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**"Better the devil you know": are stated preferences over health and happiness determined by how healthy and happy people are?**

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## **Abstract**

Most people want to be both happy and healthy. But which matters most when there is a trade-off between them? This paper addresses this question by asking 4,000 members of the public in the UK and the US to make various trade-offs between being happy or being physically healthy. The results suggest that these trade-offs are determined in substantial part by the respondent's own levels of happiness and health, with happier people more likely to choose happy lives and healthier people more likely to choose healthy ones: "better the devil you know, than the devil you don't". Age also plays an important role, with older people much more likely to choose being healthy over being happy. We also test for the effect of information when a randomly chosen half of the sample are reminded that it is possible to be happy without being healthy. Information matters, but much less so than who we are. These results serve to further our understanding of the aetiology of people's preferences and have important implications for policymakers who are concerned with satisfying those preferences.

Key words: health, subjective well-being, happiness, preferences  
JEL: D72; I30; I31; I38

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# 1 Introduction

In various ways, policymakers seek to improve peoples' lives. Research into subjective well-being (SWB), has offered considerable insight into the determinants of how people think and feel about their life (Dolan et al., 2008). Ongoing evidence and continued development of SWB measures has led to increasing interest amongst policy-makers in using these measures to routinely monitor social progress (Stiglitz et al., 2009; HM Treasury, 2011; Dolan and Metcalfe, 2012; Helliwell et al., 2013; OECD, 2013; National Research Council, 2013) and to value intangibles and non-market goods (e.g., van Praag and Baarsma, 2005; Luechinger and Raschky, 2009; Ludwig et al., 2012; Danzer and Danzer, 2016; Dolan et al., 2019).

These analyses take SWB to the ultimate welfare consideration and other factors, such as health, income, and relationships to be important only insofar as they contribute towards SWB. This is the view taken by many philosophers in the hedonic tradition (e.g., Bentham, 1789) and, unsurprisingly, by many of those involved in the empirical analyses of SWB data (e.g., Frijters et al., 2020), although rarely in such explicit terms. For many other scholars more aligned with a preference satisfaction account of welfare, SWB is only one, albeit important, aspect of individuals' overall utility function (Becker and Rayo, 2008). Many economists would see income to be the best guide to welfare because, all else equal, more money means that more desires can be fulfilled (Harsanyi, 1982). Proponents of an objective lists account of well-being, including those working in public health, in contrast, typically view health as (one of) the ultimate objective, at least insofar as public policy is concerned (Sen, 1999).

The stated preferences of the public can be used to inform this debate. Public preference data can never resolve the normative debate about what matters most for human welfare and they obviously cannot resolve the normative debate about the degree to which those preferences should be used to inform welfare judgements in the first place. They can, however, shed light on the support for different types of welfare being used in policy decisions. If the government is going to set out its objectives as maximising happiness or health, for example, it would be well placed to know the support for these positions. And not just (or even) from polling, but from studies that explicitly require respondents to make trade-offs between different objectives.

In considering a small set of just four aspects of life—including income, life expectancy, health and happiness—Adler and Dolan (2008) find that health is the most important factor when ranking hypothetical lives, followed by happiness. Benjamin et al (2014) confirm the importance of both health and happiness amongst a more comprehensive list of 136 fundamental aspects of life used to compile a single overall well-being index. Whether health or happiness is dominant overall depends on whether the choice is about self or family, with health being more important for self and happiness in the context of decisions involving others.

In a large scale study of 13,000 people in the UK and the US, which directly elicited preferences over the trade-off between SWB and, separately, income, family, knowledge, career and health, Adler et al. (2017) find that a life high in SWB tends, on average, to be preferred to a life high in four out of these five other dimensions. The exception is health. A substantially larger percentage of respondents choose health over SWB, as compared to

choices between the other dimensions and SWB. The results differed slightly by how SWB was defined (life satisfaction, worthwhileness, or happiness) but, overall, about two thirds of responses suggested that health matters more than happiness.<sup>1</sup>

Adler et al. (2017) also found that respondents were more likely to choose happiness over health when the choices were described in “vignettes” of hypothetical people rather than as personal choices. These findings suggest that respondents may be more willing to choose happiness over health for a third party rather than for themselves.

Van de Wetering et al. (2016) focus exclusively on the health-happiness nexus. In their study circa 1,000 participants in the Netherlands are asked to choose which of two groups of patients to treat based on the different hypothetical levels of health and happiness before and after receiving treatment. They conclude that both health and happiness should be considered in healthcare decision making processes.

To better understand preferences over health and happiness we need to explore the nature of those preferences, and the conditions under which they persist or change. Whether and to what extent preferences are shaped by the characteristics of the respondents is one important area for exploration. In the context of mate preferences, for example, a woman’s attractiveness (defined by her waist-hip ratio, and her possession of facial features considered to be attractive) is associated with her self-reported strength of preference for masculine features in men’s faces (Penton-Voak et al., 2003). Affective states have also been shown to be predictive of such preferences. Online studies conducted in the US have shown that women’s fear predicts preferences for aggressive and formidable males. Women’s fear was measured using an adapted version of the British Fear of Local Crime Survey and preferences were self-reported from a number of domineering adjectives such as “dominant”, “domineering”, “commanding”, “overbearing”, “tough-guy”, “bad-boy”, “strong”, “powerful”, “broad shoulders”, “tall” and “could win a fight if necessary” (Snyder et al., 2011).

