3. Type of Institution

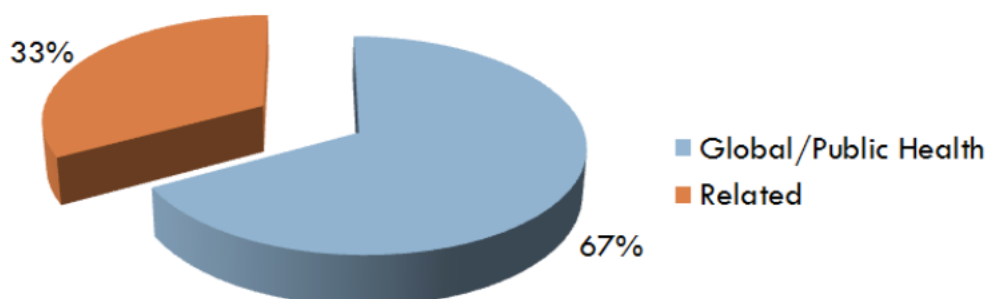


### 3.4. Type of MSI



Sixty-seven percent of the responders have global and/or public health and the remaining have related programs including those in the table below figure 3.5.

### 3.5. Type of Programs



**Table 3.6. This table depicts the disciplines offered at MSIs that are interested or involved in global health.**

Nutrition	Engineering	Community Health	GIS	Gerontology
Linguistics	International Business	International Studies	Nursing	Biomedical Sciences
Allied Health	Life Science	Water Quality	Natural Resources	Global Studies
Agriculture	Anthropology	Vision Care	Informatics	Social Work
Government Service	International Development	American Studies	Health Education	Health Science
Public Administration	International Relations	Ecology	Environmental Studies	Social Relations
Health Promotion	Exercise Science	Communication	Human Services	International Leadership
Veterinary	Healthcare Management	Biology	Urban Affairs	Health & Human Performance

Ninety-two percent of MSIs offer scholarships and 53% offer opportunities such as mentorship, postdoctoral fellowships and visiting faculty positions. Sixty-seven percent of MSIs are interested in developing global health or partnering with another institution with global health.

These institutions noted financial obstacles to be the greatest barrier for their programs. This includes resources faculty members need to make their existing programs thrive. Funding for research

