

## Online Public Health Interventions: A Good Strategy for Those with Mental Illness?

Amanda Richardson\*

Director, Research and Evaluation LEGACY, Washington DC, USA

Online delivery of public health interventions is on the rise and for good reason. Roughly 2.3 billion people across the globe are online [1] and many are using it as a resource for health-related information [2,3]. This has promoted a shift in many consumers from passive recipients to active participants in managing their own health [4,5]. Practitioners have been quick to recognize the promise of the internet as a vehicle for disseminating health-saving messages [6] and studies assessing online interventions have concluded that they work [7-12]. However, what has not been appropriately assessed is the degree to which online interventions reach and influence vulnerable sub-groups, such as those with mental disorders.

The lifetime prevalence of mental disorders is staggeringly high--in the United States, it is estimated that approximately 46% of the population will suffer from a mental disorder in their lifetime [13]. Mental disorders are costly [14], disabling [15], and associated with various adverse health outcomes [16-18] and risky behaviors [19-22]. This places the mentally ill in a disadvantaged position---which is the exact subgroup that many interventions are trying to reach. Public health practitioners who do not consider how this vulnerable group receives and responds to their messages may be inadvertently missing a critical piece of the target audience, therefore compromising the effectiveness of the intervention in reducing the population burden of disease.

The issue of the influence of the internet on mental health has gained recent publicity due to a July 2012 Newsweek cover story entitled "Is the web driving us mad" [23] and a slew of critical responses by Time, BBC, The Atlantic Wire, and others [24-27]. While our understanding of the internet's effects on mental health in the general population is still in its infancy and currently unclear, public health practitioners designing, implementing and evaluating online interventions should be careful to consider how the mentally ill may be differentially exposed to, engaged with, or influenced by online interventions. Particular issues to consider are:

First, individuals of low socioeconomic status are less likely to have access to the internet [28] or have their access shut off due to non-payment of bills (personal communication, Vish Vishwanath, June 2012). Given the association between mental illness and low socioeconomic status [29-32], this suggests that those with mental illness may be less likely to be exposed to or benefit from an online intervention.

Second, the average time spent online is increasing [33] and it is unclear how this influences an individual's exposure and receptivity to any one health message or intervention, especially within the context of an ever-increasingly crowded online environment. For individuals with attention deficits, anxiety, or depression, it is conceivable that the onslaught of messages delivered online may be attended to or processed differently as compared to individuals without these conditions.

Third, it is well-established that an individual's level of e-health literacy impacts the benefit derived from health messages online [34-36], and those with mental illness may be more likely to display issues of e-health literacy, particularly because mental illness is associated with lower educational attainment [37,38].

Finally, individuals with psychiatric disorders such as depression, anxiety, ADHD and substance use disorder are more likely to be diagnosed with an emerging condition termed 'Internet Addiction Disorder' [39], which is characterized by "excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and Internet access that lead to impairment or distress" [40]. Although this condition likely impacts only a small percentage of individuals, online health interventions actually may promote or exacerbate a mental health issue in this subgroup rather than help alleviate it.

Online public health interventions offer the benefits of broad reach, low cost, anonymity, and accessibility, and show great promise to reduce population-level rates of disease and disability. Given the high prevalence of mental illness and its known associations with other chronic health conditions and risky behaviors, it is critical that this vulnerable population be appropriately reached, engaged and influenced by these interventions. If not, the effectiveness of public health interventions may be undermined and those individuals most at-risk for poor health outcomes not appropriately considered.

### References

1. Internet World Stats: Usage and Population Statistics.
2. Fox S (2011) Health Topics. Pew Internet & American Life Project.
3. Trend Data (2012) Pew Internet & American Life Project.
4. McMullan M (2006) Patients using the Internet to obtain health information: how this affects the patient-health professional relationship. *Patient Educ Couns* 63: 24-28.
5. Wald HS, Dube CE, Anthony DC (2007) Untangling the Web--the impact of Internet use on health care and the physician-patient relationship. *Patient Educ Couns* 68: 218-248.
6. Thackeray R, Neiger BL, Hanson CL, McKenzie JF (2008) Enhancing promotional strategies within social marketing programs: use of Web 2.0 social media. *Health Promot Pract* 9: 338-343.
7. Wantland DJ, Portillo CJ, Holzemer WL, Slaughter R, McGhee EM (2004) The effectiveness of Web-based vs. non-Web-based interventions: a meta-analysis of behavioral change outcomes. *J Med Internet Res* 6: e40.
8. Shahab L, McEwen A (2009) Online support for smoking cessation: a systematic review of the literature. *Addiction* 104: 1792-1804.
9. Cugelman B, Thelwall M, Dawes P (2011) Online interventions for social

\*Corresponding author: Amanda Richardson, Director, Research and Evaluation LEGACY, Washington DC, USA, Tel: 202-454-5571; Fax: 202-454-5599; E-mail: [amanda.richardson2@gmail.com](mailto:amanda.richardson2@gmail.com)

Received July 30, 2012; Accepted August 01, 2012; Published August 02, 2012

Citation: Richardson A (2012) Online Public Health Interventions: A Good Strategy for Those with Mental Illness? *J Mass Commun Journalism* 2:e126. doi:10.4172/2165-7912.1000e126

Copyright: © 2012 Richardson A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