Given these documented relationships between personal/affective characteristics relevant to the choice at hand and preferences, it is possible that people’s preferences for health or happiness may be determined by their own health (personal) and happiness (affective) characteristics. To our knowledge, research is yet to explore this possibility. In line with congruence theories (Forgas and Eich, 2012), for example, it may be that healthier people tend to select lives high in health and happier people tend to select lives high in happiness when faced with a trade-off between the two. There is a wealth of research which demonstrates that affective states often produce powerful congruence effects on cognition and behaviour. For example, people in negative mood states tend to pay more attention and respond faster to negative words (Forgas and Eich, 2012).

In addition to personal and affective characteristics, information might matter. Insofar as

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<sup>1</sup>For example, when asked to choose between a high-SWB/low-health life and a low-SWB/high-health life, the percentage of UK respondents choosing high-SWB ranged from 29% to 43% (depending on whether SWB was specified as life satisfaction, happiness or feeling worthwhile). For similar choices against income, family, career or education, the percentages choosing the high SWB life ranged from 57%-67% (income), 59%-69% (family), 71%-82% (career) and 62%-72% (education).

health is an important component of SWB, it is possible that peoples' preference for health over happiness are motivated by an inability to imagine experiencing happiness in a state of poor health. This inability may persist despite abundant empirical evidence suggesting that people often adapt in happiness to major life events (Schkade and Kahneman, 1998; Kahneman et al., 2005; Loewenstein and Ubel, 2008; Bradford and Dolan, 2010) including health related conditions, such as disability and disease (Wu, 2001; Riis et al., 2005; Ubel et al., 2005; Dolan and Kahneman, 2008; Menzel et al., 2002).

Since many people will not have experience of such adaptation effects, it may be harder for them to appreciate the pervasiveness of our ability to come to terms with adversity. Previous evidence suggests that offering information on the experience of 'being' rather than 'becoming' unhealthy has indeed resulted in a change in preferences in time trade-off exercises used to calculate quality-adjusted life years (QALYs) (McTaggart-Cowan et al., 2011; Dolan et al., 2013). Hence, brief information preceding the trade-off questions can arguably give respondents the ability to make more *informed preferences* (Harsanyi, 1997). If alerting people to this information changes their preference, then it will be possible to isolate the inability to imagine experiencing happiness in a state of poor health as a key motivation for peoples' preference for health over happiness.<sup>2</sup> Not only will this deepen our understanding of the relationship between health and happiness, but it will reveal the extent to which preferences are malleable within the context of welfare maximisation; and for whom, which can be used to inform decision-making.

Against this background, this study seeks to explore the impact of own health and happiness, the provision of information, and background characteristics on the nature and extent of the trade-off between happiness and health. Following Adler et al. (2017), we design a survey using binary life scenarios directly trading-off hypothetical lives high/low in levels of SWB and health. Using this question format, we explicitly elicit individuals' preferences for SWB or health. We gather important information of peoples' physical and mental health as well as their own happiness levels.

We explore the possibility that a preference for health over happiness is driven by mispredictions about the extent to which individuals' happiness adapts to health problems. Following evidence that healthy individuals fail to anticipate this adaptation to poor health, we offer brief information related to peoples' adaptation to adverse health states which is randomly presented in half of our sample participants. This approach relates to the inclusion of 'cheap talk' in contingent valuation studies, which aims to decrease the hypothetical bias associated with the valuation of the good in question (Cummings and Taylor, 1999; Carlsson et al., 2005).

We, furthermore, consider the heterogeneity of preferences by using three distinct SWB measures in all of the trade-off questions—an evaluative measure of life satisfaction, an

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<sup>2</sup>This is not to say that information in itself is capable of changing preferences entirely. More research is needed into the effects of different modes of information, in addition to how different people evaluate that information.

affective measure of happiness, and a eudaimonic measure of worthwhileness/purpose in life. We additionally control for a battery of background characteristics (‘beliefs’) related to health and happiness, and repeat the trade-off questions asking people to make the choice for their *friend*.

We collect data from a representative sample of over 4,000 individuals in the UK and the US. The choice of these two countries is not coincidental. From a happiness viewpoint, contrary to the US, the UK has included subjective well-being questions in national population surveys for over a decade and these questions have been considered in policy-making guidelines (e.g., HM Treasury, 2011). From a health viewpoint, whilst healthcare is publicly funded in the UK, this is not the case in the US. This stark difference in public healthcare prioritisation may impact the extent to which the public consider a life high in health to be an important dimension of the good life. It is thus interesting to see how these two countries differ in terms of preference for subjective well-being versus health.

We report the following key empirical findings. First, the choice of the life high in SWB is broadly about 50%, suggesting that both health and happiness matter. Second, the predominant factor determining the choice for the life high in SWB is one’s self-reported physical health; respondents in relatively poorer physical health are significantly more likely to choose more happiness in life. Third, both the information that it is possible to be happy despite being unhealthy and making the choice for a friend significantly increase the choice for the happy life, but have a much smaller effect. Fourth, own levels of subjective well-being are significant determinants of choice for the happy life when it comes to choosing for oneself, but not when choosing for a friend. Finally, the dimension of SWB used in the description in the scenario matters, with that of happiness (the affective component) increasing choices for the happy life as compared to the evaluative and eudaimonic components. On the socio-demographic variables, age and ethnicity indicators stand-out, with older respondents and those of non-White ethnic background choosing the healthier life.