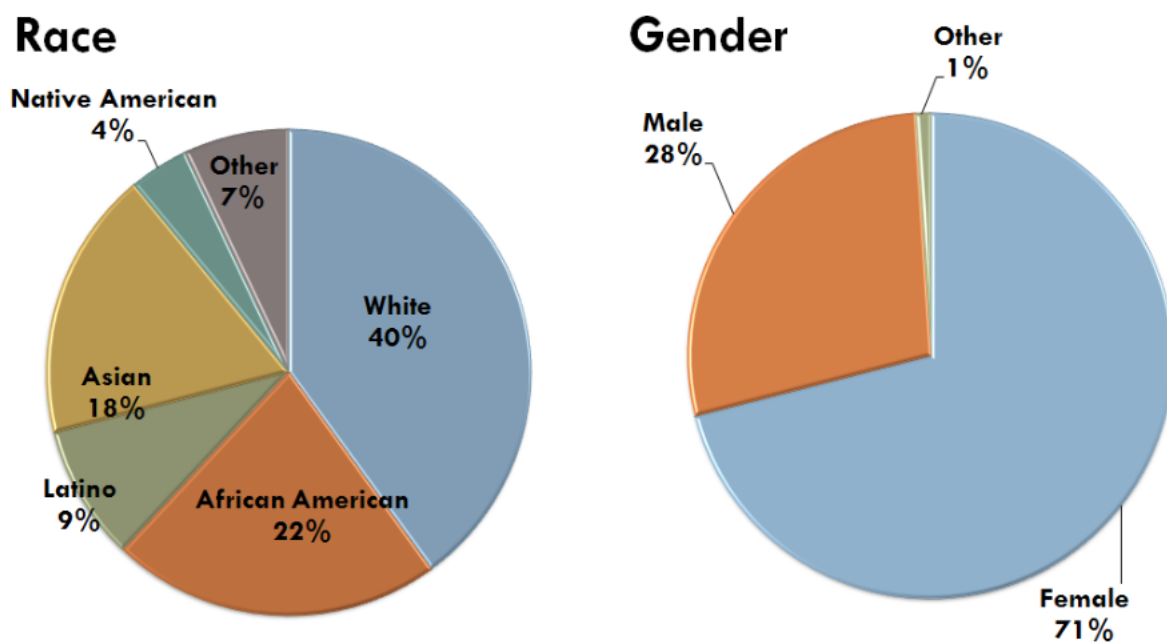


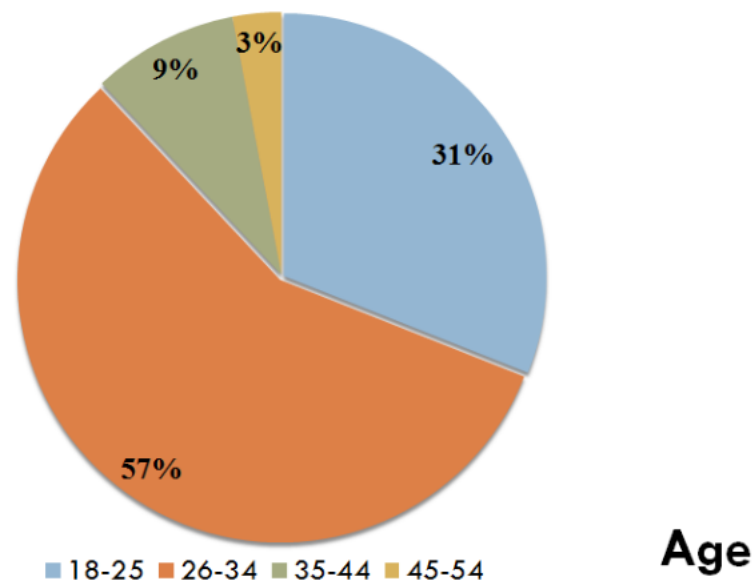
projects and for students were also mentioned. During many of the phone calls conducted as a part of the outreach plan, professors and key administrators at MSIs expressed difficulty in maintaining existing programs given continuous financial hardships. There was recently a change to the Federal PLUS loan for undergraduate students that prohibited many students from securing enough funds to complete their education. This affected enrollment which put many programs without a lot of majors in jeopardy of losing funding. Additionally, guidelines for land grants were adjusted and state funding for diversity was used to help predominantly white institutions to offer funding for programs that support a few minority students (e.g. Summer Bridge). Other factors affected by lack of funding include lack of time and lack of support staff to produce research and procure funding. It was noted that often one individual is responsible for managing a department, creating new programs, applying for funding, and retention of students. Without time or support to establish programs like global health, many MSIs will not matriculate students.

### *Global health students and early-career professionals*

The initiative conducted data analysis on the factors affecting students and early-career professionals. The survey generated responses to address barriers facing minority participation within the field of global health. The sample size (n=70) includes United States citizens (85%) of whom a majority (53%) were from a minority population specifically African American/Black (26%), Asian (18%), Latino/a (15%) and other (3%). The majority of the respondents were female (76%) which is in alignment with anecdotal assessments of the field of global health.

Figures 3.1-3.3 illustrate the distribution of race, gender, and age of survey responders.

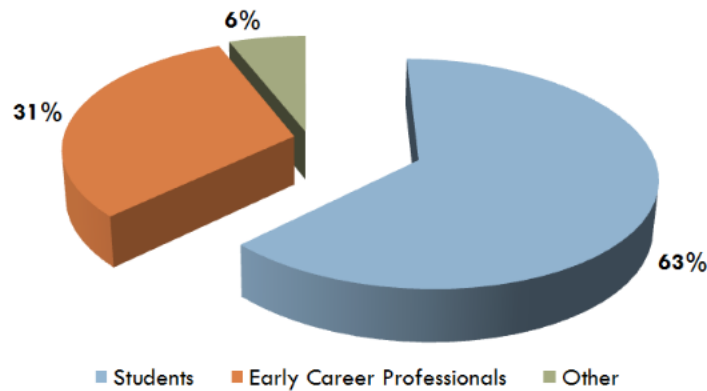




A majority of responders are between the ages of 26-34 (59%) and of this group tended to be made up of early-career professionals. Individuals 18-25 (32%) tended to represent the student population. Few individuals ranged from 35-44 (6%) and 45-54 (3%). Two mid-career professionals were identified in these ranges. All responders are of non-military veteran status.

