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Heightening Mental Health Awareness on a Diverse, Urban Public University Campus Through a Media Outreach Campaign

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Heightening Mental Health Awareness on a Diverse, Urban Public University Campus
Through a Media Outreach Campaign

A Capstone Project Presented

by

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Abstract

Mental health problems among students on college campuses have increased in severity over the last decade. On-campus health providers have reported seeing students with more complex problems such as depression, bipolar disorder, and mixed diagnoses that require frequent and regular follow-up and treatment. Students who require mental health services assistance from on-campus services need to be informed about what resources and services are available and how to access them. Since most on-campus counseling services are set up as short-term treatment models, providing students with community-based resource options is also important.

The purpose of this capstone project was to examine the impact of an outreach education campaign intended to heighten awareness of mental health services and resources to undergraduate students on an urban public university campus located in New England.

The outreach effort was evaluated for its impact on mental health help-seeking behaviors by measuring increased utilization of the on-campus Counseling Center and a designated mental health Web site. The Web site was developed for this project and includes campus and community mental health resources, as well as national organizations that provide self-help and mutual-help services. The outreach effort was evaluated in three ways: (a) through pre and post-test student questionnaires; (b) by measuring increased utilization of the on-campus Counseling Center; and (c) by documenting student use of the designated mental health Web site. Based on ANOVA, although the target goals were not fully met, one of the four objectives was fully met and the other three showed some improvement. Results supported that students who viewed the campaign had a higher increase in awareness of on-campus services from the pre to post-campaign. There was not, however, a significant increase in awareness of the Center’s hours or its location. Participants responded post-campaign at a statistically significantly higher rate than
pre-campaign that they would use or refer a friend to the Counseling Center. Participants also felt that the hyperlinks to other campus support services and online mental health resources were moderately, very, and extremely helpful. Of those who saw the campaign, 86.9% reported that their awareness about mental health resources and services was increased. The Counseling Center also appreciated 7% of their new triage patients who identified the campaign as the reason for their visit. Of the participants who were surveyed post-campaign, 22% had visited the Web site.

Using a short-term media campaign for heightening awareness on an urban diverse college campus had a positive impact and was overall effective for the general population. Future studies should investigate whether media campaigns are more or less effective for different specialty groups such as those based on gender or ethnicity. Additionally, utilization of quicker marketing techniques such as texts or blog messages for details about hours, location, and other access to services may be more effective in reaching students too busy to take the time to search Web pages for this information. Continuing to seek out improved communication methods that assist in the delivery of mental health resources and services should be a campus priority.
Heightening Mental Health Awareness on a Diverse, Urban Public University Campus

Through a Media Outreach Campaign

When addressing the mental health and wellness support needs of diverse, urban commuter college students, information must be provided in a way that is accessible, culturally sensitive, culturally specific, and increases the student’s knowledge about the resources and services and access to them. Cultural beliefs and customs due to stigma, and language barriers make it difficult to use traditional methods of providing mental health information to minority and international students (Miville & Constantine, 2006; Wei, Ku, & Liao, 2011). Additionally, commuter students often juggle multiple roles and have little time to self-seek help through making appointments or through searching multiple locations for mental health information. The purpose of the capstone project was to examine the impact of an online outreach education campaign intended to heighten awareness of mental health services and resources to students on an urban public university campus located in New England. Technology and integrated online resources expand access to mental health information to 24-hour availability. The cultural challenges of a diverse population are met with a Web page that provides translational services through embedding Google Translate, as well as a listing of culture-specific services. And for those students who are concerned about possible stigma associated with a visit to a counseling center (if only to seek initial information), doing it online makes the first step easier. A campus-wide mental health campaign provides information of available services and resources throughout areas where students congregate and heightens awareness of all students and campus community members who may also refer friends and students not inclined to seek help on their own (Fledderus, Bohlmeijer, Smit, & Westerhof, 2010).
Problem Statement

Risk of mental health issues among University of Massachusetts Boston undergraduate students is indicated by the high number of triage visits and increase in severity of visits to the Counseling Center, the number of students having mental health-related distress referred to the Counseling Center and Associate Dean of Students, the number of self-reported symptoms per Fall 2009 National College Health Association (NCHA) Survey and campus Student Resiliency Survey (University of Massachusetts Boston, School of Psychology, 2009). Risk is caused by multiple biological and environmental factors and is mediated by new events, experiences, and exposures, social isolation, and removal of direct parental control. These risk causes (if genetics, disease and medical conditions, history of victimization, perspectives on health, culture, and resiliency exist prior to the cause) can be moderated by life skills, help-seeking behaviors, access to mental health and counseling services, holistic and socio-ecological approaches to campus health and wellness, crisis management procedures, health promotional programs, and outreach campaigns.

Special populations, including minority and international students, need services offered in a way that acknowledges cultural customs and accommodates language barriers when addressing mental health service and resource needs (Kearney, Draper, & Baron, 2005; Miville & Constantine, 2006; Wei et al., 2011). Studies show that while all students are exposed to the same pressures that college life brings, minority students experience issues that are specific to “minority status stress” brought on by racial tension, being the first in the family to go to college, and being viewed as a family or group role model (Kearney et al., 2005; Wei et al., 2011; Yakushko, Davidson, & Sanford-Martens, 2008).
International students often follow different cultural and social practices and customs, and they can be subject to family pressure with regard to respecting their traditions, which can sometimes conflict with traditional Western mental health and other services offered to college students (Loya, Reddy, & Hinshaw, 2010; Ruzek, Nguygen, & Herzog, 2011; Tidwell & Hanassab, 2007). Therefore, mental health services need to consider student cultural needs when developing their mental health services and providing supportive networks, and assure that students with cultural needs are aware of and knowledgeable about their existence, including how to gain access to these services (Miville & Constantine, 2006; Ruzek et al., 2011).

Project Purpose

Mental disorders are estimated to account for nearly 50% of the diseases that America’s youth are dealing with (Eisenberg, Gollust, Golberstein, & Hefner, 2007). Growing numbers of studies support that mental health problems are an increasing problem in institutions of higher education (Cook, 2007; Eisenberg et al., 2007; Osberg, 2004). Mental health problems that remain unresolved in early adulthood can impact many aspects of a student’s life, including areas of general well-being, academic success, future employment, and relationships (Eisenberg et al., 2007). Research also supports that students can be assisted by on-campus counseling programs and other support services so that these issues can be addressed and resolved, and that on-campus support services and resources can be offered together as a network and in a coordinated effort (Eisenberg et al., 2007). However, in order for on-campus services to help with students’ success and to address their needs, students must first become aware of what resources and services are available and how to access them.

Our purpose was to examine the impact of an outreach education campaign intended to heighten awareness of mental health services and resources to undergraduate students on an
urban public university campus. The intervention that was evaluated is a program to provide a campus-wide outreach media campaign aimed at heightening awareness of mental health resources on campus, available within the local community where students reside, and available as self-help and mutual-help resources through online organizations that help promote help-seeking behaviors (Eisenberg, Downs, Golberstein, & Zivin, 2009; NASPA, 2004).

**Project Method**

The program was marketed through outreach materials strategically placed throughout campus where students most often gather (mtvU, 2006; NASPA, 2004). Campaign education media materials were provided through the use of technology including advertising the campaign in both the Web-based and hard copies of the student newspaper, on printed materials including an online Health 101 magazine sent to all students, 200 posters, 5,000 postcards, 350 table tents placed in the cafeteria, and flyers posted in high-traffic areas throughout campus walkways and student centers (NASPA, 2004; The Jed Foundation, 2011; Yorgason, Linville & Zitzman, 2008). All advertisement materials contain the same logo, branded picture, and the URL and data code for the Web page that contains the mental health resources and services (see Appendices A and B).