Section 2 describes the data and methods used; Section 3 presents descriptive statistics and the empirical results; Section 4 discusses the findings and concludes.

## 2 Data and Methods

### 2.1 The data and survey design

Our data comes from a sample of 2,005 UK and 2,003 US individuals, surveyed online between 27/08/2019—5/11/2019. The sample is representative of the respective populations with respect to gender, age, ethnicity, and income.

The survey’s design is as follows. In Section I, respondents first report their own level of subjective well-being based on the four questions used by the Office for National Statistics in the UK. These are: “*Overall, how satisfied are you with your life nowadays?*” measuring the evaluative dimension; “*Overall, how worthwhile are the things that you do in your life?*”

measuring the eudaimonic dimension; and “*Overall, how happy did you feel yesterday?*” and “*Overall, how anxious did you feel yesterday?*” both measuring the affective dimension. Reports are on a 0-11 scale, from ‘not at all’ to ‘completely’.

Section II of the survey offers brief information on adaptation to adverse physical health events. Survey participants are presented with this text at random, so about half of participants go through this arm of the survey. The information presented here reads as follows:

When people think of physical illness or disability they might often associate it with unhappiness. Some of us feel sorry for disabled people, because we imagine it must be miserable to be disabled.

But a large body of scientific evidence suggests that this is not the world that most people with chronic physical illness or disability inhabit. Scientists have done very thorough testing of what people say and how they think (based for example on disabled peoples’ testimonials and self-reported happiness) showing that many people in these adverse health states do adapt in time to the pre-trauma levels and live fulfilling lives.

Section III of the survey introduces participants to the trade-off questions, clarifying that the intention is to elicit preferences and opinions about what makes for a good life and that there is no “right” or “wrong” answer to these comparisons. Participants are asked to select one of two hypothetical lives, high (low) in subjective well-being and low (high) in *physical* health.<sup>3</sup> We elicit preferences for each dimension of subjective well-being in the scenarios—i.e., evaluative, eudaimonic and affective—with each participant responding to all three life pairs. Each of these may yield different results in terms of overall preferences given possible differences in the extent to which people may value these subjective well-being dimensions differently. Whether the health over happiness preference remains stable against these three conditions can help policymakers to decide to what extent, and under which conditions, they should use this preference to guide their decisions.

Critically, for scenarios associated with poor health to not be associated with a reduced life expectancy, our scenarios inform participants that life expectancy is the same in each of the possible hypothetical lives and that the state of each life in the scenario will remain consistent over time. This section is presented as follows.

Please select life A or B from the following statement pairs.

Life expectancy is the same in the two lives. Each life in the imagined states will remain consistent over time.

Which life you would choose for yourself?

Life Satisfaction:

- Life A: You feel satisfied with your life. You have poor physical health.
- Life B: You do not feel satisfied with your life. You have excellent physical health.

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<sup>3</sup>Note that all hypothetical lives considered in this study are exclusively based on physical health.

Worthwhile:

- Life A: The things you do in your life feel worthwhile. You have poor physical health.
- Life B: The things you do in your life do not feel worthwhile. You have excellent physical health.

Happiness:

- Life A: You feel happy. You have poor physical health.
- Life B: You do not feel happy. You have excellent physical health.

As well as preferences over which dimension of subjective well-being, there are also issues pertaining to preferences over *whom*. If stated preferences are to be used to guide policy making, we might wish to consider whether the choices are framed on behalf of self or others, such as a friend. Previous work has highlighted a diversion in preferences for lives high in different factors including health and happiness when people are deciding for themselves relative to when they are deciding for other people (Dolan, 2019). In making choices for oneself, preferences may represent meta-preferences (i.e., choice here might represent a preference the individual wishes to have). Although not viewed as a disadvantage, nonetheless by distancing from the self and changing the frame of reference in choosing for someone else—i.e., making the choice for a friend—preferences for your friend might, to some extent, reflect *normative preferences*. Typically, people have been shown to value happiness more than other dimensions of life when they are deciding on behalf of others than themselves. Taking this under consideration, we next present the same three life pairs again, with participants this time asked which life they would choose for a friend—i.e., all “you” statements in the scenarios are replaced with “your friend” statements—so as to gain a more comprehensive understanding of contexts under which the preference for health over happens persists.

Following Adler et al. (2017), the survey design presents one of the three “you” pair of lives at random and asks participants to rate the credibility of each hypothetical life in that pair. This is critical as for the analysis of preferences based on these trade-off questions to be of any value, it needs to be based on hypothetical lives that are considered by respondents as meaningful. Credibility is assessed by asking respondents “*how likely do you think it is that someone would have a life like [the one described in Life A, B]?*”, with responses on a 0-10 scale ranging from ‘not very likely’ to ‘very likely’.

Since “what we rationally want or do depends on our beliefs” (Parfit, 2011:111), in Section IV we additionally include a set of background questions which we broadly refer to as ‘belief questions’ related to health and happiness which may influence choice in trade-off scenarios. Similar to Van de Wetering et al. (2016), we also assess how important the participant considers good physical health to be for their happiness (0-10 scale, ranging from ‘not very important’ to ‘very important’); where note that the position of this question is randomised, with half the sample receiving it at the beginning of Section III prior to



completing the trade-off questions. Our objective here is not to examine the origin or evolution of those beliefs—which arguably stem from personal experiences, social learning, and the acquisition of knowledge (Anderson et al., 2004; Seymour et al., 2007)—rather to further understand their role as determinants of the choices respondents make for themselves and others.

