FI SEVIER

Contents lists available at ScienceDirect

Preventive Medicine

journal homepage: www.elsevier.com/locate/ypmed



Commentary

Global citizenship is key to securing global health: The role of higher education



Lee Stoner^{a,*}, Lane Perry^b, Daniel Wadsworth^c, Krystina R. Stoner^d, Michael A. Tarrant^d

- ^a School of Sport and Exercise, College of Health, Massey University, Wellington, New Zealand
- ^b Center for Service Learning & Department of Human Services, Western Carolina University, Cullowhee, USA
- ^c Institute of Food Nutrition and Human Health, College of Health, Massey University, Wellington, New Zealand
- ^d Warnell School of Forestry and Natural Resources, University of Georgia Athens, USA

ARTICLE INFO

Available online 13 May 2014

Keywords:
Public health
Global
Pedagogy
Education
Non-communicable diseases
Obesity
Citizenship
Internationality
Globalization
Awareness

ABSTRACT

Despite growing public awareness, health systems are struggling under the escalating burden of non-communicable diseases. While personal responsibility is crucial, alone it is insufficient. We argue that one must place themselves within the broader/global context to begin to truly understand the health implications of personal choices. Global citizenship competency has become an integral part of the higher education discourse; this discourse can and should be extended to include global health. A global citizen is someone who is (1) aware of global issues, (2) socially responsible, and (3) civically engaged. From this perspective, personal health is not solely an individual, self-serving act; rather, the consequences of our lifestyle choices and behaviors have far-reaching implications. This paper will argue that, through consciously identifying global health within the constructs of global citizenship, institutions of higher education can play an instrumental role in fostering civically engaged students capable of driving social change.

© 2014 Elsevier Inc. All rights reserved.

Introduction

Health systems are struggling under the escalating burden of non-communicable diseases (NCDs). This is a global issue; worldwide there were 57 million deaths in 2008, 63% of which can be attributed to NCDs, with approximately 80% of these deaths occurring in low- and middle-income countries (Hunter and Reddy, 2013). Clearly, lives could be saved and much suffering avoided if people did more to avoid poor lifestyle choices such as physical inactivity and unhealthy eating habits. Yet despite growing public awareness about NCDs and the consequences of such lifestyle choices, NCDs continue to rise. Based on this observation, perhaps "personal"-responsibility is not the answer, and conceivably the answer is "global"-responsibility, manifested as global citizenship.

 $\label{lem:email$

Global citizenship development has become an integral part of the higher education discourse; this discourse can and should be extended to include global health. This paper, *using obesity as an exemplar context*, will argue that higher education can play a key role in the fight against NCDs. Specifically, a critical understanding of global health can aid in fostering global citizenship, which in turn may empower students to become civically engaged and potentially drive social change.

${\bf Consequences\ of\ lifestyle\text{-}driven\ obesity:\ from\ personal\ to\ global}$

Globally, the prevalence of obesity (defined as a BMI \geq 30) doubled between 1980 and 2008, from 6.4% to 12.0% (Stevens et al., 2012). Notably, obesity is now increasing at a faster rate in low- and middle-income countries than high-income countries (Kelly et al., 2008; Popkin et al., 2012), thereby particularly afflicting nations with limited public health resources. Since changes to our genetic makeup cannot explain this relatively recent obesity pandemic, lifestyle factors have been cited, including declining physical activity levels and less healthy food choices. These lifestyle choices are modifiable, implying that we have the power to change this crisis through personal responsibility. Yet despite growing public awareness, the trend has not been encumbered. In fact, the global prevalence of obesity is accelerating and obesity is occurring

[☆] Contributions: LS managed the various drafts of the manuscript, performed the literature search, and is the guarantor. LP, DW, KS and MAT aided with the design, and critically revised the manuscript for important intellectual content. All authors gave final approval for publication.

^{*} Corresponding author at: Massey University, College of Health, School of Sport and Exercise, Private Bag 756, Wellington 6140, New Zealand.

at an increasingly younger age. The obesity pandemic is resulting in personal, community, national and global consequences.

Personal

Obesity is associated with a clustering of cardio-metabolic complications, including hypertension, hypercholesterolemia, type 2 diabetes, and subsequent cardiovascular diseases (Dietz, 2004). This clustering of complications not only contributes to a decreased lifespan, but also to a decreased quality of life (Brettschneider et al., 2013). Notably, the higher populations in low- and middle-income countries, mean that NCDs, including obesity, will be responsible for three times as many disability adjusted life years as communicable diseases, maternal, perinatal and nutritional conditions combined, by 2030 (WHO, 2008).