The Web page also contains hyperlinks to various self-help and mutual-help national organizations and educational resources that provide 24-hour access to mental health information. These sites include those supported by Substance Abuse and Mental Health Services Administration (SAMHSA), National Alliance on Mental Illness (NAMI), and MtvU’s Half of Us project (mtvU, 2006; NAMI, 2006; SAMHSA, 2009)
**Evidence of the Problem**

College is the time in a young person’s life for transition from dependence on parental control and direction to independent decision making and new exposures and experiences of young adult college life. For many college students, this transition may be overwhelming, resulting in mental health symptoms such as stress, anxiety, or depression (Cook 2007; mtvU, 2006). For some, the transformation may exacerbate existing mental or behavioral health symptoms (Center for the Study of Collegiate Mental Health [CSCMH], 2009; Cook, 2007; Eisenberg et al., 2007; mtvU, 2006; National Student Affairs in Higher Education [NASPA], 2004; Osberg, 2004; Suicide Prevention Resource Center [SPRC], 2004; The Jed Foundation, 2011).

Some studies provide evidence that students’ drug and alcohol use may cause mental health behavior changes as well (Alschuler, Hoodin, & Byrd, 2008; American College Health Association [ACHA], 2010; Palombi, 2006). Given these identified variables and the fact that mental health illness often begins in adolescence and early adulthood, studies provide evidence that college students are at risk for mental health problems (ACHA, 2010; CSCMH, 2009; Cook, 2007; mtvU, 2006; Osberg, 2004).

Recent studies provide evidence of the increase in frequency and severity rates of mental health problems in college students (Eisenberg et al., 2007; Osberg, 2004; Vogel, Wade, & Ascheman, 2009). Results also show that some students (a) did not seek assistance with their mental health symptoms through on-campus mental health services when such services were available (Cook, 2007; mtvU, 2008;), (b) reported they did not know about the services (Cook, 2007; Yorgason et al., 2008), or (c) knew about services and did not use them (Miville & Constantine, 2006; mtvU, 2006; The Jed Foundation, 2004; Yorgason et al., 2008). To speak to these issues, many national college health and mental health organizations recommend that
college campuses address their students’ mental health needs through developing a unified socio-ecological approach, which includes social marketing campaigns to heighten awareness of mental health services and resources available on and near campus as part of an overall campus-wide process of addressing mental health on campus (Cook, 2007; mtvU, 2006; NASPA, 2004; SAMHSA, 2004; Yorgason et al., 2008).

**Review of Literature**

**Critical Appraisal of Research on Interventions**

Increasing awareness, early identification, and treatment of mental health problems is a national public health priority (Eisenberg et al., 2009; NASPA, 2004; Osberg, 2004; Vogel et al., 2009). According to the World Health Organization (WHO), “One in four people will develop one or more mental or behavioral disorders during their lifetime” (WHO, 2002). The Jed Foundation notes, “serious mental health illnesses are rising on college campuses” (2011). Research supports that college students suffer from mental health symptoms brought on by the transition from home life to a college life that is more unstructured (mtvU, 2006). These changes can include being exposed to new relationships and experiences, loss of social support experienced from family and lifetime friends, and difficulty in functioning independently once students are away from parental control (mtvU, 2006; NASPA, 2004). Students may also use their independence to experiment more with drugs and alcohol, to begin to use drugs or alcohol as a means of self-medication or to cope with their symptoms of stress and anxiety, which can sometimes bring forward underlying mental health conditions (Cook, 2007; NAPSA, 2004; SAMHSA, 2009).

Though there is currently an upward trend toward increasing mental health problems among college students, many do not seek assistance through on-campus health centers or in the local community (Cook, 2007; mtvU, 2006). Some students are concerned about being stigmatized
with a diagnosis of a mental health condition, about the cultural conflict of having a mental illness, or they do not seek services due to a lack of information about what’s available (Cook, 2007). Given this, a review of the literature supports the theory that heightening awareness of mental health resources and services available to college students through a media outreach campaign can increase (a) awareness of services and resources (Cook, 2007; mtvU, 2006; NASPA, 2004; Yorgason et al., 2008), (b) knowledge of mental health symptoms and how and when to access services (Knox et al., 2010; Yorgason et al., 2008), and (c) help-seeking behaviors that can decrease stigma (Cook, 2007; Eisenberg et al., 2007; Evans-Lacko, London, Little, Henderson, & Thornicroft, 2010; mtvU, 2006; The Jed Foundation, 2011).

Research has also shown that mental health outreach media campaign strategies that have been most successful in raising awareness and behavior change are the ones using multi-media, multi-faceted, scientifically based approaches (Fledderus et al., 2010). Successful campaigns have also included mental health promotion and well-being information (Keyes, Myers, & Kendler, 2010). In their study, Sole, Stuart, and Deichen (2006), reported high utilization, high student satisfaction, and accurate diagnosis when incorporating health education and advice to students through a Web-based triage and health education service. The services included mental health information. As shown in the executive summary of mtvU’s 2006 College Mental Health Study on Stress, Depression, and Stigma, when a group of 503 students were asked what their number-one resource would be to turn to once they decided to seek help with mental health issues, (a) 69% said they would turn to friends, (b) 63% said they would turn to family, (c) 31% said they would use online resources, (d) 12% would turn to resident advisors, and (e) 7% said they would turn to hotlines for help (mtvU, 2006).
Synthesis of Evidence

The American College Heath Association (ACHA) is known as the nation’s leading advocate and organization for college and university health (ACHA, 2010). Their goal is to represent the membership of “multidisciplinary professionals and administrators who provide and support the delivery of healthcare, health promotion, wellness and education services to the nation’s 18 million college students” (ACHA, 2011). The organization initiated a national college health assessment (NCHA) survey in 2000 and is currently noted for housing the largest comprehensive data set on the health of college students available (ACHA, 2011). In 2008, they implemented a new baseline instrument, resulting in studies later than 2008 being designated as “Assessment II” in their survey title (ACHA, 2011).

Each year, members of the ACHA self-select to participate in the campus-wide survey to monitor their current campus health trends, which also provide benchmarks for national comparisons (ACHA, 2011). Forty-two institutions resulting in 30,263 student surveys participated in the Fall 2010 national health survey, however, for the purpose of forming the national reference group. Institutions that were included in the final data set were those that surveyed all students or used a random sampling technique (ACHA, 2011). Given these criteria, the final data set consisted of 30,093 students surveys from 39 institutions (ACHA, 2011).

Campus characteristics of the Fall 2010 ACHA/NCHA II Reference Group include the following that relate to UMass Boston’s campus: (a) public institutions, 62%, (b) 4-year or above, 92%, (c) located in the Northeast, 15%, (d) greater than 10,000 students, 41%, (e) large to very large city, 13%, and, (f) research institution (Carnegie classification), 44% (ACHA, 2011).

As also reflected in the American College Health Association-National College Health Assessment II Fall 2010 Executive Survey Reference Group results (ACHA/NECHA, 2011),
when 30,093 students were asked to report disabilities and/or medical conditions, (a) 5.9% reported attention deficit and hyperactivity disorder, (b) 3.9% reported a learning disability, (c) 3.6% reported they had a psychiatric condition, and (d) 3.5% reported they had a chronic illness (e.g., cancer, diabetes, autoimmune disorders), all which could contribute to increased stress and anxiety while students try to complete their academic endeavors.

The ACHA/NECHA II Fall 2010 Executive Survey also showed that when students were questioned about mental health symptoms, the following percentages reported experiencing the listed mental health symptoms within the last 12 months: (a) 44% had felt things were hopeless, (b) 84% felt overwhelmed by all they had to do, (c) 78% felt exhausted not by physical activity, (d) 54% felt very lonely, (e) 58% felt very sad, and (f) 28% felt so depressed that it was difficult for them to function (ACHA/NECHA, 2011).