Participants are asked to rate their physical health and mental health (“*would you say that in general your physical health, mental health is...*” [‘*excellent; very good; good; fair; poor*’]). They are also asked three questions related to worries about death (“*to what extent are you worried about death, the thought of not being able to die the way you would want to, how and where you will die?*”, each on a 0-10 scale from ‘*not at all worried*’ to ‘*I worry very much*’). The extent to which respondents agree with three additional statements about health, happiness and religion follow. These are: “*People should look after their physical health*”, “*people should want to be happy*”, and “*my religious beliefs are what really lie behind my whole approach to life*” (all on a 0-10 scale, from ‘*do not agree at all*’ to ‘*agree very much*’).

The survey concludes by asking further demographic questions (in addition to age, gender, ethnicity and household income band, which are used as quotas for the representativeness of the sample). These include marital status, employment status, highest level of education reached, and number of children under the age of 16 in the household.

## 2.2 Empirical model

Following Kimball and Willis (2006), Becker and Rayo (2008) and Adler (2012) we consider objective goods, such as health, and hedonic states of subjective well-being as different elements of an individual’s utility. This can be illustrated in a simplified model as  $U = U(H, SWB)$ , where  $H$  is health and  $SWB$  is subjective well-being. It is assumed that individuals maximise their utility subject to their budget constraint and production functions for each of  $H$  and  $SWB$  based on their individual preferences. An individual can thus have higher levels of  $H$  as compared to  $SWB$  leading to higher utility than another individual with lower levels of  $H$  but higher levels of  $SWB$  (and vice-versa); and, thus, the former will weakly prefer health to happiness (and vice-versa), under the assumption that other things—such as life expectancy—is held constant. That is,  $U(H_{High}, SWB_{Low}) \geq U(H_{Low}, SWB_{High})$ .

Empirically, we estimate respondents’ probability of preferring the life high in subjective well-being given by:

$$Pr(SWB_{High} = 1|z) = F(\beta_0 + \beta_1 SWB + \beta_2 Info_i + \beta_3 Choice_{Friend} + \beta_4 SWB_{R,i} + \beta_5 X_i + \epsilon_i) \quad (1)$$

Where  $F(\cdot)$  is the standard normal cumulative distribution function.  $SWB_{High}$  is a

binary variable taking the value of one if at a given pair of lives the respondent chooses the life high in the subjective well-being element;  $SWB$  is a set of binary variables corresponding to the three measures of subjective well-being  $\{Life\ Satisfaction, Worthwhileness, Happiness\}$ ;  $Info$  is a binary variable denoting whether the respondent is randomly allocated to the arm of the survey receiving the brief information on adaptation to adverse health states (i.e., section II of the survey);  $Choice_{Friend}$  is a binary variable taking the value of one if the respondent is choosing for a friend and the value of zero if choosing for him/herself;  $SWB_R$  is the respondent’s self-reported levels of subjective well-being (measured here by their own life satisfaction, worthwhileness, happiness yesterday and anxiety yesterday);  $X_i$  represents a set of socio-demographic characteristics of the respondent, including age, gender, marital status, employment status, highest educational qualification, number of children under the age of 16 in the household, income (in bands), and ethnicity.

Equation 1 is estimated separately for the UK and the US samples. We routinely cluster standard errors at the respondent level so as to allow the error term,  $\epsilon$ , to be correlated within, but not between, respondents. Further specifications augment equation 1 with additional variables, including a set of beliefs the individual holds about the importance of health for happiness (and vice-versa), religion and worries related to death.

## 3 Results

### 3.1 Descriptive statistics

Overall, the proportion of respondents choosing the life high in subjective well-being for themselves in the UK is 50.4%; the corresponding statistic for the US sample is at 53.7%. The equivalent statistics for the case of choosing for a friend are higher: 53% for the UK and 56.4% for the US.

Figures 1 and 2 graph these proportions for the UK and the US, respectively. These offer *prima facie* evidence on a number of hypotheses. First, the brief information on adaptation to adverse health states matters, with respondents receiving this information being more likely to choose the life high in subjective well-being, irrespective of whether they are choosing for themselves or their friend. Second, the measure of subjective well-being used on the scenario matters, with the proportion of those choosing the life higher in subjective well-being increasing when it comes to the affective measure as compared to the evaluative and eudaimonic measures. Third, there appears to be a significant difference between choosing for oneself versus choosing for a friend. In general, individuals are more likely to maximise the subjective well-being element of life when making the choice for a friend. The only apparent exception to this tendency occurs for the case of choosing for oneself combined with the happiness measure, under no provision of information, in the UK.

