Results of Survey on Wellbeing and Bridge by Samantha Punch March 31

Projects funded by English Bridge Education and Development (EBED) in partnership with the University of Stirling in Scotland have published two online papers in relation to 'brain health' and 'healthy ageing' which are connected to playing bridge.

The first report discusses the link between playing bridge and subjective measures of quality of life and considers two research questions:

- 1) What are the characteristics of bridge players and their playing habits?
- 2) Is there an association between playing bridge and measures of individual wellbeing?

An online questionnaire was developed to capture demographic, social, subjective wellbeing, and bridge playing characteristics of individuals. Over 7000 individuals from the UK and internationally responded to the survey. Many thanks to those from BridgeWinners who participated in this research. Questions relating to demographic, social and wellbeing were used from a subset of the questions contained in Wave 6 of the English Longitudinal Study of Aging (ELSA) to enable a comparison between bridge players and non-bridge players.

The key finding was that those who play bridge have higher levels of wellbeing than those who do not play. Bridge players report high levels of subjective wellbeing, revealing they tend to be optimistic about their future and the opportunities available to them, satisfied with the way their lives have turned out, sociable, and in control of their own lives. However, the results of our study are not conclusive and the question remains: does bridge have a positive effect or are healthier, happier individuals more likely to play bridge?

A summary follows below and for further information, including the full report from the survey as well as a literature review of *Possible Interventions into Healthy Ageing and Cognitive Stimulation: Exploring the Links between Bridge and Dementia*, see EBED's website:

http://www.ebedcio.org.uk/health-wellbeing-research

# 1) Bridge: Characteristics of Players and Playing Habits

The survey found that 94 percent of individuals that play bridge have regular playing partners, with the mean and median number of partners being 3 and 2 respectively; quite a number of people (16%) have had the same partner for over 30 years. On average, individuals play bridge 10 times in a typical month; however this excludes sessions played online (via Bridge Base Online for example) and so the actual number of sessions is likely higher. Bridge also appears to be a persistent feature of people's lives, with many respondents indicating they have been playing for decades; even those that take a break for a number of years find their way back to the game. Family members and face-to-face lessons play a crucial role in individual's learning of the game, with books and online resources playing a minor role. Finally, a majority of respondents indicated that playing bridge brought benefits to them personally in the form of the game having a competitive element, facilitating socialising with friends, and – most commonly – being mentally stimulating and deriving enjoyment from the activity; this is the case for all ages in our sample.

## 2) Playing Bridge and Individual Wellbeing

Using our quality of life measures, it appears that individuals in the sample are optimistic about their future and the opportunities available to them, satisfied with the way their lives have turned out, sociable, unencumbered by money concerns and feel they are in control of their own lives. On the other hand, a large minority of respondents reported they at least sometimes feel that their age and health prevents them from pursuing activities. Using a linear regression model to predict an individual's wellbeing, we discovered that playing bridge has a positive effect, though the effect is not as strong when we only include respondents aged 50 and older. For those that play bridge, the specifics of their playing habits – such as the number of regular partners or years spent playing the game – are not associated with higher levels of wellbeing.

What is clear is the need for unambiguous research designs to test the effect of playing bridge on a chosen measure of wellbeing. Experimental or quasi-experimental approaches could isolate the specific effect of playing bridge, eliminating confounding factors that are almost certainly a feature of our study.

Further bridge research is being coordinated by one of EDEB's Trustees, Dr Caroline Small, an Honorary Senior Lecturer at Imperial College, London, working alongside Prof. Samantha Punch and colleagues from the Faculty of Social Sciences at the University of Stirling.

The full report is available at the following link:

http://www.ebedcio.org.uk/files/docs/research/individual-wellbeing-and-bridge-an-empirical-analysis.pdf

 $\underline{www.ebedcio.org.uk/files/docs/research/individual-wellbeing-and-bridge-an-empirical-analysis.pdf}$ 

## **Brett Kunin**

You are ignoring the author of this comment. Click to temporarily show the comment. TY, Samantha. I agree that the key is the question you posed in the 4th paragraph -- one must always be wary of a syllogism. I trust that if there is additional research leading to further findings, you will follow-up with another post.

March 31

Please <u>log in</u> to leave a comment.



#### David Caprera

You are ignoring the author of this comment. Click to temporarily show the comment. I would be interested to know to what extent this reflects the level of education and socioeconomic status of bridge players versus non-bridge players. That smarter, richer people with

access to superior health care feel better than the rest would not seem surprising.

Now, maybe we are just a bunch of poor dumb bastards. I really don't know. March 31



#### Samantha Punch

You are ignoring the author of this comment. Click to temporarily show the comment. Equivalent individuals were compared by controlling for demographic and social factors. April 1

Please log in to leave a comment.



## Meic Goodyear

You are ignoring the author of this comment. Click to temporarily show the comment. David - I agree it would be good to control for education and socio-economic status, but it's a piece of research being done in the UK, where we all have access to the best health care through our National Health Service,

March 31

Please log in to leave a comment.



#### Timuçin (Timo) Erkoç

You are ignoring the author of this comment. Click to temporarily show the comment. Thank you, Samantha!