The 2010 ACHA/NECHA II Executive Summary (2011) included a checklist for students to indicate factors that affected their individual academic performance in the past 12 months. A list of common reported symptoms was provided for the students to choose from (ACHA, 2011). The survey defined “affected academic performance” for the students as “received a lower grade on an exam or an important project, received a lower grade in the course, received an incomplete or dropping the course, or experienced a significant disruption in thesis, dissertation, research or practicum work” (ACHA, 2011). The leading behavioral and mental health issues reported by college students as affecting their academic performance, given the indicators listed above, included (a) stress 25.4%, (b) sleep difficulties 17.8%, (c) anxiety 16.4%, (d) work 11.4%, (e) concern for family member or friend 10.1%, and (f) depression 10% (ACHA, 2011). These conditions have also been reported in other research studies as causes of student mental health distress and as contributors to experiencing academic difficulties (Cook, 2007; Eisenberg et al.,
Special populations in college students are groups who, due to their social characteristics and unique needs such as language, culture and traditions, ethnicity, and other differences, often require specific attention when setting up mental health and other support services (NACADA, 2007; NASPA, 2004; SPRC, 2004; Tidwell & Hanassab, 2007). Studies support that one of the fastest growing United States college populations is the international group (Tidwell & Hanassab, 2007; Yakushko et al., 2008). The needs of international students require specific and deliberate approaches to mental health education, outreach, and clinical services (Tidwell & Hanassab, 2007; Yakushko et al., 2008). Minority populations require specific focus for mental health services as well (Kearney et al., 2005; Miville & Constantine, 2006). Research supports that while all college students are exposed to the same pressures of college life, minority students experience issues that are specific to “minority status stress” such as racial tension, being the first to go to college, and being a family or a group role model (Miville & Constantine, 2006; Wei et al., 2011). Additionally, minority students may experience racial segregation on campuses (Kearney et al., 2005; Ruzek et al., 2011; Yakushko et al., 2008). Mental health services need to be designed so that all students have the same opportunities to utilize and access services, that there are no barriers or gaps identified that may prevent special populations from locating or receiving services, and that identified challenges that prevent access or utilization of services are identified, addressed, and improved (NACADA, 2007; SPRC, 2004).

Research also supports that media outreach campaigns are effective at heightening mental health-related knowledge (Evans-Lacko et al., 2010) and awareness of mental health services and resources available to college students and others on campus (mtvU, 2006; NASPA, 2004; Yorgason et al., 2008). Studies show that students suffer from mental health symptoms, which
can impact their academic success (ACHA/NECHA, 2011). Therefore, students need to become aware of the mental health resources available and how to access these services (mtvU, 2006). Special populations, including international and minority students, require that their specific cultural and traditional needs be considered when developing and offering mental health services, and such services need to be marketed to these students and easily accessed (Kearney et al., 2005; Tidwell & Hanassab, 2007; Yakushko et al., 2008).

**Socio-Ecological Influences on the Mental Health Outreach Campaign**

Research and national organizations suggest that best outcomes will result when campus departments and services take a socio-ecological approach in developing a system-wide, collaborative, coordinated approach where the various resources and services link together to form a solid safety net and a single unified theme (Knox et al., 2010; Langford, 2004; NASPA, 2004; The Jed Foundation, 2010). This comprehensive approach helps to prevent redundancy of efforts, strengthens services, allows for sharing of information and resources, and provides a uniform message to the campus community.

The socio-ecological model is a health behavior model that proposes that individual, interpersonal, community, organizational, and societal factors should be acknowledged and addressed when planning and implementing health promotion and education programs due to their direct and indirect influences on lifestyle, behavior choices, and health (Glanz, Rimer, & Viswanath, 2008; McLeroy, Bibeau, Steckler, & Glanz, 1988). The model applies to campus mental health programs centered around a multidisciplinary approach to how university students are influenced by multiple interacting systems, including the social context in which students live, the neighborhoods they live in, the university community, the surrounding physical environment, the student’s traditions and culture, and the laws and regulations that impact and
influence mental health treatment, services, and health insurance coverage (Glanz et al., 2008; McLeroy et al., 1988; NASPA, 2004; Swearer & Espelage, 2004; Zenzano et al., 2011). When developing a mental health campaign using socio-ecological traits, the campaign would include using both direct and indirect influencers for mental health support services and resource opportunities. In addition to medical and mental health services, these references would include health and well-being resources that focus on stress reduction through exercise, yoga, and spirituality, peer support through participation in clubs, organizations, or groups, financial and other social service related assistance, and options offered through community-based health providers that provide culturally specific mental health services.

Assessing the impact of a mental health outreach campaign program by evaluating student participation by demographics and number of visits to specific Web site campaign selection areas assists in further refining education program delivery methods and program content for mental health information as well as other needed health and well-being education and outreach. Additionally, a health education campaign is just a portion of an overall comprehensive mental health program but one that assists with laying the foundation for future socio-ecological work of the campus community, including development of a formal peer educators program, focused outreach offered to high-risk populations, and other collaborative campus-wide efforts needed to assist college students with reducing mental health needs (Glanz et al., 2008; NASPA, 2004; Swearer & Espelage, 2004).

**Project Description, Implementation, and Monitoring**

**Description of the Community**

The community in which the mental health outreach campaign was implemented is the University of Massachusetts Boston campus. This diverse university is made up of approximately 15,000
students and 900 faculty members, and offers over 150 academic programs for undergraduate, graduate, and non-degree-seeking students and is the city of Boston’s only public university (UMass Boston Fast Facts, 2010).

Though the outreach campaign was offered to the entire campus community, the focus of the project was on the 11,500 undergraduate students. Approximately 53% of undergraduate students are under the age of 22, 32% between ages 23 and 30, and 15% over the age of 31 (UMass Boston Fast Facts, 2010). Of these, 44% are of minority populations (UMass Boston Fast Facts, 2010). Of the undergraduate minority populations, the ethnic breakdown includes 17% Black, 2% Cape Verdean, 14% Asian, 11% Hispanic, 1% two or more races, and 0% American Indian, or Pacific Islander (UMass Boston Fast Facts, 2010). Non-resident aliens (International) were reported as 466, and 1,449 students did not report. Females are 57%, and males are 43% (UMass Boston Fast Facts, 2010).

The undergraduate population was chosen for the campaign because research has shown that the impact of mental illness in college populations aged 18–24 is of increasing public health concern, and suicide is the third leading cause of death among all young people aged 15–24 (mtvU, 2006; The Jed Foundation, 2010). Using this age range for the outreach campaign provided data that are comparable against national benchmarks within the same age range, and also focused on the typical undergraduate population that is served by mental health services nationally on campus (NAMI, 2006; The Jed Foundation, 2010).

Because this campus includes a large diverse population, providing accessible, quality, cost-effective mental health services, which includes health promotion and education program components applicable to cultural and traditional needs, was considered when the program was developed and offered. (Ruzek et al., 2011).
Organizational Analysis of Project Site

The project was coordinated through the on-site health services department, the University Health Services (UHS), which is overseen by the Assistant Vice Chancellor/Executive Director of Health Services (AVC/ED). The UHS is comprised of the departments of General Medicine, the Counseling Center, and Health Education and Wellness Outreach Services. The UHS department functions within the Division of Student Affairs. The AVC/ED reports to the Vice Chancellor of Student Affairs. The Vice Chancellor of Student Affairs reports to the Chancellor. The Chancellor has been delegated responsibilities for the UMass Boston campus through the Board of Trustees through the office of the UMass President. The UMass President is new, and he renamed the President’s office the Systems Office.