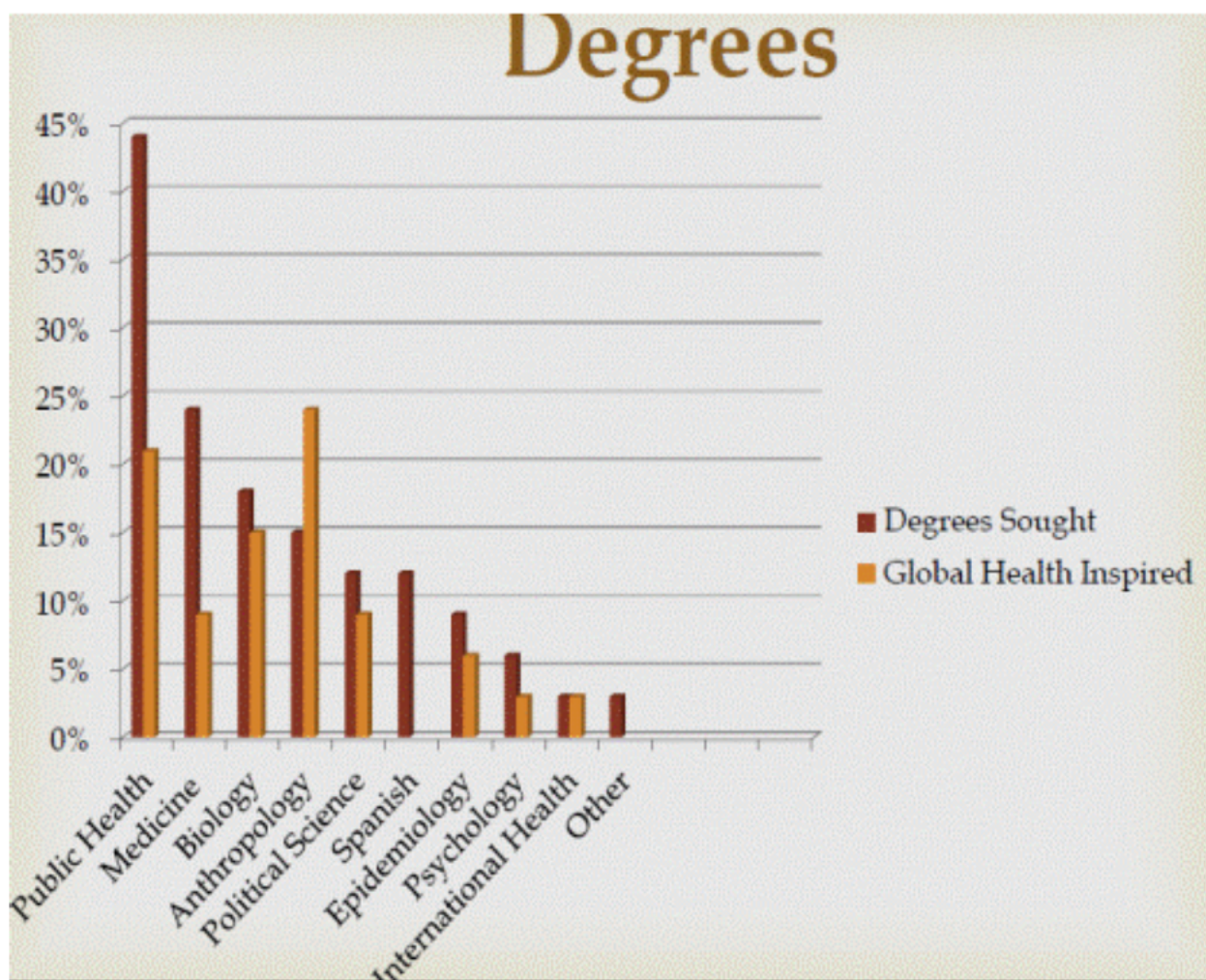
All but three responders are interested in global health and only 74% of the respondents study or work in global health. Sixty percent study or work in research universities, 28% study or work in the US in non-university settings, and 12% study or work internationally. The study determined individuals in research universities are mostly students while individuals in non-university settings are predominantly early-career professionals. More students participated in the survey (59%) than early-career professionals (35%).

Chart 3.4 shows the differences between survey responders.