Figure 1: Choice for High SWB Scenario, UK

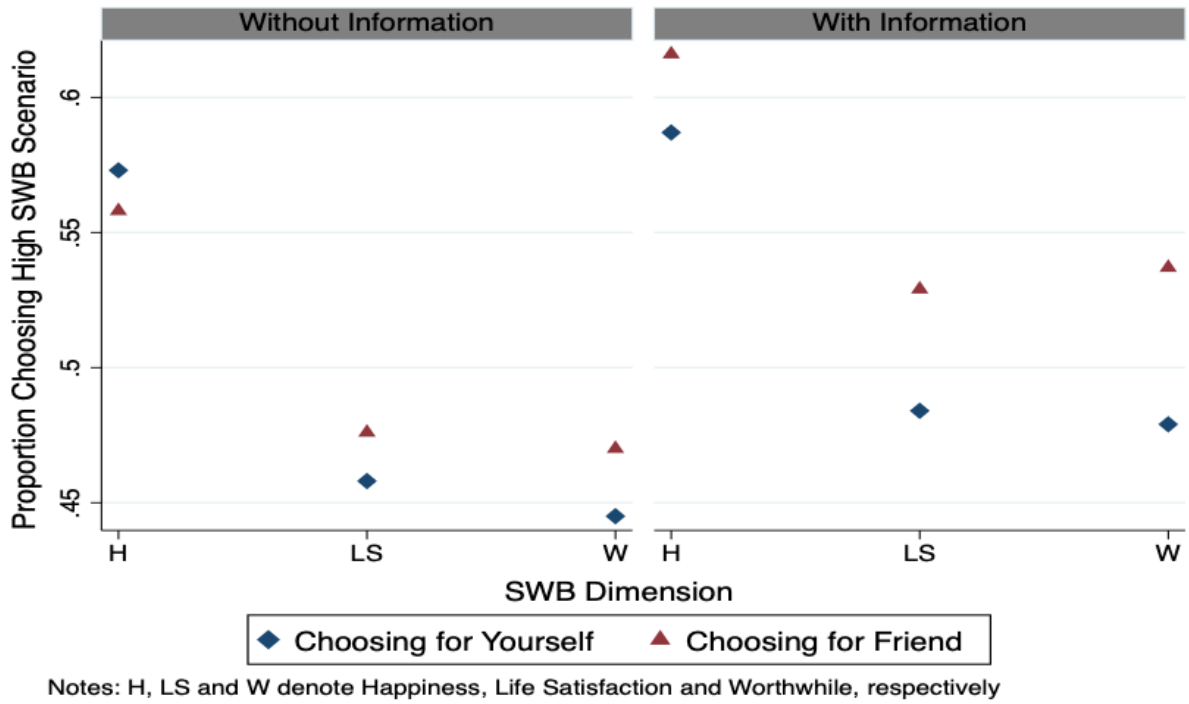


Figure 2: Choice for High SWB Scenario, US

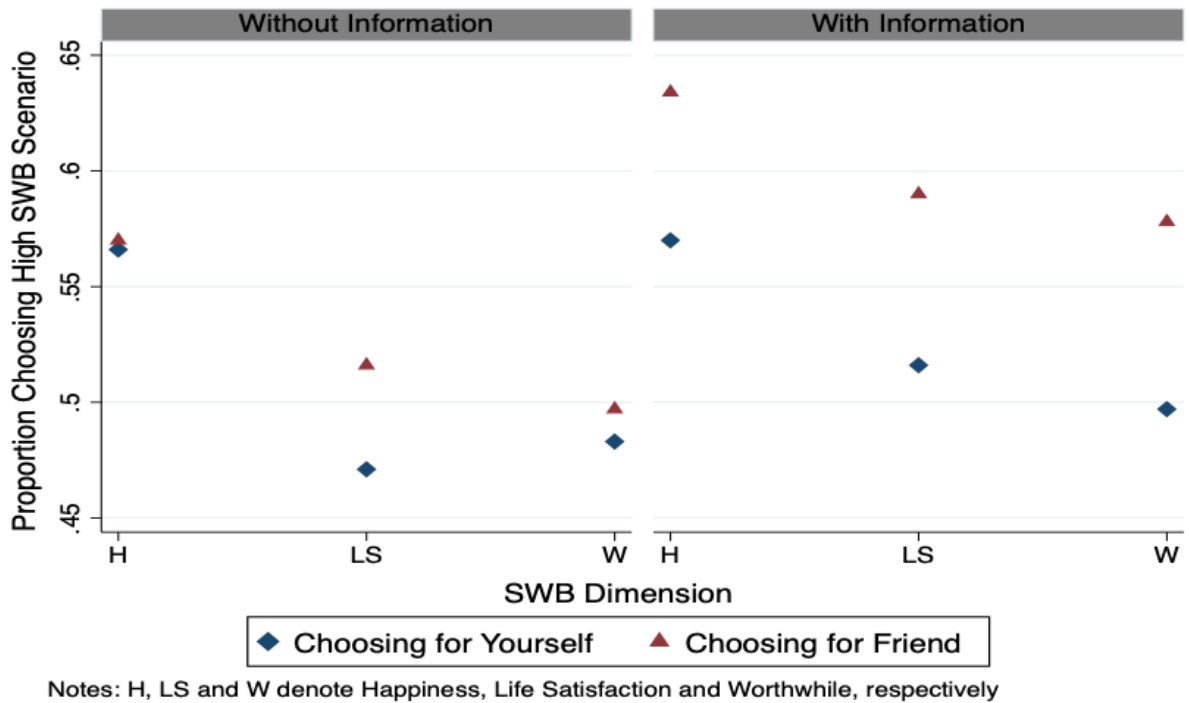


Table 1 offers a test of proportions for these statistics based on the information arm of the survey. Receiving the adaptation information significantly increases the proportion of respondents choosing the life high in subjective well-being in all cases but those choosing

for themselves in the UK (i.e., the upper-left quadrant in Table 1).<sup>4</sup>

Table 1: Choosing life High in SWB

	UK		US	
	Without Information	With Information	Without Information	With Information
<i>Panel A: Choosing for Yourself</i>				
Life Satisfaction	0.458	0.484	0.471	0.559***
Worthwhile	0.445	0.479	0.483	0.528**
Happiness	0.573	0.587	0.566	0.617**
<i>Panel B: Choosing for Friend</i>				
Life Satisfaction	0.476	0.529***	0.516	0.59***
Worthwhile	0.47	0.537***	0.497	0.578***
Happiness	0.558	0.616***	0.57	0.634***