The mental health outreach campaign project was developed, assessed, planned, implemented and evaluated by this author, who is a DNP candidate in the Public Health Nurse Leader program. A mental health advisory task force made up of members the University of Massachusetts Boston community was developed and met during the fall 2011 semester to assist with development of the outreach campaign. Committee members included representatives from the Counseling Center, Health Education and Wellness, Student Affairs, professors from Health Communications and Psychology, members from Asian and Black Research Centers, and the UHS Information Technical Support consultant. Four students agreed to join the committee; however, due to their class schedules, they were unable to attend the meetings. Instead, student input was gathered through a focus group of first-year seminar students made up of 16 diverse participating students.

The advisory group recommended that the topic be narrowed to evaluate awareness of services and resources, assure that the campaign information include minority population needs,
and, since our commuter students were not always on campus to utilize our services provided to them through UMass efforts, that it include community-based resource information. The student focus group recommended that the initial campaign materials spark curiosity in students to make them want to go on the Web page to seek more information, that it include on-campus departments’ scope of services, and access information, and that it provide links to sites that were culturally sensitive and that students could relate to. Both groups’ recommendations were integrated into the outreach campaign design.

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**Figure 1. Organization Chart Mental Health Outreach Campaign Project**

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**Evidence of Stakeholder Support, Letter of Agreement**

The Vice Chancellor of Student Affairs of the University of Massachusetts Boston approved the project and signed the letter of approval, which was submitted to the DNP program advisor in the
summer, 2011.

**Mental Health Outreach Program Plan**

**Project design and feasibility.** The project purpose was to examine the impact of exposure to an outreach education campaign intended to heighten awareness of mental health issues and available resources and services available to an undergraduate college population on a diverse urban public university campus. The impact was evaluated through a convenience sample of University of Massachusetts Boston students who were approached in public spaces primarily where they were congregated in groups such as the cafeteria, student organizations, and campus center study areas, before and after the outreach campaign to determine whether exposure to the campaign made an impact on awareness of services, resources, and help-seeking behaviors. Impact was also measured by the percentage of students who accessed the designated Web page included in the campaign materials, and the number of triages that came through the on-site Counseling Center who identified the outreach campaign as the reason for their visit.

The outreach campaign consisted of distributed information on how to access a Web page developed especially for this project, which contains information about mental health services and student-available resources that are located on campus, throughout the local community, and connections to Web-based education and peer support Web-based resources. The content of the Web page was developed using the socio-ecological influences of individual, interpersonal, community, organizational, and societal factors of the university and student population. Mental health information and hyperlinks located on the Web page included the following: (a) on-campus Counseling Center, other health services, and other on-campus support Web sites, (b) on-campus distressed and distressing students Web site, (c) community health centers and mental health resources, and (d) self-help and mutual-help Web-based resources such as mtvU, Suicide
Prevention Resource Center, and SAMHSA What A Friend Campaign and national education and support organizations (mtvU, 2006; SPRC, 2004; University of Massachusetts Boston, 2011).

The outreach campaign included a logo that branded the campaign and was used on all information materials. The handouts also referenced the designated Web page that contained the mental health resources and services information. (Eisenberg et al., 2009; mtvU, 2006; Yorgason et al., 2008). All printed materials, handouts, and posters pertaining to the campaign were branded with the Web page URL and logo, and were made available where students most congregate. All printed information also contained the embedded data code, which, when activated, took the student to the designated Web page.

The pre- and post-campaign survey data were collected by volunteer students enrolled in a public health marketing program taught by a professor on the program’s advisory task force committee. The student surveyors took CITI IRB training before collecting data and were instructed in the proper technique for conducting research surveys. They surveyed a sample of the student population on campus at two separate times: pre-campaign, and the week after the outreach campaign was completed. The student volunteers were instructed to randomly approach students throughout the campus where they most congregated. Those students who met the study criteria and who agreed to participate were asked to complete a short survey. The survey was taken on iPods, which were fully loaded ahead of time with the survey questions. Demographic information was collected as part of the survey; however no personal information or identifiers were recorded. The goal was to survey 100 to 200 undergraduate students pre- and post-outreach campaign.
**Pre-outreach campaign survey questions** included age, gender, race, year in school, full or part time, and the following:

1. Are you aware that the university offers an on-campus Counseling Center?
2. Are you aware of the Center’s location?
3. Do you know when the Center is open?
4. Have you or are you using these services?
5. Do you use other support services on campus for your mental health needs?
6. Do you use resources off campus or online to assist you with your mental health needs?
7. If you were provided information about the on-campus Counseling Center services, would you consider using them or referring a friend to them in the future?

**Post-intervention survey questions** began with asking the students whether they participated in the pre-intervention survey, and, to avoid bias, those who did were excluded from the post-intervention survey. All others who agreed to be surveyed were asked their age, gender, race, year in school, whether full- or part-time, and the following questions:

1. Are you aware that the university offers an on-campus Counseling Center?
2. Are you aware of the Center’s location?
3. Do you know when the Center is open?
4. Have you or are you using these services?
5. Do you use other support services on campus for your mental health needs?
6. Do you use resources off campus or online to assist you with your mental health needs?
7. If you were provided information about the on-campus Counseling Center services, would you consider using them or referring a friend to them in the future?
8. Did you see any of the posters and information promoting the mental health services and resources available to students on campus as part of the outreach campaign?

9. If yes to Questions 8, as the result of the poster or information you saw, do you believe you will utilize any of the services that are provided?

10. Did you go online and review the Web page on mental health resources and services? If so, what information did you find most helpful?
   a. List of scope of services the Counseling Center offers
   b. Hours of operation and location of the Counseling Center
   c. Hyperlinks to other support services located on campus
   d. Hyperlinks to Web-based support services

11. As a result of the outreach campaign, do you believe you increased your awareness about mental health services and resources available to you?

**Pre-campaign recommendations** from the Advisory Task Force were to keep the campaign message focused on mental health resources and services, and to refrain from including treatment modalities or specific mental health behaviors. These recommendations were supported by feedback received from the student focus group, where students reported that they were not familiar with the mental health services location, hours of operation, or scope of services available to them. Additionally, the focus group recommended that if a media campaign were to be offered to students that it be provided in a simple, visible, and technological manner so that students could access it whenever they could around their busy schedules. The focus group also requested that, to minimize students’ searching around online or on campus for information, a list of available resources and services be located in a centralized location. These recommendations were integrated into the outreach program.
The Advisory Task Force also recommended additional ideas, after the outreach campaign was completed that could expand mental health programs for the campus. These included expressive art projects, authoring poems and stories, sponsoring speaker luncheons and developing peer support programs. The Task Force, though set to reconvene only once near the end of the semester to review the campaign survey data, showed interest and offered to stay engaged in the future to further develop more programming for the campus community.

Goals and objectives of the project with expected outcomes listed in measurable terms included the following:

Goal 1. Increase awareness of mental health resources and services available for the University of Massachusetts, Boston undergraduate students and campus community.

Objective 1.1. Plan, develop, and implement a media outreach campaign incorporating information about services and resources on campus, in the local community, and available online during the time period of February–March 2012.

Expected outcomes. Increase awareness of services and resources of the undergraduate population by 50% comparing pre- to post-survey results post-campaign.

Objective 1.2. Students who were exposed to the outreach campaign will agree that they learned new information about mental health resources and that they would utilize the resources or services if they or a friend needed help.

Expected outcomes. Thirty percent of the undergraduate students surveyed post-campaign will respond positively to the questions that they learned new information and will utilize the services for themselves or a friend if needed as the result of the outreach campaign information.

Goal 2. Increase help-seeking behavior by 10% as the result of the education outreach campaign.
Objective 2.1. UMass Boston undergraduate students will be provided with information on how to access resources for assistance with mental health concerns as part of the one-month mental health outreach campaign offered during mid February–mid March 2012.