One of the interests of this project is to better understand the interdisciplinary fields of study that contribute to interests in global health. Surveyors were asked what fields of study inspired their interest in global health. Anthropology (24%) is the leading field of study with public health (21%) also contributing. Other fields such as biology (15%), medicine and public policy (9%), education and epidemiology (6%), community health, community nursing, environmental sciences, ethnic studies, psychology, religious studies, social work, nursing, and pharmacy (3%) are also noted. Global health is only listed once (3%). Life experiences (18%) also influences individual interests in global health. All but one respondent notes during the open-ended question section that they became involved in global health because of their interests, connections, compassions, and desires to help people and discontinue disparities.

Graph 3.5 lists the degrees pursued by survey responders.



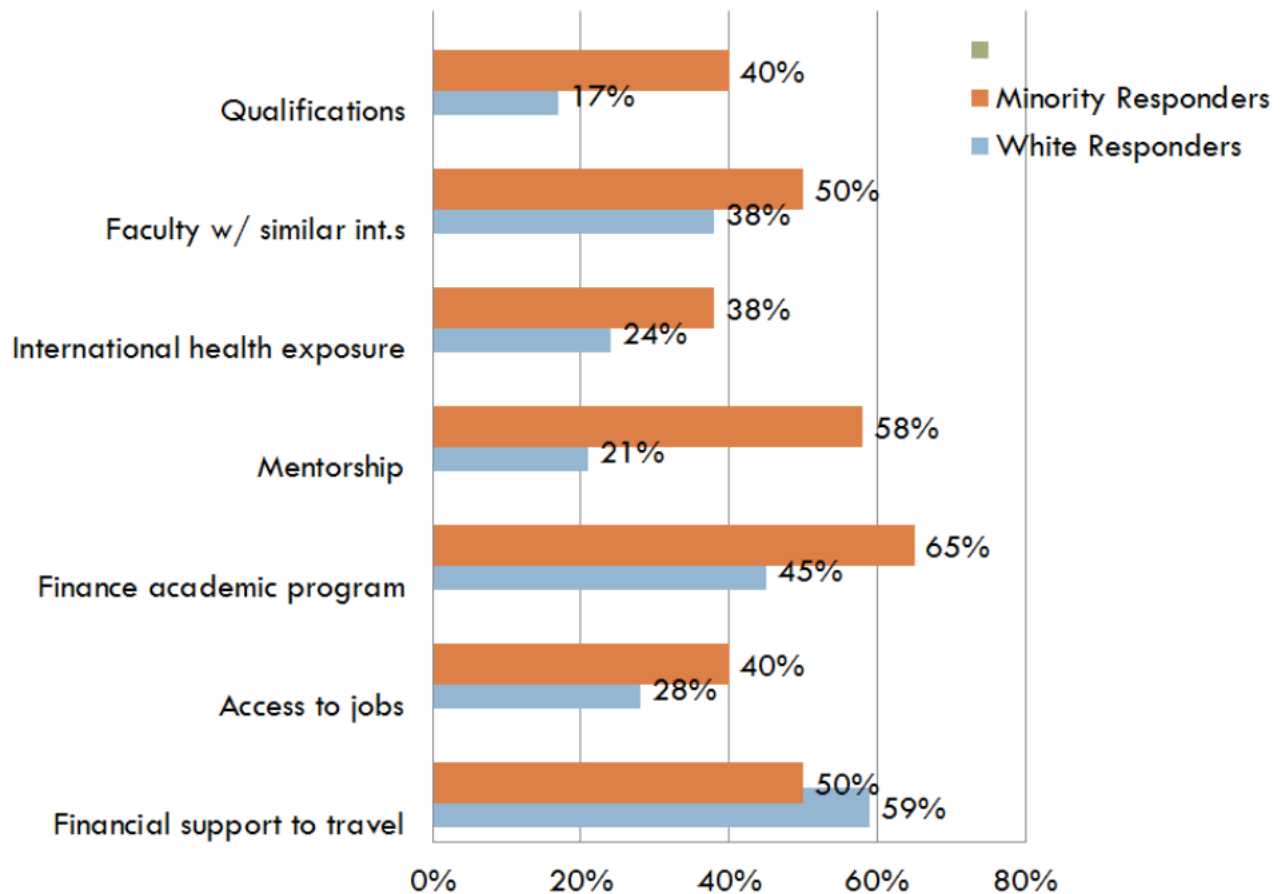
The survey also requested the names of the degrees sought by individuals involved in global health so future efforts can focus on targeting such programs to increase diversity. Most degrees available to students interested in global health come from departments of public health (44%) and medicine (24%). These departments provide the most exposure to the field of global health and, in many cases, international service and research. Findings from this survey suggest there are not enough opportunities to go around as minority students named *lack of financial support to travel*, *lack of financial support in an academic program*, and *lack of international exposure* as the top barriers they face in the field of global health. This also includes *lack of mentorship* and *lack of access to jobs*. These issues attribute to the lack of visibility of minority students within the global health workforce. The white responders also reported *lack of financial*

