

Review of: "Building a digital republic to reduce health disparities and improve population health in the United States"

Ana María Ruiz-Ruano García¹, Jorge López Puga¹

¹ Universidad de Granada

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The role of education to boost population health

We firstly want to congratulate authors for their article. The topic they are addressing is extremely complex and relevant to society. The issue can be seen from multiple angles and conclusions or recipes to solve problems depend on the point of view. In any case, the article topic is one of those deserving careful and urgent attention because it is referred to human suffering. Many things can be done in that sense, and the authors of this paper are doing what society expect from them: thinking, reflecting, and providing ideas to solve social and human problems. As a result, we do thank the authors for their braveness to share their ideas about this socially relevant matter. Here we will humbly provide some reflections we hope authors take advantage from them to continuing developing their ideas. We will try to be as constructive as possible.

In our view, the manuscript is unnecessarily politicized. As education and health scientists, we think you can express the same ideas and proposals avoiding political terms in your texts. The thing is not to omit political ideas in texts. It is not a matter of self-censure but a way to try to be impartial and objective. As suggested by Greene^[1] in "The quiet American", after all you always (desired, or not) get involved. So, you have to make an effort to be as fair as possible. We learnt that from our beloved Professor Antonio Sánchez Cañadas: may he rest in peace.

To allow you to understand what we are referring about, take your title. The title of your article contains the word "republic". This term is philosophical and political in nature. But the problem with that is it refers to different things. It is true the meaning of this word is crystal clear in its origins but, at the same time, it is polysemic today. Take the United States and Spain cases for example. To be a republican in the United States is not the same of being a republican in Spain. In some cases, the political meaning of "republican" (in terms of political orientation) is the opposite considering the United States and the Spain cases. As you probably know, here in Spain we suffer a terrible Civil War some years ago. All wars are ruin but that was probably one of the worst. Brothers, sisters, parents, and grandparents fought each other. Here is not the place nor the time to go deeper on that, but although many reasons can explain the Civil War outbreak in Spain the republic-versus-monarchy was in the roots of the conflict. And what is more, we are still unfortunately suffering the vestiges of that confrontation in the current political scene. We were born in a brand-new democratic country. Democracy is plenty in Spain nowadays (although never finished and always working for improvement) and most republican

objectives have been achieved but the war is still latent in the political board (*policy is policy*). Probably because of the polysemic nature of “republic” in Spanish language^[2]. As a result, some people, in Spain or elsewhere, can feel uncomfortable when reading your article which is, from the beginning, spiced with political terms. We suggest trying to avoid it.

We have informally analysed your manuscript by using text analysis tools. R source code and graphs can be found in an *Open Science Framework* repository^[3]. As you can see, “health” is the critical point in your text from a quantitative point of view (see Figure <https://osf.io/av4xz>). There are additional key terms in your manuscript and those are related to the idea of a “digital society”, “data” coming from this form of society and issues related to personal or social “identity” (see Figure <https://osf.io/r982h>). We also think these are critical things to think and discuss about^[4]. Let us anyway to focus on the problem from the educative front.

We miss a stronger reference to education as a key factor to improve health population in your manuscript. The word “education” only appears three times in the text. Fortunately, education is mentioned two times in your paper to refer to a basic survival need in population and the third time it appears is to notice the differences between those more and less educated. This latter thing you mention is precisely a critical point to build a fruitful society. The education gap between different segments in society is a serious drawback to make come true a true functional digital society. If citizens are not properly educated, they will hardly manage to effectively survive in a technologized environment.

Let us provide you a particular example. The 21st century, or at least its beginning, is probably the data century. You are aware of that because “data” is the third more repeated word in your article (see Figure <https://osf.io/r982h>). The massive amount of information posit that we must develop a good way of information judgement. Otherwise, we are condemned to failure. Think of health information provided by mass media. It would be sensible to gather reliable information from newspapers or television news to make healthier your lifestyle. However, it seems that we are vulnerable to fake news and sensationalist information^[5]. Some training or education about uncertainty, risk and statistical reasoning would help citizens across the globe to efficiently manage health-relevant information^[6]. Some scholars suggest we need an authentic statistical literacy to deal with information in our information society (see, for example, ^[7] and ^[8]). In that sense, education can work as a vaccine against misinformation or to efficiently manage massive and conflicting information.

Education is also critical when considering migrants. Identity cards are, as you say, crucial to allow people play a role in the system but this is not enough. We argue that language training or language education is also a basic need to be fulfilled when speaking about migration processes. The United States of America seems to have a vast experience dealing with those situations because language evaluation, assessment and training is considered differently when working with migrants^[9]. Human language is a fallible tool to share, develop and induce thoughts and emotions^[10]. Human language is also considered as the most relevant element distinguishing us from the rest of the living beings on earth. When working on language education we are allowing migrants to “vote with their feet and hearts” as proposed by Richerdson and Boyd^[11].

To finish with, we would like to come back to the point of identity. Identity related concepts were frequently mentioned in the article. The letters string reminding those concepts is in the top of the ranking too (see Figure <https://osf.io/r982h>). Again, this is not a trivial topic. We above said it is not enough for migrants to have an identity card to get involved in society. It is also not enough for non-migrant people. We agree a unique identification code is basic for a society (digital or not), but this is not sufficient to be identified and recognised as a human being (see, for example, ^[12]). Well, we can discuss about Pythagoreans ideas referring to the relevance of numbers to understand reality. We could probably come up with interesting conclusions regarding this topic. But, in general, a digital alfa-numeric code is not enough to provide a human being with an identity. Education can help people to develop healthy self-images and self-identities. This will end up allowing citizens to responsibly participate in their societies. It is easy said than done because we are probably, in some places of the world, suffering a lack of identity pandemic. Maybe we should review Humanism principles through the lens of 21st century to make progresses in that sense.

We just wanted to stress the relevance of education to improve health. What we exposed here are simply a couple of ideas about that. The issue is richer enough to spend more than a life speaking about. We suggest trying to make advances in society in a smooth and pacific fashion as suggested by the Beattles^[13]. It is true that history, and natural evolution is also characterised by radical-like changes, but we must be careful about that to avoid human suffering in the process. Education is a tool to make our society better. It helps us to teach people to fish. Instead of giving people fish to eat for a day, teaching to fish allow people not to be hungry for the rest of their life.

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