Expected outcomes. Ten percent of new patient triages from the on-campus Counseling Center will identify the mental health media campaign as the initial source that brought them into the center.

Objective 2.2. Monitor utilization of the designated Web page post-mental health outreach campaign to evaluate utilization during the months of March through April 2012. Document campaign utilization statistics by the embedded counter on the designated Web site during and post-campaign.

Expected outcomes. Thirty percent of the students surveyed will also have visited the designated mental health information Web site as measured by question in the post-campaign survey. Additionally, a counter on the different Web pages of the Web site will provide general information on how many individuals visited the Web site and what they looked at.
Costs and Obtaining Resources (see Table 1)

Table 1
Budget and Justification of Resources for Mental Health Outreach Campaign

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Time</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>Kathleen Golden McAndrew, Assistant Vice Chancellor/Executive Director of Health Services, served as Project Director/DNP candidate</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. Ester Shapiro served as on-site preceptor, provided expertise in cultural diversity needs, sat on advisory task force and coordinated student surveyors</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. Christine Williams, Counseling Center Psychologist, provided statistical support</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rosemary St. Clair, Manager of Administration and Finance, UHS, assisted with billing and procurement needs</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ms. Westhaver, administrative assistant for Project Director, provided administrative support</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ms. Livingstone, Counseling Center receptionist, provided administrative support</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students enrolled in Spring 2012 public health psychology course assisted with gathering pre-post survey data using the iPods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td>1 round-trip ticket, 4 days housing and per diem for 1 presenter at 1 national conference to present results</td>
<td></td>
<td>$2,000</td>
</tr>
<tr>
<td>Small Equipment</td>
<td>6 iPods to collect pre- and post-campaign data purchased with UHS funds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials and Supplies</td>
<td>Misc. office supplies and materials</td>
<td></td>
<td>$200</td>
</tr>
<tr>
<td></td>
<td>Education outreach materials including postcards, posters, Web development, and printed materials attributed to program</td>
<td></td>
<td>$2,000</td>
</tr>
<tr>
<td>Communications</td>
<td>Setup of designated Web page</td>
<td></td>
<td>$500</td>
</tr>
<tr>
<td>Other</td>
<td>Development of swag as outreach materials</td>
<td></td>
<td>$650</td>
</tr>
<tr>
<td>IT Consultant</td>
<td>Assistance with technological needs including Web site development, data coding, hyperlinking of other Web sites, development of multimedia and Google analytics of Web site for post-campaign results. Paid by UHS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Direct Costs</td>
<td>Staff $000</td>
<td></td>
<td>$5,350</td>
</tr>
<tr>
<td></td>
<td>Travel $2,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplies $3,350</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cost Benefit of the Program

The total direct costs of this project were projected to be $5,350. UMass Boston Health Services department budgeted to cover these costs and to cover for the salaries of the UHS professional staff who worked on the project. This investment by the University was well placed as tuition in 2010 for a full-time undergraduate with in-state residency for one semester at UMass Boston was $5,306, and for nonresidents it was $11,399 (UMass Boston Fast Facts, 2010). When students are unable to keep up with their studies due to mental health illness and drop out of college on a withdrawal, the financial impact for even one semester can be devastating. This does not take into consideration costs incurred from broken lease agreements if the student moves back home, from co-insurance costs from medical care and counseling, which is currently at a $5,000 maximum out of pocket for the University-sponsored student plan, and for any other costs incurred given the halt in education and treatment of mental health conditions (UMass Boston, 2010). Given that one international student suffering from a mental illness could easily incur over $20,000 in academic and medical costs over one semester, the program was well worth the cost since the campaign was designed to reach the entire campus community of 11,500 undergraduate students.

IRB Approval

Given that the information was gathered from a random survey and all data were unidentifiable, human subjects’ confidentiality was protected.

If students were emotionally distressed by the information they were exposed to in this project, they were supplied with numbers to contact for mental health assistance included on the Web page. Because this was a research translation project, there was not a need for an IRB
review: however, given that students were involved in the survey collection and sample, the IRB at University of Massachusetts Boston requested that the proposal be submitted. After a request for exemption was submitted and reviewed, the UMass Boston IRB approved the project for full exemption.

**Project Timeline**

In order to organize the mental health outreach campaign and complete the evaluation within the year’s timeframe, a project timeline was created. The timeline outlines each step required to develop the program including specifics steps of program development and evaluation, the estimated time required for each section to be completed (see Table 2).
Table 2

Plan for Implementation and Evaluation/Timeline

<table>
<thead>
<tr>
<th>Timeline for Mental Health Outreach Campaign</th>
<th>June 1, 2011–August 31, 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td></td>
</tr>
<tr>
<td>Consultation with benchmark institutions</td>
<td>X X X</td>
</tr>
<tr>
<td>Review and revise goals and objectives</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>Review needs assessment</td>
<td>X X</td>
</tr>
<tr>
<td>Finalize implementation plan</td>
<td>X X X</td>
</tr>
<tr>
<td>Mental Health Promotion/Education Outreach</td>
<td></td>
</tr>
<tr>
<td>Evaluate campaign design options</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>Draft Web site design, education information, and other media resources for outreach campaign</td>
<td>X X X X</td>
</tr>
<tr>
<td>Develop social marketing /media development plan</td>
<td>X X X X</td>
</tr>
<tr>
<td>Taskforce Advisory Committee</td>
<td>X X X</td>
</tr>
<tr>
<td>Implementation of Outreach Campaign</td>
<td></td>
</tr>
<tr>
<td>Recruit students to collect random pre- and post-campaign sampling and perform survey</td>
<td>X X X</td>
</tr>
<tr>
<td>Determine locations for outreach campaign materials, handouts, flyers, posters</td>
<td>X X X X X</td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
</tr>
<tr>
<td>Review/evaluate plan</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>Data analysis</td>
<td>X X</td>
</tr>
<tr>
<td>Final Capstone report /program outcomes presentation</td>
<td>X X</td>
</tr>
</tbody>
</table>
Program Evaluation

Methods

Data Collection

As the goal of the project was to increase student awareness and utilization of mental health services by way of a targeted media campaign, a quasi-experimental, a pre-post-test design was used. To reduce bias, two separate groups were used for the pre- and post-tests. Specifically, as all individuals who took the first survey would be aware of services by virtue of taking that survey, a second sample was used for the post-campaign survey. Therefore a pre-campaign survey of students was conducted on the UMass Boston campus before the mental health campaign began, in mid-February, 2012. Then, following the campaign, a second survey of students was conducted, and any students surveyed who indicated they had taken part in the pre-campaign survey were deemed not eligible for the post-campaign survey.

Student volunteers were trained on data collection, including the methodology, relevant ethical considerations, and how to utilize the iPods and the survey technology. The volunteers then were assigned different times of day to collect data across each week. Volunteers were stationed in public spaces, such as the cafeteria, student organizations, and campus center study areas, where students congregated in groups, and they approached students at random to complete the survey, first describing the survey and its purpose, and obtaining informed consent. Students then completed the surveys on the iPods, from which the data were automatically downloaded to the StudentVoice survey site.

Campaign

In between the pre- and post-campaign surveys, the mental health outreach campaign was widely advertised around the campus and online for one month. A total of 200 posters, 5,000 postcards,
and 350 table tents were used to advertise the campaign. Additionally, the campaign was advertised in both the print and online versions of the student newspaper and in the March volume of the online wellness newsletter that all students receive. The campaign was also advertised on the campus-wide television sets located throughout the university.

Data Analysis

SPSS version 19.0 was utilized for all statistical analyses. As the goal of the project was to increase student awareness and utilization of mental health services by way of a targeted media campaign, using a pre- post-test design, two sets of analyses were conducted. The demographic characteristics of the pre- and post-campaign groups were compared to help ensure that any observed differences in awareness and utilization were not due to extraneous variables. Additionally, to ensure that the sample was representative of the general student body, the demographic characteristics of the samples were compared to the university as a whole.