*support to travel* as the primary obstacle they face in the field. However, they did not highlight the other barriers minority students encounter as key issues they face within global health.

Other degrees sought by global health students and early-career professionals include biology (18%), anthropology (15%), Spanish and political science (12%), epidemiology (9%), psychology, social work and women's studies (6%), and animal science, applied biostatistics, Chinese medicine, community health, exercise science, greek and roman studies, journalism, nursing, public policy, and veterinary medicine (3%). An international health degree was sought by only one individual (3%).

#### *Barriers for minority students*

**Figure 3.6 denotes the differences in obstacles between all responders and individuals from minority populations.**



Funding for travel and support services were echoed in the multiple choice and open-ended sections of the survey which asked about barriers to success in global health and ways to improve access to



opportunities for students. The responses suggested funding exchange programs, internships, and other paid experiences at the local, national and international levels and through a variety of disciplines. 34% of responders are from fields outside of public health and medicine and as one responder noted, improved access would require, “a change in the perception that global health is a science in itself, it should probably be perceived as a crossroad where individuals from a diversity of backgrounds can come together to work on issues that surpass their individual expertise.”

There are most students in global health than early-career professionals. The latter mostly have master’s level education and noted they have trouble finding opportunities to conduct research or perform work internationally without a university backing or doctoral/medical degree. Funding to travel and conduct research is often limited to doctoral and medical students, and minority students, who often experience racism in the academy, sometimes choose not to pursue a doctoral degree. If these individuals travel internationally, they often fund their own experiences, which are financially restrictive for minority and underserved populations. It was noted many individuals from minority populations seeking global experience will sign up with programs that charge expensive prices to participate in their programs. With a lack of support it becomes difficult for minority students to excel in a field such as global health.

Respondents also noted there is a need for improvements in mentorship and training. For those already involved in the field, some noted they would prefer “trainings around concrete skills” such as basic health care services (e.g. EMT), ethical codes of conduct, and the regulations and laws of various countries. They also noted the communication between university entities and public and private organizations needed improvement as better connections could diversify opportunities for students graduating. Others noted there is a lack of exposure to global health in urban media as well as a lack of early access to global health opportunities in early education K-12. One responder noted visibility of global health is limited to the East Coast and suggested the opportunities be widened to other areas of the country.

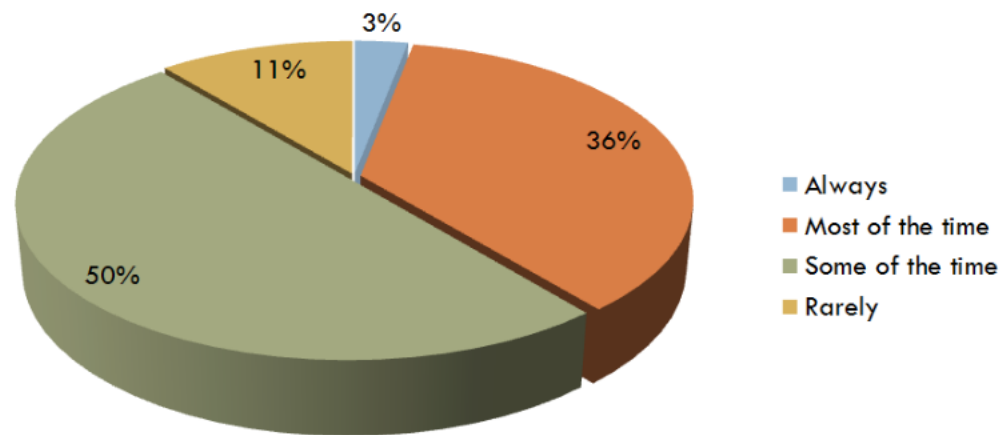
Lack of mentorship includes a lack of faculty and other persons who could help guide individuals in the field of global health post-graduation. Because of this survey requested degree information from responders, a list of institutions was also obtained. Lack of mentorship is specific to minority individuals who attended predominantly white institutions. As mentioned above, many students face racism and unequal opportunities in their academic departments and graduate without sustainable mentors. One

responder suggested having a program or service where minority individuals could be mentored by established global health professionals.