Community

NCDs, including obesity, can exact enormous social costs (Hammond and Levine, 2010). Obesity and associated co-morbid complications may impair an individual both physiologically and psychologically, limiting the capacity of said individual to contribute to family and community. Moreover, if the complications of obesity become severe, the individual may require homecare, which may place a financial burden on the family and a psychological burden on the caregiver (Hammond and Levine, 2010).

National

The obesity epidemic is placing an increasing economic burden on greater society, including productivity costs, transportation costs, and human capital costs (Hammond and Levine, 2010). Limiting these costs to [lost] productivity, in the U.S. alone it has been estimated that total productivity costs are as high as \$66 billion annually (Hammond and Levine, 2010). Considering that obesity is occurring at an increasingly younger age (Stevens et al., 2012), this figure is likely to grow.

Global

Poor lifestyle choices, including those which contribute to obesity, have been linked to climate change and subsequent biodiversity loss (Diaz et al., 2006). For example, use of personal vehicles to commute to school or work, instead of walking or cycling, results in environmental pollution. Poor food choices, including high consumption of meat, results in inefficient use of land, soil and water resources (Tukker et al., 2011). Environmental pollution and inefficient natural resource use are contributing to biodiversity loss. Biodiversity loss implicates the production of food, fiber, potable water, shelter, and medicines (Diaz et al., 2006), which is of particular consequence to people from low-income countries and to indigenous groups, who are more directly dependent on ecosystem services (Diaz et al., 2006).

Global citizenship

Although global citizenship is a highly contested and multifaceted term, three key dimensions are commonly accepted (Schattle, 2009): (1) global awareness (understanding and appreciation of one's self in the world and of world issues), (2) social responsibility (concern for others, for society at large, and for the environment), and (3) civic engagement (active engagement with local, regional, national and global community issues). There have been increasing calls, from both the political and academic arenas, to ensure the capacity of higher education students to think and act globally in order to effectively address political, social, economic, and environmental problems on a global scale. This call can and should be extended to include global health, which

together with climate change are, arguably, the two biggest concerns facing humanity.

How do we foster global citizenship (and global health)?

Nurturing a globally-minded citizen is often associated with a transformative learning experience, one that engages the student with alternative lenses and orientations of an issue (such as global health), ultimately leading to a change in perspective (Mezirow, 1991). Arguably, the key to transformative learning is educative experiences coupled with critical reflection (Dewey, 1938; Kolb, 1984). An experience without critical reflection is just an experience, which does not necessarily provide an individual with the opportunity to shape perspective, and actually has the possibility of being *mis-educative* (Dewey, 1938; Wojcikiewicz, 2010). An educative experience should serve as a departure point for learning, not an end result and subsequently should present an opportunity for response or an investigation of the "why" associated with the experience (Dewey, 1938).

Building upon the theoretical framework offered by Dewey (Dewey, 1938) and Kolb (1984), Thornton (Thornton, 2013) demonstrates a simple pedagogical primacy, known as the three Ds: Directing, Discussing, Delegating, with each 'D' representing a unique style of facilitating learning. Initially, the educator adopts the Directive Style, telling the students what to do, how to do it, and when it needs to be done. For example, through this style the educator will raise awareness about the global rise in NCDs, including obesity, providing a knowledge base to build upon (global citizenship criteria 1). Subsequently, using the Discussant Style the educator, in a Socratic manner, frames the concept with challenging questions to guide discussion and illuminate the students' biases, worldview, perspective, and attempts to challenge these preconceived notions and how they came to be. For example, through this style the educator will raise awareness about the consequences of lifestyle-driven obesity, and ask the students to begin to question how their health actions and lifestyle choices impact the global community (global citizenship criteria 2). Finally, as a facilitator adopts the Delegation Style the challenging questions begin to come from the students themselves. As the task experience increases and the students become more empowered and civically engaged (global citizenship criteria 3), this is where critical reflection becomes imperative for student learning. At this juncture the facilitator assumes the role of learning facilitator and the students become the arbiters of their own learning and, just as importantly, become lifelong learners. While the content is always changing and adapting, the process whereby students make sense of the vacillating content is enduring.

Given the complexity of the latent construct, global citizenship, there is unlikely to be a "one size fits all" pedagogical approach. However, in order for an institution of higher education to identify the most appropriate model, there must first be a philosophical platform to place the building blocks. Utilizing the pedagogical model described above, the context of environmental sustainability (including climate change) has been successfully applied to foster global citizenship (Tarrant et al., 2011; Tarrant et al., 2014). This previous work has used international (study abroad) transformative learning experiences; it may be argued that critical reflection on global environmental issues is most powerful when there is "direct" contact with said issues. In support, there is mounting evidence suggesting that international experiences provide powerful disorientating experiences, leading to deep reflection, critical analysis, and synthesis (McKeown, 2009; Sutton and Rubin, 2004; Tarrant et al., 2011; Tarrant et al., 2014). Support should be given to such international experiences, specifically those focused on global health issues. However, it is more than likely that a student will not need to travel beyond the local community to experience and critically reflect upon the NCD pandemic. Moreover, by utilizing local contexts to engage students with global issues, there is potential for sustained student engagement following the disorientating experience.