Analyses were then conducted to examine the main goals and objectives of the study. First, differences in awareness of, utilization of, and attitudes toward mental health resources on and off campus were compared. Next, whether the specific goals and objectives of the study were met was examined. This included testing for increased awareness of services and resources (Goal 1, Objective 1.1); and a positive response to the campaign materials, which led to an increased willingness to utilize counseling resources (Goal 1, Objective 1.2). Additionally, it was proposed that students presenting for triage at the Counseling Center would identify the campaign as having contributed to their decision to seek services (Goal 2, Objective 2.1); and that students exposed to the campaign would have visited the affiliated Web site (Goal 2, Objective 2.2).
Results

A total of 343 students responded to the pre-campaign questionnaire, which established the baseline for awareness and utilization of mental health resources. This exceeded the target sample size of 100–200 participants. The entries were checked for missing data and randomly checked for data entry errors by the statistician. Six entries had egregious amounts of missing data (i.e., more than 10%; Rubin & Little, 2002), and therefore were not included in the sample. Eight respondents completed the survey and selected “chose not to respond” to ethnicity. They were included in the sample and listed under ethnicity as “chose not to respond.” A total of 337 pre-campaign surveys made up the final pre-campaign sample.

The post-campaign survey was performed the week after the mental health campaign ended starting March 21–23, 2012. A total number of 273 students responded to the post-campaign questionnaire, also exceeding the expectations of the survey goal. Thirty-seven entries had egregious amounts of missing data, and therefore were not included in the sample. This was a large increase from the pre-survey campaign. Upon examining the data, it appears there was a system error, which will be brought to the attention of the database software company, StudentVoice, where the surveys were uploaded. Fourteen respondents completed the survey and selected “chose not to respond” to ethnicity. They were included in the sample and listed under ethnicity as “chose not to respond.” A total of 236 surveys made up the final post-campaign sample.

Demographic Characteristics

Information regarding the pre- and post-campaign groups is summarized in Table 3.

To examine any potential differences between the pre- and post-campaign samples, two techniques were used. As age is ratio level data, a $t$-test was used to examine the mean
differences between the pre- and post-campaign groups; results indicated a significant difference ($t = 2.85; df = 570$). However, it should be noted that this was not a meaningful difference from a practical perspective (i.e., the average age of students in the pre-campaign group was 21.77, whereas the average age for the post-campaign group was 21.18). That this was significant is due primarily to the large sample size, which significantly increased the power of the $t$-test, and also is more likely to result in a Type II error.

As the remaining demographics were categorical variables (i.e., nominal level data), chi-square tests were used to examine differences between the pre- and post-campaign groups to determine whether there was a significantly different distribution of any of the demographic variables between them. No statistically different significances were observed (see Table 3).

**Student Status**

In the pre-campaign survey, the majority of the respondents were undergraduates. Others included graduates, students taking certificate classes, PhD students, students enrolled in special one-year programs, and students working on their second degree (see Table 3). Of the respondents, 85.8% were full-time students and 14.2% were part-time. In the post-campaign survey, a total of 94.9% of the respondents were undergraduates; this was not statistically different from the pre-campaign sample (see Table 3). However, of the respondents, 91.9% were full-time students and 8.1% were part-time in the post-campaign sample. This was significantly different from the initial sample, with proportionally fewer part-time students having been surveyed in the post-campaign.
Table 3

Student Demographics and Student Status Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Pre- (n = 337) % of total</th>
<th>Post- (n = 236) % of total</th>
<th>Pre- to Post-Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>X = 21.77</td>
<td>X = 21.18</td>
<td>t = 2.85**</td>
</tr>
<tr>
<td>Under 18</td>
<td>.5</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>18–21</td>
<td>48.4</td>
<td>56.7</td>
<td></td>
</tr>
<tr>
<td>22–24</td>
<td>24.6</td>
<td>28.0</td>
<td></td>
</tr>
<tr>
<td>25+</td>
<td>26.1</td>
<td>13.6</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>44.5</td>
<td>42.8</td>
<td>x² (df = 2) = 0.35</td>
</tr>
<tr>
<td>Female</td>
<td>54.3</td>
<td>56.4</td>
<td></td>
</tr>
<tr>
<td>Transgender</td>
<td>1.2</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>14.8</td>
<td>16.9</td>
<td>x² (df = 7) = 7.48</td>
</tr>
<tr>
<td>Black</td>
<td>18.7</td>
<td>16.8</td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>12.8</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>4.7</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Multiracial</td>
<td>8.0</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>0.6</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>38.0</td>
<td>37.7</td>
<td></td>
</tr>
<tr>
<td>Chose not to respond</td>
<td>2.4</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>International Student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>7.7</td>
<td>7.6</td>
<td>x² (df = 1) = 0.01</td>
</tr>
<tr>
<td>No</td>
<td>92.3</td>
<td>92.4</td>
<td></td>
</tr>
<tr>
<td>Class Standing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>19.9</td>
<td>23.3</td>
<td>x² (df = 5) = 8.84</td>
</tr>
<tr>
<td>Sophomore</td>
<td>21.1</td>
<td>20.3</td>
<td></td>
</tr>
<tr>
<td>Junior</td>
<td>27.6</td>
<td>26.7</td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>19.9</td>
<td>24.6</td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>7.1</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>4.5</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>85.8</td>
<td>91.9</td>
<td>x² (df = 1) = 4.57*</td>
</tr>
<tr>
<td>Part-time</td>
<td>14.2</td>
<td>8.1</td>
<td></td>
</tr>
</tbody>
</table>

Significance levels: *p<.05, **p<.01

Awareness of On-Campus Counseling Center

Table 4 displays questions aimed at measuring responses related to baseline (pre-campaign) and post-campaign resource awareness and utilization of the on-campus Counseling Center. The target for Objective 1.1 was to see a 50% increase in awareness of on-campus services from the
pre- to post-campaign. As 71.4% of students surveyed pre-campaign were aware or somewhat aware of the Counseling Center’s presence, to realize this goal would have meant an additional 35.7% of students needed to endorse that they were aware of the Center (or a full 100%). The observed increase, (from 71.4% being “aware” or “somewhat aware” to 87.3% indicating as much), represents a 22.3% increase. While this was short of the target goal, it was a statistically significant increase.

In terms of the awareness of the Counseling Center’s hours and location, there was not a significant increase in awareness of the location (see Table 4). There was a change in awareness of the hours. However, in examining the differences pre- and post-campaign, the same number of students still said they were not aware of the hours (64.4% pre-, versus 63.6% post-campaign). The difference is that in the pre-campaign sample, students were more likely to endorse that “yes” they were aware of the hours (21.4% pre- versus 13.1% post-campaign), and in the post-campaign sample, students were more likely to endorse that they were "somewhat aware" of the hours (14.2% pre- versus 23.3% post-campaign).
Table 4

<table>
<thead>
<tr>
<th>Awareness of:</th>
<th>Pre- (%)</th>
<th>Post- (%)</th>
<th>Pre- to Post- Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Presence of on-campus Counseling Center</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>50.7</td>
<td>58.1</td>
<td>$\chi^2_{(df=2)} = 27.13^{**}$</td>
</tr>
<tr>
<td>Somewhat</td>
<td>18.7</td>
<td>29.2</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>30.6</td>
<td>12.7</td>
<td></td>
</tr>
<tr>
<td><strong>Location of Counseling Center</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes, and have visited</td>
<td>20.5</td>
<td>22.5</td>
<td>$\chi^2_{(df=2)} = 5.28$</td>
</tr>
<tr>
<td>Yes, have not visited</td>
<td>46.6</td>
<td>33.5</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>32.9</td>
<td>44.1</td>
<td></td>
</tr>
<tr>
<td><strong>Hours of Counseling Center</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>21.4</td>
<td>13.1</td>
<td>$\chi^2_{(df=2)} = 11.58^{**}$</td>
</tr>
<tr>
<td>Somewhat</td>
<td>14.2</td>
<td>23.3</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>64.4</td>
<td>63.6</td>
<td></td>
</tr>
</tbody>
</table>