### *Barriers for minority early-career professionals*

One individual noted, “We are not primed to excel in academic schools like white students so we may not appear competitive on paper but we have the ability to grow.” This quote speaks to a narrow criterion that often excludes minority individuals from eligibility when applying for opportunities in global health. Based on this survey data, 34% of minority individuals feel qualified for global health opportunities *most of the time* and 50% *some of the time*; yet of the 44% of respondents who are early-career professionals, less than half work in global health many of whom through alternative fields such as acupuncture, social work, anthropology, and Chinese medicine.

**Chart 3.7 depicts the percentage of students/early-career professionals that feel qualified for positions.**



Many individuals noted on the survey that the job market has reduced or dismissed many introductory positions. Because of the disparity between these positions and mid-career positions, individuals find themselves less qualified for many opportunities that would help them build their career. Often individuals end up performing secretarial or basic administrative level jobs in global health instead



of utilizing the skills they learned in school. Many noted these jobs do not further train the individual so when they leave the position their skills have not been expanded upon to help foster their experience.

Seventy-eight percent of respondents were *somewhat to mostly aware* of global health opportunities and noted there is also a lack of networking opportunities for early-career professionals. Few academic programs help their students obtain introductory positions or help mentor them until they find an appropriate position. Many organizations do not reach out to graduating students who will become early career-professionals to assist with the transitional phase. The demands of student loans are a major concern of outgoing students and thus many do not take positions in global health because they seek to find work to pay their loans in a timely manner. Some obtain positions that pay them enough for bills but do not provide opportunities for the individual to save money or to take time off to travel and be exposed to international experiences that would make them more eligible for a global health position. This information denotes there are many areas in the field of global health that need improvement in order to increase access for minority students and early-career professionals.

## **Discussion**

There are a number of barriers to success for minority populations in the field of global health. Financial obstacles and access to resources were found to be the more significant challenges.

There are fewer opportunities for minority individuals and institutions to pursue global health due to financial obstacles. At minority-serving institutions, finances appear to be the most significant problem. Faculty at MSIs are interested in global health but lack the financial resources to make programs possible. The student/early-career professional survey indicated *lack of funding for an academic program* was one of the top obstacles to success in the field of global health for minority responders despite type of university or college. Contrarily, responses from these institutions noted 89% of programs offer scholarships to all students and specifically those from minority populations. Although these institutions offer support, it may not be enough to cover important costs especially given post-graduation loan repayment concerns. Some students finance their own education through employment and find it difficult to seek opportunities for funding in addition to study time. With limited financial support in programs and the accumulation of debt without guaranteed work, minority students are at a disadvantage for pursuing global health.

There is also differentiated access to various opportunities during education and post-graduation. At predominantly white institutions, access to opportunities appears to be the greatest problem for minority students. Global health faculty at predominantly white institutions are deterred from establishing international sites that would expose attending minority students to international health as *lack of exposure to international sites* was a key obstacle for minority responders. It seems when the obstacle is not addressed at the institutional level for all universities and colleges, it continues to be a barrier to success for individuals, specifically those from minority populations.

Fewer opportunities exist after one's education for minorities to participate in global health. This was a concern noted by early-career professionals that jobs were not available for individuals entering the field. The same data reflected fewer institutions offered postdoctoral fellowships and visiting faculty positions. It was suggested by early-career professionals that communications increase between potential graduates and organizations involved in global health.

Mentorship is another significant factor noted in the survey that contributes to a lack of access to resources for minority responders. White students who completed the survey did not rank *mentorship* as one of the top barriers to success in global health. The ratio of faculty to students in global health programs would support the notion that there are at least three faculty mentors for each student. However, responses from minority students and early-career professionals indicated differently as *mentorship* was one of the greatest barriers to success for minority students. Whether due to discrimination or another variable, there is a lack of mentorship at predominately white institutions that adversely affects minority students. Together these barriers provide an exclusionary process where the field of global health does not reflect the international population it serves.