Notes: Figures are proportions of choosing the life high in subjective well-being.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$

## 3.2 Regression Results

Next we turn to a more systematic, regression-based analysis, on the determinants of preferences between health and happiness. Table 2, column 1, presents the estimates following the estimation of equation 1 for the UK and US, respectively. In both countries, the dimension of subjective well-being used in the scenario has a significant and sizeable effect on choice: relative to a scenario where the dimension of subjective well-being is that of worthwhileness (the eudaimonic measure), a scenario based on life satisfaction (the evaluative measure) is not significantly different whereas a scenario based on happiness (the affective measure) increases choice for the life high in subjective well-being by a significant and sizeable degree.

The randomised information provided to participants also plays a significant role on choice, increasing that for the life high in subjective well-being. Respondents are also significantly more likely to choose a life high in subjective well-being for their friend, although the magnitude of this estimate is somewhat smaller. In this specification, respondents' own levels of subjective well-being do not seem to significantly determine choice between scenarios.

Column (2) augments the specification given by equation 1 by adding a set of background questions, including various belief questions. Regarding respondents' self-assessed state of physical and mental health, our estimates suggest that only the former is a significant determinant of choice, whereas the latter is not. The interesting finding, however, here is that the lower one's physical health rating is, the more likely on average one is to choose the

<sup>4</sup>Table A1 in the appendix transposes these proportions comparing between scenarios for oneself versus scenarios for a friend. In the absence of the adaptation information there is little evidence that choosing for a friend increases choice for the life high in subjective well-being; this is the case only for the measure of worthwhileness in the UK and of life satisfaction in the US. The adaptation information has, however, a more consistent effect on choice for high subjective well-being for a friend in both countries.

life high in subjective well-being. The magnitude of these coefficients are relatively large as well, rendering one’s physical health as the key determinant of choice between scenarios.

On the belief variables, worry about death is a significant determinant in the UK, reducing the probability of choosing the life high in subjective well-being. In both countries, holding the belief that people should look after their physical health reduces the probability of choice for the life high in subjective well-being. On the other hand, holding the belief that people should want to be happy increases it; although the size of the latter estimates are about half as large as those of the former. Perhaps not as surprisingly, we find that the higher the importance of health for happiness the lower the probability that the respondent will choose a life high in subjective well-being.

Finally, regarding the demographic variables, we generally find gender, age and ethnicity to be consistent determinants of choice. Male respondents are less likely to choose happiness over health. This is also the case as we move up the age band of respondents. Black ethnicity—and Hispanic for the case of the US—is also significantly less likely to choose a life high in subjective well-being, with a considerably large estimate. Income levels and employment status do not appear to be a significant determinant of choice. In the US, the respondents’ education matters, with higher levels of education reducing the probability of choosing the life high in subjective well-being. Furthermore, for both countries, note that in column (2) specifications respondents’ own reports of worthwhileness and are positive determinants of choice for the life high in subjective well-being.

Table 2: Regression results

	UK		US	
	(1)	(2)	(3)	(4)
<i>SWB in Scenario:</i>				
Life Satisfaction	0.004 (0.007)	0.004 (0.008)	0.013 (0.008)	0.014 (0.008)
Happiness	0.106*** (0.008)	0.112*** (0.008)	0.079*** (0.008)	0.083*** (0.008)
Worthwhileness	Reference	Reference	Reference	Reference
Information	0.05*** (0.018)	0.042** (0.018)	0.064*** (0.017)	0.007*** (0.017)
Choice for Friend	0.028*** (0.009)	0.029*** (0.009)	0.028*** (0.009)	0.03*** (0.009)
<i>Respondent’s SWB:</i>				
Own Life Satisfaction	-0.001 (0.008)	0.013 (0.009)	0.004 (0.007)	0.007 (0.007)
Own Worthwhileness	0.006 (0.007)	0.021*** (0.007)	0.008 (0.006)	0.023*** (0.006)
Own Happiness	0.008 (0.007)	0.019*** (0.007)	0.006 (0.006)	0.011** (0.006)
Own Anxiety	0.003 (0.003)	0.006 (0.004)	0.003 (0.003)	0.008** (0.003)
<i>Background Qs:</i>				
<i>State of Physical Health (Reference: Excellent)</i>				
Very Good		0.028 (0.034)		-0.003 (0.029)
Good		0.009** (0.035)		0.074** (0.031)
Fair		0.203*** (0.037)		0.158*** (0.034)
Poor		0.246*** (0.042)		0.192*** (0.046)
<i>State of Mental Health (Reference: Excellent)</i>				
Very Good		0.002 (0.027)		-0.028 (0.025)

