Great Desire for Extended Life and Health amongst the American Public

Yoni Donner¹, Kristen Fortney², Stuart R. G. Calimport³, Karl Pfleger⁴, Munjal Shah⁵ and Joe Betts-LaCroix⁵*

¹ Department of Computer Science, Stanford University, Stanford, CA, USA, ² Department of Developmental Biology, Stanford University, Stanford, CA, USA, ³ School of Life and Health Sciences, Aston University, Birmingham, UK, ⁴ Independent Researcher, San Francisco, CA, USA, ⁵ Health Extension Foundation, Seattle, WA, USA

People want to live long, healthy lives. Previous surveys suggest very limited interest in much longer lifespans, but we show that stipulating good health changes responses to favor longer lives by an order of magnitude. Advances in aging research hold out hope for greatly slowed aging with associated good health. Understanding the public’s desires correctly is important to avoid misallocation of resources for research.

Keywords: survey research, life extension, public policy, public opinion, lifespan

Recent advances in aging research and regenerative medicine may soon translate into dramatically increased human lifespans. But does the American public want to live longer? Popular press argues the answer is no, e.g., a recent survey on desired lifespan reported in the New York Times found 60% of respondents voted for the shortest option, an 80 year lifespan, while fewer than 1% opted for an unlimited lifespan (Duncan, 2012). Here, we show that negative attitudes to longer lives are a consequence of erroneously equating extended life with an extended period of frailty. When we stipulated continued health to the original survey question, responses dramatically favored longer life: only 20% wish to die at age 85, while 42% want an unlimited lifespan. Since funding for aging research depends on its perceived value, better science communication is needed to align public policy with public interests.

We surveyed 1000 individuals (through “Ask Your Target Market,” http://aytm.com/) about how long they wished to live (to age 85, 120, 150, or indefinitely), under 3 scenarios: (1) sustained mental and physical youthfulness, (2) mental youthfulness only, (3) physical youthfulness only. While responses to the two partial youthfulness conditions recapitulated the results of previous surveys (Cicirelli, 2011; Kogan et al., 2011; Partridge et al., 2011; Duncan, 2012; Pew Research Center, 2013), i.e., most responders (65.3%) wished to live to age 85 only—under scenario (1) the pattern of responses was completely different. When guaranteed mental and physical health, 797 of 1000 people wanted to live to 120 or longer, and 53.1% of the 797 desired unlimited life spans. Furthermore, 70.1% of the people who responded 85 to scenario (2) or (3) changed their answer to 120 or longer in scenario (1). Full survey response data are publicly available from: http://healthextension.co/wp-content/uploads/2015/11/AYTM-Results.csv.

The fraction of people who changed their answer from 85 to 120 or longer was significantly higher among people with some interest in science (445/622 vs. 13/31, p < 0.001, Fisher’s exact test), and this was the main predictor of changing the answer to favor longer life. Less significant correlations were found with other surveyed variables such as age, health status, and self-esteem. Similar results were recently reported for Canadians (Dragojlovic, 2013): 59% of 1231 respondents wished to live to 120 (the maximum age included in that survey), and science orientation was the strongest predictor of support for life extension.
We also reproduced our primary finding—that most people wish to live far longer than the average human lifespan so long as they stay healthy—using Google Surveys (McDonald et al., 2012). In this replication cohort of 1500 respondents, we found that 74.4% wished to live to 120 or longer if health was guaranteed, but only 57.4% wished to live that long if it wasn’t. Full survey data and results are publicly available in an interactive browsable format from: https://www.google.com/insights/consumersurveys/view?survey=rkieml6pkjigf.

A recent survey by the Pew foundation (Pew Research Center, 2013) found a basic result similar to other prior work: 56% of people would not want medical treatments to slow aging vs. 38% who would. Interestingly, this survey also asked what respondents thought other people would do, finding that 68% thought most others would choose such treatments (vs. 27% who did not). Future work to explore this discrepancy should investigate whether most people perceive a difference in likely future health of others vs. themselves in the context of longer lives. The Pew survey also found that more people thought radical slowing of aging would be bad for society (51%) than good (41%). Future work should test whether this too would reverse under stipulation of youthful health.

Results from The Human Memome Project (HMP)—a project to survey longevity predictors, socio-cultural information and attitudes to longevity—show that attitudes to long life are not just positive in North America, but that globally, citizens show positive attitudes to long life (Calimport and Bentley, 2013). 175/394 participants from crowdsourcing and citizen science communities definitely wanting to live as long as possible and 97/394 participants probably wanting to live as long as possible. 189/394 participants stated that they definitely valued their lifespan and that of others highlighting the value of lifespan for citizens. The HMP data for those that opted in to the open science dataset are available on ResearchGate at: https://www.researchgate.net/publication/256460492_HMP_Open_Science_Dataset_04092013.

REFERENCES

Andersen, S. L., Sebastiani, P., Dworkis, D. A., Feldman, L., and Perls, T. T. (2012). Health span approximates life span among many supercentenarians: compression of morbidity at the approximate limit of life span. J. Gerontol. A Biol. Sci. Med. Sci. 67, 395–405. doi: 10.1093/gerona/glr223

Calimport, S. R. G., and Bentley, B. (2013). “The human memome project: text-data analytics to find socio-cultural predictors of longevity utilising the quantified self, crowdsourcing and citizen science communities,” in Conference Paper, SENS 6, Queens’ College Cambridge (Cambridge, UK).

Cicirelli, V. G. (2011). Elders’ attitudes toward extending the healthy life span. J. Aging Stud. 25, 84–93. doi: 10.1016/j.jaging.2010.08.011

Dragojlovic, N. (2013). Canadians’ support for radical life extension resulting from advances in regenerative medicine. J. Aging Stud. 27, 151–158. doi: 10.1016/j.jaging.2012.12.008

Duncan, D. E. (2012). How long do you want to live? N. Y. Times, p. SR4.

Fries, J. F. (1980). Aging, natural death, and the compression of morbidity. N. Engl. J. Med. 303, 130–135. doi: 10.1056/NEJM19800717303030

Kogan, N., Tucker, J., and Porter, M. (2011). Extending the human life span: an exploratory study of pro- and anti-longevity attitudes. Int. J. Aging Hum. Dev. 73, 1–25. doi: 10.2190/AG.73.1.a

McDonald, P., Mohebbi, M., and Slatkin, B. (2012). Comparing Google Consumer Surveys to Existing Probability and Non-Probability Based Internet Surveys. Google Inc., Whitepaper. Available online at: http://www.google.com/insights/consumersurveys/static/consumer_surveys_whitepaper.pdf.

Partridge, B., Lucke, J., Bartlett, H., and Hall, W. (2011). Public attitudes towards human life extension by intervening in ageing. J. Aging Stud. 25, 73–83. doi: 10.1016/j.jaging.2010.08.012

Pew Research Center (2013). Living to 120 and Beyond: Americans’ Views on Aging, Medical Advances and Radical Life Extension. Washington, DC: Pew Research Center's Religion and Public Life Project.

Stipp, D. (2012). The transformative promise of aging science. Cell Cycle, 11, 3903–3904. doi: 10.4161/cc.22211

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2016 Donner, Fortney, Calimport, Pfleger, Shah and Betts-LaCroix. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.