March 31

Please log in to leave a comment.



#### John Larkin

You are ignoring the author of this comment. Click to temporarily show the comment. Thank you.

A couple of questions?

What is the range of each individual bar in Figures 2 and 3? They seem not to add-up, and I wondered if this was from reproducing computer-ranges rather than self-chosen.

In Figure 4 this gives me a problem as the ranges for the two groups seem to differ, and I wondered if that meant the y-axis units would have to change? Difficult to compare.

If the raw comparison of bridge players vs non-players shows no well-being difference, but the regression analysis does show a significant and fairly large difference - that suggests that the bridge playing population differs in these factors from the non-players in a way that would tend to worsen their wellbeing scores. Do you have a comparison of the relevant factors in the bridgeplaying and non-playing groups, as that might show us the imporant ones?

Ok, then... three OK? March 31



#### Samantha Punch

You are ignoring the author of this comment. Click to temporarily show the comment. Thank you for your observant comments. Diarmuid who did the quantitative analysis has replied but his figure and table won't paste here so I hope the below makes sense.

## Figures 2 & 3

Yes, the width of individual bars was decided by the statistical software: width=1.7894737 and width=2.1578947 respectively. Setting width=2 or width=1 doesn't change the overall shape of the distributions by very much.

## Figure 4

The widths were determined by the software, and are not the same due to the different sample sizes of each group. This shouldn't necessitate any changes to the y axis as the density measures the frequency of the different bars in the data, though I agree that you are not comparing the same range of values for each group and that having a common width would be clearer in this case).

## Regression results

If I've understood this correctly, you would like to see separate regression analyses for bridge and non-bridge players alike: if so see below. The factors explain more of the variation in wellbeing for non-bridge players, and there are some differences in the magnitude and direction of effects between the groups. As we acknowledge in the conclusion, it is likely that playing bridge has an effect on wellbeing, but we cannot rule out the plausible possibility that people with higher wellbeing are attracted to bridge (and other similar activities).

Not sure if the below can be read - supposed to be in table form...

Coefficient
Bridge Non-bridge
Age -0.04\*\*\* 0.14
Female 0.75\*\*\* 1.69
Ability to socialise when feel like it 5.76 7.95
Member of an online social network -0.2125 0.73
Live with a spouse or partner 1.20 3.65
Retired 1.20 -.79
Degree or higher .43 0.80

Constant 39.39 22.98 R squared 7% 19% n 6,092 293 April 1



#### John Larkin

You are ignoring the author of this comment. Click to temporarily show the comment. Hi

Thanks for this.

Simpler might be a comparison of players vs non-players re these factors.

E..g are bridge players more likely to be male?

Or more likely to be non-retired?

OR less likely to be able to socialise whenever they like...?

....than non-bridge players.

April 1

Please log in to leave a comment.



# Ed Judy

You are ignoring the author of this comment. Click to temporarily show the comment. As a layman, I'm always interested in the response to two key questions:

- (1) Reliability (are the findings easily replicated?)
- (2) Validity (do the findings measure what they purport to measure?)

What would non-layman opine?

March 31



## Samantha Punch

You are ignoring the author of this comment. Click to temporarily show the comment. Reliability: the questions measuring wellbeing and associated factors were drawn from the English Longitudinal Study of Aging (ELSA), a large scale, high quality survey. Therefore we are confident that the responses to these questions in our survey are reliable i.e. measure the same thing, in the same way, every time.

Validity: we cannot claim that the sample of survey respondents is representative of the populations of bridge and non-bridge players in the UK, therefore it is unlikely that our findings generalise to said populations. What we found is indicative i.e. bridge looks to be associated with higher wellbeing but a different research design would be needed to confirm it.

April 20

Please log in to leave a comment.



#### Steve Zolotow

You are ignoring the author of this comment. Click to temporarily show the comment.

Chess has done an excellent job of 'proving' that chess education in schools is extremely beneficial to the mental & psychological development of children. Perhaps bridge should do likewise. It would make bridge eduction much more acceptable.

April 4



#### Samantha Punch

You are ignoring the author of this comment. Click to temporarily show the comment. Do you know of any references for this? We're trying to build up a general literature review on related material in similar fields such as chess, scrabble, poker, so any suggestions much appreciated. We're waiting to hear the outcome of a funding application to research the benefits of learning bridge across the lifecourse, which will include a focus on schools. April 4



#### **David Levin**

You are ignoring the author of this comment. Click to temporarily show the comment. The U. S. Chess Federation has made available a free CD that contains a bibliography of chess research. I have not seen it, but it's described at

http://www.uschess.org/content/view/7866/131/, which also gives contact information for obtaining the CD.

April 4



## Samantha Punch

You are ignoring the author of this comment. Click to temporarily show the comment. Very helpful thanks.

April 4

Please <u>log in</u> to leave a comment.



## John Larkin

You are ignoring the author of this comment. Click to temporarily show the comment. Have been watching poster on BBO vs. England.

Exciting.

Thanks.

April 7

https://drive.google.com/file/d/1EmmnB1UZRvv6WtKVDUjfMA9BFmotqxf4/view?ts=5ae09d75