Good		0.022 (0.031)		-0.032 (0.029)
Fair		0.032 (0.037)		-0.021 (0.037)
Poor		0.059 (0.049)		-0.032 (0.055)
<i>Beliefs:</i>				
Worried: Death		-0.017*** (0.004)		-0.002 (0.004)
Die way you want		0.008 (0.005)		-0.002 (0.005)
Die how and where		0.001 (0.006)		-0.001 (0.005)
People look after physical health		-0.022*** (0.007)		-0.031*** (0.006)
People should want happiness		0.017*** (0.006)		0.023*** (0.006)
Religious beliefs affect life		0.005 (0.003)		0.003 (0.003)
Importance Health for Happiness		-0.054*** (0.006)		-0.049*** (0.006)
<i>Demographics:</i>				
Male	-0.076*** (0.019)	-0.087*** (0.02)	-0.023 (0.02)	-0.034 (0.02)
Age: 18-29	Reference	Reference	Reference	Reference
Age: 30-44	-0.132*** (0.028)	-0.133*** (0.028)	-0.096*** (0.026)	-0.098*** (0.027)
Age: 45-59	-0.213*** (0.03)	-0.211*** (0.03)	-0.182*** (0.027)	-0.183*** (0.029)
Age: 60+	-0.222*** (0.041)	-0.234*** (0.041)	-0.255*** (0.035)	-0.222*** (0.037)
Single	Reference	Reference	Reference	Reference
Divorced	-0.095 (0.049)	-0.117** (0.048)	-0.032 (0.037)	-0.035 (0.036)
Partner	-0.047 (0.03)	-0.064** (0.03)	0.047 (0.033)	0.037 (0.034)
Married	-0.055 (0.029)	-0.075*** (0.029)	0.055** (0.026)	0.041 (0.026)
Separated	-0.171** (0.068)	-0.218*** (0.061)	-0.001 (0.071)	-0.013 (0.071)
Widowed	-0.004 (0.07)	-0.048 (0.07)	0.024 (0.047)	0.004 (0.046)
Employed FT	Reference	Reference	Reference	Reference
Employed PT	-0.024 (0.028)	-0.031 (0.028)	-0.008 (0.03)	-0.022 (0.031)
Student	0.072 (0.056)	0.044 (0.059)	0.008 (0.053)	0.023 (0.049)
Retired	0.042 (0.04)	0.033 (0.04)	0.017 (0.034)	-0.011 (0.034)
Self-Employed	0.01 (0.041)	0.019 (0.041)	-0.066 (0.036)	-0.085** (0.036)
Unemployed (permanent)	0.019 (0.051)	-0.038 (0.051)	0.012 (0.04)	-0.023 (0.041)
Unemployed (looking)	-0.019 (0.051)	-0.009 (0.052)	-0.028 (0.037)	-0.038 (0.039)
Educ: Graduate degree	Reference	Reference	Reference	Reference
Educ: Other	-0.047 (0.057)	-0.035 (0.058)	-0.045 (0.353)	-0.05 (0.046)
Educ: Secondary	-0.027 (0.026)	-0.026 (0.026)	-0.086*** (0.027)	-0.10*** (0.027)
Educ: Uni/College	0.015 (0.023)	0.008 (0.024)	-0.088*** (0.024)	-0.096*** (0.024)
Child: None	Reference	Reference	Reference	Reference
Child: 1	0.027 (0.025)	0.026 (0.026)	-0.022 (0.025)	-0.027 (0.025)
Child: 2	0.031 (0.029)	0.033 (0.029)	0.009 (0.029)	0.008 (0.029)
Child: 3+	-0.064 (0.047)	-0.056 (0.048)	0.002 (0.042)	0.015 (0.043)
<i>Income Bands (Reference: Inc1)</i>				
Inc2	0.038 (0.067)	0.046 (0.068)	0.029 (0.04)	0.019 (0.04)
Inc3	0.10 (0.065)	0.107 (0.065)	0.012 (0.04)	0.01 (0.04)
Inc4	-0.009 (0.072)	0.012 (0.074)	0.023 (0.042)	0.028 (0.041)
Inc5	0.09 (0.062)	0.118 (0.063)	-0.068 (0.042)	-0.063 (0.042)
Inc6	0.037 (0.065)	0.066 (0.065)	-0.021 (0.046)	-0.013 (0.045)
Inc7	0.088 (0.07)	0.121 (0.069)	-0.096 (0.052)	-0.079 (0.052)
Inc8	0.083 (0.07)	0.089 (0.069)	-0.003 (0.046)	-0.001 (0.046)
Inc9	0.087 (0.074)	0.128 (0.073)	-0.098** (0.044)	-0.069 (0.043)
Inc10	0.03 (0.081)	0.087 (0.08)	-0.119** (0.05)	-0.086 (0.05)

Inc11	0.096 (0.075)	0.146** (0.073)	-0.085 (0.059)	-0.059 (0.059)
Ethnicity UK (Reference: White):				
Asian	-0.082** (0.035)	-0.067 (0.035)		
Black	-0.192*** (0.051)	-0.16*** (0.057)		
Mixed	-0.098** (0.047)	-0.089 (0.047)		
Other	0.222*** (0.083)	-0.20** (0.088)		
Ethnicity US (Reference: White) :				
American Indian			-0.052 (0.071)	-0.001 (0.072)
Asian			-0.062 (0.041)	-0.042 (0.041)
Hispanic			-0.078*** (0.025)	-0.06** (0.025)
Black			-0.149*** (0.026)	-0.134*** (0.028)
Other			0.06 (0.054)	0.056 (0.055)
pseudo- $R^2$	0.05	0.098	0.045	0.087
$N$	12,030	12,030	12,018	12,018
$Pr(SWB_{High})$	0.519	0.52	0.554	0.557

*Notes:* Regressions are probits. Dependent variable denotes the selection of the life high in SWB. Coefficients are marginal effects. Robust standard errors clustered at the respondents level are reported in parentheses.  $Pr(SWB_{High})$  denotes the predicted probability of selecting the life high in SWB. Regressions control for question order effects.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$

### 3.3 Heterogeneity

In this section we dig deeper into preferences between self and friend. We approach this by estimating separate regressions based on the person of reference for which the choice is being made and draw comparisons between these. Results are reported in Table 3. In terms of similarities in the determinants of choice, the dimension of subjective well-being presented in the scenario matters, with happiness exerting a consistently positive effect on choice of the life high in subjective well-being. This is also the case of information, which however does not appear to have a statistically significant coefficient when making choices for yourself in the UK.