Significance levels: *p<.05, **p<.01

Other Campus Support Services or Off-Campus Services or Resources

Aside from on-campus services, students were asked whether they utilized other resources to maintain or improve their mental health and well-being. When respondents were asked if they used other on-campus support services, a small percentage indicated that they did. Survey results show these services included the Ross Disability Center, the exercise facilities, the UHS General Medicine department, and students’ advisors and professors. Differences between the pre- and post-campaign groups in terms of utilization were not significant (see Table 5). Comparatively, a significantly lower percentage of students in the post-campaign survey group indicated utilizing off-campus services. In terms of these off-campus services, respondents reported using personal counseling services, primary care providers, veterans’ services, and medication.
Table 5

Distribution of Students’ Baseline and Post-Campaign Utilization of On-Campus Support Resources and Off-Campus Services

<table>
<thead>
<tr>
<th>Utilization of</th>
<th>Pre- (n = 337)</th>
<th>Post- (n = 236)</th>
<th>Pre- to Post-Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of total</td>
<td>% of total</td>
<td></td>
</tr>
<tr>
<td>Other on-campus resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5.6</td>
<td>4.2</td>
<td>$\chi^2_{(df=1)} = 0.31$</td>
</tr>
<tr>
<td>No</td>
<td>94.4</td>
<td>95.8</td>
<td></td>
</tr>
<tr>
<td>Off-campus mental health services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>20.8</td>
<td>11.9</td>
<td>$\chi^2_{(df=1)} = 7.04^{**}$</td>
</tr>
<tr>
<td>No</td>
<td>79.2</td>
<td>87.7</td>
<td></td>
</tr>
<tr>
<td>Chose not to respond</td>
<td>0.0</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

Significance levels: *p<.05, **p<.01

Interest in Utilizing Campus Center Counseling Center

Respondents were also asked whether, if they were provided with more information, they would use or refer a friend to the Counseling Center. To determine whether there were significant pre- and post-campaign differences, this question was scored on a 4-point Likert-type scale (1 = very unlikely; 4 = very likely). When scored like this, ordinal level data can then be treated as interval level data, and parametric tests (such as a $t$-test) can be used to examine group differences (Pedhazur & Shmelkin, 1991). Results indicated that the average rating of willingness to utilize the on-campus Counseling Center was slightly higher post-campaign (see Table 6), as expected\(^1\).

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\(^1\) The Levene’s test for equality of variance between the pre- and post-campaign samples indicated that equal variances could not be assumed ($F = 33.73; p < .01$), therefore a more conservative calculation (as denoted by the adjusted degrees of freedom) was used to account for the violation of this assumption.
Table 6

Student’s Willingness to Utilize On-Campus Counseling Center

<table>
<thead>
<tr>
<th></th>
<th>Pre-</th>
<th>Post-</th>
</tr>
</thead>
<tbody>
<tr>
<td>$(n = 337)$</td>
<td>1.79</td>
<td>1.88</td>
</tr>
<tr>
<td>$x$</td>
<td></td>
<td>$x$</td>
</tr>
</tbody>
</table>

$\bar{x}_{\text{Pre}}$ to $\bar{x}_{\text{Post}}$ Difference $t_{(df=559.47)} = 2.891^{**}$

Significance levels: *$p<.05$, **$p<.01$

To determine whether this was due to exposure to the media campaign (Objective 1.2), students in the post-campaign survey were further separated into four groups, based upon whether they were surveyed pre- or post-campaign, and their response to the question, “Did you see any of the posters and information promoting the mental health services and resources available to students on campus as part of the recent outreach campaign?” (i.e., “no,” “yes, but I did not read the materials,” or “yes, and I read the materials.”) See Table 7 for the mean scores of each group.

With the data split into four groups, a one-way ANOVA, (which, unlike a $t$-test, allows for the comparison between more than two groups), was conducted to determine whether there was a significant difference between the groups. Results of the ANOVA indicated there were significant differences between groups ($F_{(df=3)} = 11.97; p < .001$).

As ANOVA is an omnibus test whose purpose is to control for family-wise error when contrasting more than two groups, individual post-hoc $t$-tests were then conducted to determine the exact source of the differences. As before, equal variances were not assumed, and as the sample size for each cell was low in the post-campaign, the more conservative Games-Howell corrected $t$-test was used.
Table 7
Post-Hoc Comparisons of Mean Differences Between Groups in Terms of Willingness to Utilize or Recommend the campus Counseling Clinic

<table>
<thead>
<tr>
<th></th>
<th>Mean difference ($\bar{X}_1 - \bar{X}_2$) between Pre-campaign, and...</th>
<th>Post-campaign</th>
<th>Did not see materials, and...</th>
<th>Saw, but did not read, and...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-campaign</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not see materials</td>
<td>2.40</td>
<td>.57**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Saw, but did not read</td>
<td>2.67</td>
<td>.30*</td>
<td>-.27</td>
<td>-</td>
</tr>
<tr>
<td>Saw and read materials</td>
<td>3.10</td>
<td>-.13</td>
<td>-.70**</td>
<td>-.43*</td>
</tr>
</tbody>
</table>

Significance levels: *p<.05, **p<.01

As shown above, post-hoc analyses showed two distinct patterns. First, students in the post-campaign group who saw and read the campaign materials reported a greater average willingness to utilize or recommend the Counseling Center in the future than those who did not see the materials and those who saw but did not read the materials, but not compared to those surveyed pre-campaign (although the mean is higher, it is not significant). The other was that those surveyed pre-campaign were more likely to report a willingness to utilize or refer someone to the Counseling Center in the future compared to those in the post-campaign who did not see the materials and those who saw but did not read the materials.

Student Response to the Media Campaign

Participants in the post-campaign were asked a series of questions about the campaign and its effectiveness. Of those who saw the campaign, 53.72% said they would utilize services that are provided as a result of the posters or information they saw, and 23.97% went online and reviewed the resources.

In terms of what information students thought was helpful in the media campaign, the response was generally positive. In terms of information about the Counseling Center, 74.48% of
students said that it was moderately, very, or extremely helpful to see the list of services available; 22.06% said it was slightly helpful, and 8.28% said it was not at all helpful. And 64.14% of students said that it was moderately, very, or extremely helpful to have the hours and location of the Counseling Center provided; 26.20% said it was slightly helpful, and 11.03% said it was not at all helpful.

In terms of information about other resources, 72.41% of students said that it was moderately, very, or extremely helpful to have the hyperlinks to other campus support services provided; 23.45% said it was slightly helpful, and 8.97% said it was not at all helpful. And 67.59% of students said that it was moderately, very, or extremely helpful to have the hyperlinks to online mental health resources provided; 22.07% said it was slightly helpful, and 11.03% said it was not at all helpful.

Finally, of those who saw the campaign, in terms of those who felt their awareness about mental health services and resources was increased: 86.9% said yes, it was increased, and 12.3% said no.

**Campus Center Triage Visits Attributed to the Outreach Campaign**

The second goal of the campaign was to see an increase in help-seeking behavior on campus. The goal for Objective 2.1 was that 10% of triages would identify the medial campaign as the initial source that brought them to the center. During the campaign, the on-site Counseling Center triaged a total of 45 new patients. The month before, the Counseling Center triaged 48, and the year before (in the same time period), triaged 43. Of patients triaged during the campaign, 7% identified the mental health campaign as the reason for their visit, and an additional 7% indicated they had seen the campaign, although they did not identify it as the primary factor influencing their decision to schedule.
Web Site Analysis

In terms of Objective 2.2, the goal was that 30% of students surveyed would have visited the designated Web site. As noted above, just over 22% of students surveyed post-campaign visited. Google analytics tracked and compiled data on visits to the designated Web site during the campaign. The analytics provided visual daily tracking of visits to the homepage, to each individual section, and average length of time visitors remained on the site.