- marketing health behavior change campaigns: a meta-analysis of psychological architectures and adherence factors. *J Med Internet Res* 13: e17.
10. Fogg BJ (2003) *Persuasive Technology: Using Computers to Change What We Think and Do*. Morgan Kaufmann, San Francisco, pp. 1-283.
  11. Webb TL, Joseph J, Yardley L, Michie S (2010) Using the internet to promote health behavior change: a systematic review and meta-analysis of the impact of theoretical basis, use of behavior change techniques, and mode of delivery on efficacy. *J Med Internet Res* 12: e4.
  12. Neuhauser L, Kreps GL (2003) Rethinking Communication in the E-health Era. *J Health Psychol* 8: 7-23.
  13. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR (2005) Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 62: 593-602.
  14. Brown E (2011) *Health Care Expenditures for Adults Ages 18–64 with a Mental Health or Substance Abuse Related Expense: 2007 versus 1997*. Rockville, MD.: Agency for Healthcare Research and Quality.
  15. WHO (2008) *Global Burden of Disease 2004 Update*. Geneva, Switzerland: WHO.
  16. Kessler RC (2012) The costs of depression. *Psychiatr Clin North Am* 35: 1-14.
  17. Roest AM, Zuidersma M, de Jonge P (2012) Myocardial infarction and generalised anxiety disorder: 10-year follow-up. *B J Psych* 200: 324-329.
  18. Rutledge T, Reis SE, Olson MB, Owens J, Kelsey SF, et al. (2006) Depression symptom severity and reported treatment history in the prediction of cardiac risk in women with suspected myocardial ischemia: The NHLBI-sponsored WISE study. *Arch Gen Psychiatry* 63: 874-880.
  19. Scott-Parker B, Watson B, King MJ, Hyde MK (2012) The influence of sensitivity to reward and punishment, propensity for sensation seeking, depression, and anxiety on the risky behaviour of novice drivers: a path model. *Br J Psychol* 103: 248-267.
  20. Scott D, Happell B (2011) The high prevalence of poor physical health and unhealthy lifestyle behaviours in individuals with severe mental illness. *Issues Ment Health Nurs* 32: 589-597.
  21. Lawrence D, Mitrou F, Zubrick SR (2009) Smoking and mental illness: results from population surveys in Australia and the United States. *BMC Public Health* 9: 285.
  22. Jane-Llopis E, Matytsina I (2006) Mental health and alcohol, drugs and tobacco: a review of the comorbidity between mental disorders and the use of alcohol, tobacco and illicit drugs. *Drug Alcohol Rev* 25: 515-536.
  23. Tony Dokoupil (2012) Is the web driving us mad?
  24. Maia Szalavitz (2012) Does the Internet Really Make Everyone Crazy?
  25. Tom Chatfield (2012) The madness of net scare stories.
  26. Rebecca Greenfield (2012) The Internet Has Been Making Us Crazy for at Least 16 Years.
  27. Grohol MJ (2012) Is Biased Journalism Making Us Crazy? *Newsweek's Hit Piece on Technology*.
  28. Zickuhr K, Smith A (2012) *Digital Differences*.
  29. Dohrenwend BP, Levav I, Shrout PE, Schwartz S, Naveh G, et al. (1992) Socioeconomic status and psychiatric disorders: the causation-selection issue. *Science* 255: 946-952.
  30. Ritsher JE, Warner V, Johnson JG, Dohrenwend BP (2001) Inter-generational longitudinal study of social class and depression: a test of social causation and social selection models. *Br J Psychiatry Suppl* 40: s84-s90.
  31. Vick B, Jones K, Mitra S (2012) Poverty and severe psychiatric disorder in the u.s.: evidence from the medical expenditure panel survey. *J Ment Health Policy Econ* 15: 83-96.
  32. Stansfeld SA, Clark C, Rodgers B, Caldwell T, Power C (2011) Repeated exposure to socioeconomic disadvantage and health selection as life course pathways to mid-life depressive and anxiety disorders. *Soc Psychiatry Psychiatr Epidemiol* 46: 549-558.
  33. comScore (2012) *It's a Social World: Top 10 Need-to-Knows About Social Networking and Where It's Headed*.
  34. Neter E, Brainin E (2012) eHealth literacy: extending the digital divide to the realm of health information. *J Med Internet Res* 14: e19.
  35. Bodie GD, Dutta MJ (2008) Understanding health literacy for strategic health marketing: eHealth literacy, health disparities, and the digital divide. *Health Mark Q* 25: 175-203.
  36. Lustria ML, Smith SA, Hinnant CC (2011) Exploring digital divides: an examination of eHealth technology use in health information seeking, communication and personal health information management in the USA. *Health Informatics J* 17: 224-243.
  37. Breslau J, Lane M, Sampson N, Kessler RC (2008) Mental disorders and subsequent educational attainment in a US national sample. *J Psychiatr Res* 42: 708-716.
  38. Fletcher JM (2008) Adolescent depression: diagnosis, treatment, and educational attainment. *Health Econ* 17: 1215-1235.
  39. Ko CH, Yen JY, Yen CF, Chen CS, Chen CC (2012) The association between Internet addiction and psychiatric disorder: a review of the literature. *Eur Psychiatry* 27: 1-8.
  40. Weinstein A, Lejoyeux M (2010) Internet addiction or excessive internet use. *Am J Drug Alcohol Abuse* 36: 277-283.