

Mental Health for the Masses

April 09, 2015

Ricardo Muñoz thinks that MOOCs get a bad rap. MOOC stands for Massive Open Online Courses, Internet-based higher education available to anyone in the world, regardless of age or qualifications, and usually for free. MOOCs have become very popular in recent years, and now attract millions of students who want to learn art history or calculus or abnormal psychology with some of the world's best professors.

Critics focus on MOOCs' dismal attrition rates. While millions of eager students may sign up, they say, most of these drop out. They point to examples, including one MIT MOOC, in which 155,000 enrolled but only 7,157 passed the course. That's a paltry 4.6 percent completion rate.

This is true, says Muñoz, professor and founding director of the Institute for International Internet Interventions for Health (*i4Health*) at Palo Alto University, and professor emeritus at the University of California, San Francisco. But this argument misses the more important point, he insists. It's a major achievement for 7,157 students to complete a college course—reading, lectures, papers, everything—in a single semester. Indeed, it would take 40 years for that many students to complete the same MIT course if it were offered in the traditional way.

This is why Muñoz and his colleagues are using MOOCs as a model for their Massive Open Online Interventions, which they call MOOIs. MOOIs are mental health and substance abuse interventions, scientifically validated and available online to unlimited numbers of consumers. As with MOOCs, most of these consumers can be expected to drop out, but some will stay—and get well. Since many of these would otherwise have access to no services at all, MOOIs could be a valuable resource for global health. The drop-out rate should be seen as a natural part of the process, Muñoz argues, not as a weakness.

Muñoz has been thinking and writing about massive mental health interventions since the 70s, long before the Internet even existed. Nearly four decades later, most people have daily access to computers, email, social media and mobile devices, creating the opportunity for mass interventions to reach millions. Unlike face-to-face interventions and medications, digital interventions are never used up. There is no practical limit to their reach.

Muñoz and his colleagues have been studying one MOOI in particular, a smoking cessation intervention that has been available in both English and Spanish for 30 months. During that time, 292,978 people from 168 countries have visited the site. The scientists recruited participants through a Google campaign, which targeted those who searched for smoking cessation. Upon entering the website, participants were given immediate free access to a stop-smoking guide and a nicotine replacement therapy guide, even if they didn't sign up for the entire intervention. They were told that the program would last eight weeks, with follow-up emails at 1, 3, 6 and 12 months to monitor progress. Those who signed up provided basic demographics and information on mood and smoking history.

Participants were given a menu of nine intervention elements to choose from, including guidance in removing smoking-related cues; a mood management course; individually timed email messages; a virtual forum; and more. The scientists studied participation and successes over an 18-month period, during which 27,163 people were screened for eligibility. Of these 8,881 signed consent forms, and 7,407 completed the baseline survey. The scientists report their results in a forthcoming issue of the journal *Clinical Psychological Science*.

The success rates for quitting smoking ranged from 39.2 percent at one month to 50.3 percent at one year. Those quit rates were considerably lower if those missing at follow-up were assumed to have relapsed, from 7.6 percent at one month to 5.5 percent at one year. But even those pessimistic outcome statistics indicate that thousands can be helped by making such evidence-based behavioral interventions widely available.

By comparison, the nicotine patch has success rates from 14 to 22 percent, and stop-smoking groups from 24 to 27 percent—but these interventions reach far fewer hopeful quitters at much greater cost. By Muñoz's calculations, a single full-time practitioner, using face-to-face interventions, would require almost 70 years to successfully treat the same number as this online intervention. The \$200,000 needed to maintain the website is a fraction of the millions it would cost for face-to-face counseling. What's more, none of the cost is borne by those who want to quit smoking—meaning that MOOIs could potentially reduce health disparities linked to socioeconomic class.

Follow Wray Herbert's reporting on psychological science in The Huffington Post and on Twitter at @wrayherbert.