The total number of unique visits to the Web site during the campaign was 474. The average number of pages viewed per visit was 6. The average time online per visit was 9 minutes and 19 seconds. The greatest peak of daily visits to the Web page occurred during the first day of the campaign when 250 visits to the campaign homepage were tracked. The most popular sections of the Web site, based on visits, in order, were (a) the homepage, (b) the listing of on-campus resources and services, (c) the listing and online connection to self-help and mutual-help resources and services, and (d) the community-based resources and services.

Discussion

The purpose of this project was to examine the impact of exposure to an outreach campaign intended to heighten awareness of mental health issues and available resources and services available to undergraduate college students on the UMass Boston campus. Preceding the outreach campaign, a sample of students was surveyed to determine a baseline of students’ awareness of services, utilization of services, and willingness to utilize services. This was then compared to responses of a second sample of students surveyed after the campaign, who were also asked about their reactions to campaign materials. Of the four objectives outlined, one was met in full, and the other three showed some improvement, although the target goals were not fully met.
Awareness of On-Campus Counseling Center

The target for Objective 1.1 was to see a 50% increase in awareness of on-campus services from the pre- to post-campaign; there was a 22.3% increase. While this was short of the target goal, it was a statistically significant increase. As approximately three-quarters of students were aware of services in the pre-campaign, a 50% increase would have meant that all students on campus were now aware of the Counseling Center’s services. Therefore, the target goal of 50% may not have been realistic. Given the rate of pre-campaign survey responses on awareness of on-campus services, there could have been an underestimation of the baseline level of awareness that students had of the current on-campus services.

Regarding awareness of the Counseling Center’s hours and location, there were not meaningful changes. When evaluating the page visit locations on the campaign Web site, many of the Web page visits only viewed the homepage. Given that the hours, location, and other detailed information about specific Counseling Center services required clicking through multiple pages to find these details, students did not choose to search to this level to seek the information.

Interest in Utilizing Campus Center Counseling Center

Objective 1.2 addressed whether respondents would use or refer a friend to the Counseling Center if they were provided with more information. Results indicated that the average rating of willingness to utilize the on-campus Counseling Center was slightly higher at the post-campaign, as expected. Specifically, students in the post-campaign group who saw and read the campaign materials reported a greater average willingness to utilize or recommend the Counseling Center in the future than those who did not see the materials and those who saw but did not read the materials. This indicates that the marketing materials were effective. These had been developed
with input from the student focus group, who suggested that the materials be developed to draw interest and the curiosity of the students so they would go online to read more about the campaign materials. Additionally, utilizing technology through embedding data codes into all printed materials, developing the Web-based materials to fit most smart phones for ease in reading, and embedding Google analytics assisted in meeting our diverse campus population and in reaching the interest of those were at many different levels of technological advancement.

However, unexpectedly, there was not a significant difference between those surveyed pre-campaign baseline, and those in the post-campaign who saw and read the materials (although the mean is higher, it is not significant). There are two pieces of information in the data collected, that may give us clues. First, those surveyed pre-campaign were more likely to report a willingness to utilize or refer to the Counseling Center in the future compared to those post-campaign who did not see the materials and those who saw but did not read the materials. As students who did not explore the materials in the post-campaign sample had a lower willingness than those in the pre-campaign (who by virtue of being in the pre-campaign survey never saw the materials), one possible interpretation is that the post-campaign group was somehow different than the pre-campaign group in a baseline willingness to utilize mental health resources. The other piece of supporting data for this interpretation is that students in the post-sample were much less likely to be utilizing off-campus mental health resources than the pre-campaign group.

**Campus Center Triage Visits Attributed to the Outreach Campaign**

The second goal of the campaign was to see an increase in help-seeking behavior on campus. The goal for Objective 2.1 was that 10% of triages would identify the media campaign as the initial source that brought them to the center. During the campaign, the on-site Counseling Center triaged a total of 45 new patients. The month before, it triaged 48, and the year before (in
the same time period), it triaged 43. Of patients triaged during the campaign, 7% identified the mental health campaign as the reason for their visit to the Counseling Center, and an additional 7% indicated they had seen the campaign, although they did not identify it as the primary factor influencing their decision to schedule. Given that the mental health media campaign ran one week into spring break and students were on campus for only 3 out of the 4 weeks of the campaign, the 7% increase may have been short of the targeted goal but was valued in bringing in new students for mental health assistance to the Counseling Center.

**Web Site Analysis**

In terms of Objective 2.2, the goal was that 30% of students surveyed would have visited the designated Web site. As noted above, just over 22% of students surveyed in the post-campaign visited. According to Mowbray et al. (2006), “when averaging a number of studies, approximately 12–18% of students on college campuses have diagnosable mental illness.” Given this, the goal of 30% may have been set too high. Since the mental health Web site provided information specific to mental health resources and services, not all the students who viewed the campaign may have required mental health services and chose not to engage in the specific details of the site until such services were needed. Having the increased knowledge for future access is a positive result overall.

**Plans for Post-Project Continuation and Implication for Future Practice**

Recommendations for future research translation projects include using the current data to explore the differences in ethnicity in terms of willingness to seek services and if the campaign was more or less effective for different specialty groups. Additionally, exploring the differences in gender in Web site utilization would be of importance as research supports that men prefer online resources over traditional face-to-face counseling for their mental health services.
(Rochlen, Land, & Wong, 2004). Though not considered a substitute for traditional therapy, it would be a good first step for this population to seek initial information, resources, and knowledge about services.

Given we saw a difference between post-campaign survey responses regarding willingness to utilize or recommend the Counseling Center in the future between those who had not seen the materials and those who saw but did not read the materials, compared to those surveyed pre-campaign, adding survey questions about attitudes toward seeking services may have been helpful to explain this discrepancy and could be helpful in future outreach campaigns.

Since the majority of students did not go further on the designated Web site than the homepage, questions pertaining to information that required further page exploration did not show significant changes pre- and post-campaign response. Providing information about specific details such as hours of operation, location, and how to access services though other types of quick media marketing techniques, such as sending out texts or blog messages that contain only a few words per sentence, and following up with post-survey to measure the effectiveness of awareness impact would be another consideration.

Finally, only a very small percentage of pre- and post-survey responses identified using resources either off campus or using other support services on campus for their mental health needs, which included health promotion, wellness or stress reduction strategies. According to Keyes et al. (2012), “to highlight mental health promotion at a population level, especially as society seeks to invest in young people’s futures through the promotion of well-being, future research is needed.” Exploring the relationship between positive mental health and mental disorders though health promotion and stress reduction would be also a future consideration for this population.
References


University of Massachusetts Boston, School of Psychology. (2009). *Mental health resources for success survey: Promoting student resources for educational success and wellness at University of Massachusetts Boston*. Unpublished survey, University of Massachusetts, Boston, MA.


doi:10.1037/a0023359


APPENDIX A

OUTREACH CAMPAIGN FLYER

BUILDING A HEALTHY COMMUNITY AT UMass Boston...

Do you know where to seek help if you or a friend need it? To locate resources on campus and in the community that provide wellness support to students, check out:

WWW.HEALTHY-U-HEALTHY.ME
BUILDING A HEALTHY COMMUNITY AT UMass Boston...

Do you know where to seek help if you or a friend need it? To locate resources on campus and in the community that provide wellness support to students, check out:

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