Conclusions

Personal health is not solely an individual, self-serving act; rather, the consequences of our lifestyle behaviors have deep and wide consequences extending to the community, national, and global contexts. Being a true global citizen means one is: (a) cognizant of these interconnections and the role personal decisions play in each context; and (b) civically engaged and capable of driving social change. A global citizenship competency, within the context of global health, should become an integral component of a university's core curriculum, alongside fundamental disciplines such as history or science. Simply put, there are practical pedagogical decisions that can be made to refocus the core curricula on learning outcomes directly related to the issues being encountered by today's communities.

Conflict of interest

The authors declare that there is no conflict of interest.

References

- Brettschneider, C., Leicht, H., Bickel, H., Dahlhaus, A., Fuchs, A., Gensichen, J., Maier, W., Riedel-Heller, S., Schafer, I., et al., 2013. Relative impact of multimorbid chronic conditions on health-related quality of life — results from the MultiCare Cohort Study. PLoS ONE 8. e66742.
- Dewey, John, 1938. Experience and Education. Collier Books, New York.
- Diaz, S., Fargione, J., Chapin 3rd, F.S., Tilman, D., 2006. Biodiversity loss threatens human well-being. PLoS Biol. 4, e277.
- Dietz, W.H., 2004. Overweight in childhood and adolescence. N. Engl. J. Med. 350, 855–857. Thornton, P.B., 2013. Three teaching styles. Faculty Focus. 30, 2013 Available online at http://www.facultyfocus.com/articles/philosophy-of-teaching/three-teaching-

- styles/?utm_source=cheetah&utm_medium=email&utm_campaign=2013.09. 30%20Faculty%20Focus%20Update last accessed on Sept 30 2013.
- Hammond, R.A., Levine, R., 2010. The economic impact of obesity in the United States. Diabetes Metab. Syndr. Obes. 3, 285–295.
- Hunter, D.J., Reddy, K.S., 2013. Noncommunicable diseases. N. Engl. J. Med. 369, 1336–1343.
- Kelly, T., Yang, W., Chen, C.S., Reynolds, K., He, J., 2008. Global burden of obesity in 2005 and projections to 2030. Int. J. Obes. (Lond) 32, 1431–1437.
- Kolb, David A., 1984. Experiential Learning: Experience as the Source of Learning and Development. Prentice-Hall, Englewood Cliffs; London.
- McKeown, Joshua S., 2009. The First Time Effect: The Impact of Study Abroad on College Student Intellectual Development. State University of New York Press, Albany. NY.
- Mezirow, Jack, 1991. Transformative Dimensions of Adult Learning, 1st ed. Jossey-Bass, San Francisco.
- Popkin, B.M., Adair, L.S., Ng, S.W., 2012. Global nutrition transition and the pandemic of obesity in developing countries. Nutr. Rev. 70, 3–21.
- Schattle, H., 2009. Global citizenship in theory and practice. In: Lewin, R. (Ed.), The hand-book of practice and research in study abroad: higher education and the quest for global citizenship. Routledge, London, pp. 3–18.
- Stevens, G.A., Singh, G.M., Lu, Y., Danaei, G., Lin, J.K., Finucane, M.M., Bahalim, A.N., McIntire, R.K., Gutierrez, H.R., et al., 2012. National, regional, and global trends in adult overweight and obesity prevalences. Popul. Health Metrics 10, 22.
- Sutton, R.C., Rubin, D.L., 2004. The GLOSSARI project: initial findings from a system-wide research initiative on study abroad learning outcomes. Frontiers: Interdiscip. J. Study Abroad 65–82.
- Tarrant, Michael A., Stoner, Lee, Borrie, William T., Kyle, Gerard, Moore, Roger L., Moore, Annette, 2011. Educational travel and global citizenship. J. Leis. Res. 43, 403–426
- Tarrant, M., Lyons, K., Stoner, L., Kyle, G., Wearing, S., Poudyal, N., 2014. Global citizenry, educational travel and sustainable tourism: evidence from Australia and New Zealand. J. Sustain. Tour. 403–420.
- Tukker, A., Goldbohm, R., de Koning, A., Verheijden, M., Kleijn, R., Wolf, O., Perez-Dominguez, I., Reuda-Cantuche, J., 2011. Environmental impacts of changes to healthier diets in Europe. Ecol. Econ. 70, 1776–1788.
- Wojcikiewicz, S.K., 2010. Dewey, Peirce, and the categories of learning. Educ. Cult. 26, 65–82. World Health Organization, 2008. The Global Burden of Disease: 2004 Update.