## **Implications**

This project included many flaws. Data collected from the global and public health program surveys did not request or collect certain information. The survey included over 26 questions on a variety of topics. Many questions that required numerical values seemed to be avoided by faculty while program administrators rarely completed the entire survey. As a result, there were multiple surveys from the same individual or department, or missing and inaccurate data. One institution completed the first part of the survey three times but never completed it despite follow up attempts.

Additionally, few institutions that did not have global or public health responded to the international or health survey. For those that replied, many noted the survey was not relevant to them or their institution because they did not seek to develop a global health program. There were also minimal participants for the student and early-career professional survey. Immediately following the public health conference, there were no responses to the survey for two weeks. With the data collected, there is no way to know if those individuals solicited to take selfies and upload them to social media completed the survey later. Despite a communications plan (i.e. technical assistance guide) and a social media campaign, many institutions and individuals did not respond to the surveys. The number of responses also made it unnecessary to perform more statistical analyses.

## **Recommendations**

Due to the feedback from academic institutions and students/early-career professionals who completed the survey, the greatest barriers for developing or sustaining global health programs are lack of funding, programmatic incentives, and mentorships opportunities. The following recommendations address program and student funding, faculty training and incentives, mentorship opportunities, and increasing awareness of global opportunities.

### *A. Financial Obstacles*

The largest obstacle for institutions with global health programs is financial obstacles and here are recommendations for this issue:

1. Reconfigure institutional budgets to integrate additional visiting faculty and post-doctoral fellowships to support research development and facilitation in international projects. New people often bring a unique perspective and approach to research and can also jump into existing projects further building their management skills in international research. This process will serve to employ more early-career professionals into entry-level positions as well as establish a mentorship between the fellow or lecturer that can endure throughout one's career.
2. Partner with additional governmental agencies, NGOs, non-profits, foundations, and other entities to establish fundamental relationships amongst the work being done. This partnership will also

benefit students who can experience internships at these sites but also graduate and access employment in global health.

3. Diversify the ways global health programs and departments seek funding for research by increasing interdepartmental collaboration with other disciplines such as engineering, business, anthropology, law, and many others who are also engaged in international efforts that impact health. Study Abroad and Alternative Spring Break programs should be incorporated and better utilized by the field of global health.

### *B. Accessibility Obstacles*

In order to increase the diversity of the workforce institutions must provide active experience for students.

1. Diversify institutional abroad opportunities beyond health education. Utilize the interdisciplinary activities and skills of the students to tackle issues related to agriculture, clean water, construction, and others. Survey responders remarked they did not have tangible/hands-on skills outside of research to actually help individuals. Organizing abroad trips where students offer EMT services or help build houses were examples given. Offering varying opportunities from a range of activities that all contribute to global health would be beneficial.
2. Offer international opportunities for individuals outside of education that are inexpensive and not limited to tourist activities and mission trips lead by church groups. Diversifying non-academic experiences will increase individual's understanding of the world and expand non-academic skills needed in global health. Organizations or institutions can develop programs that are managed by early-career professionals, employ recent graduates to work in exchange for living in international locations while supervising student interns for short periods of time. This is just an example but there are diverse strategies that would address this issue.
3. Increase fellowships for minority early-career professionals.
4. Reopen entry-level positions to individuals who are entering the workforce.

### *C. International Exposure*

In the light of faculty concerns and feedback in regards to institutional bureaucracy around international engagement, it is recommended that institutions develop trainings and incentives for faculty to establish

and programs abroad by supporting additional research opportunities, institutional partnerships with minority-serving institutions, additional visiting faculty opportunities and teaching cooperative agreements, and international conference opportunities.

Given a large percentage of students and early-career professionals have stated there is a lack of mentorship, institutions should develop a mentorship opportunities for students within predominantly white institutions and with students and professionals in other institutions. Strategies should include one-on-one mentorship (student to student), alumni mentorship, organizational partnership mentors, and faculty mentorship.

In effort to increase knowledge of opportunities within global health it is recommended that institutions centralizing information and develop a site or medium of communication geared toward minority populations. This approach must include awareness and networking opportunities through job boards, workshops, conferences, mailings, working groups, and organizations.

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