In terms of differences in the determinants of choice, own levels of subjective well-being generally tend to have significant effect when choosing for yourself in both the UK and the US, whereas these do not seem to generally determine choices for your friend. The coefficients of self-reported physical health are again the strongest predictors of choice between health and subjective well-being and hold the same interpretation as above. Notably, however, own physical health is not a statistically significant determinant when making choices for your friend in the US. In terms of the belief coefficients and those of the other background variables, there are no notable differences between models and countries other than the ones discussed in Table 2.

Table 3: Yourself vs. Friend

	UK choice for:		US choice for:	
	Yourself	Your Friend	Yourself	Your Friend
<i>SWB in Scenario:</i>				
Life Satisfaction	0.011 (0.011)	-0.001 (0.001)	0.011 (0.011)	0.018 (0.01)
Happiness	0.136*** (0.011)	0.095*** (0.01)	0.098*** (0.011)	0.071*** (0.01)
Worthwhileness	Reference	Reference	Reference	Reference
Information	0.021 (0.02)	0.062*** (0.021)	0.073*** (0.02)	0.068*** (0.02)
<i>Respondent's SWB:</i>				
Own Life Satisfaction	0.008 (0.01)	0.018 (0.01)	0.011 (0.008)	0.003 (0.008)
Own Worthwhileness	0.03*** (0.009)	0.013 (0.009)	0.027*** (0.007)	0.021*** (0.007)
Own Happiness	0.03*** (0.008)	0.009 (0.008)	0.018*** (0.007)	0.005 (0.007)
Own Anxiety	0.009** (0.004)	0.005 (0.004)	0.012*** (0.004)	0.004 (0.004)
<i>Background Qs:</i>				
<i>State of Physical Health (Reference: Excellent)</i>				
Very Good	0.022 (0.037)	0.035 (0.039)	0.029 (0.033)	-0.034 (0.034)
Good	0.088** (0.039)	0.095** (0.041)	0.161*** (0.035)	-0.011 (0.036)
Fair	0.27*** (0.039)	0.141*** (0.044)	0.283*** (0.034)	0.03 (0.042)
Poor	0.335*** (0.042)	0.159*** (0.056)	0.34*** (0.038)	0.015 (0.064)
<i>State of Mental Health (Reference: Excellent)</i>				
Very Good	0.005 (0.03)	0.001 (0.032)	-0.032 (0.028)	-0.025 (0.028)
Good	-0.009 (0.034)	-0.035 (0.036)	-0.069** (0.034)	0.004 (0.034)
Fair	0.039 (0.042)	0.027 (0.044)	-0.077 (0.043)	0.032 (0.042)
Poor	0.09 (0.057)	0.029 (0.058)	-0.058 (0.068)	-0.01 (0.064)
<i>Beliefs:</i>				
Worried: Death	-0.02*** (0.005)	-0.014*** (0.005)	-0.001 (0.005)	-0.003 (0.005)
Die way you want	0.008 (0.006)	0.008 (0.006)	-0.006 (0.006)	0.001 (0.005)
Die how and where	-0.001 (0.006)	0.003 (0.006)	-0.002 (0.006)	0.001 (0.006)
People look after physical health	-0.027*** (0.008)	-0.018** (0.008)	-0.032*** (0.007)	-0.03*** (0.007)
People should want happiness	0.021*** (0.007)	0.013 (0.007)	0.019*** (0.007)	0.027*** (0.007)
Religious beliefs affect life	0.008** (0.003)	0.002 (0.003)	0.002 (0.003)	0.003 (0.003)
Importance Health for Happiness	-0.06*** (0.007)	-0.048*** (0.007)	-0.047*** (0.007)	-0.053*** (0.007)
<i>Demographics:</i>				
Male	-0.104*** (0.022)	-0.073*** (0.023)	-0.046** (0.023)	-0.023 (0.023)
Age: 18-29	Reference	Reference	Reference	Reference
Age: 30-44	-0.129*** (0.033)	-0.139*** (0.033)	-0.112*** (0.031)	-0.087*** (0.032)
Age: 45-59	-0.224*** (0.034)	-0.20*** (0.035)	-0.17*** (0.033)	-0.20*** (0.034)
Age: 60+	-0.237*** (0.046)	-0.234*** (0.047)	-0.249*** (0.041)	-0.20*** (0.044)
Single	Reference	Reference	Reference	Reference
Divorced	-0.114** (0.053)	-0.121** (0.054)	-0.004 (0.041)	-0.066 (0.042)
Partner	-0.05 (0.035)	-0.077** (0.034)	0.038 (0.039)	0.037 (0.04)
Married	-0.044 (0.032)	-0.105*** (0.032)	0.066** (0.03)	0.017 (0.03)
Separated	-0.182** (0.072)	-0.253*** (0.07)	-0.019 (0.078)	-0.008 (0.077)
Widowed	-0.001 (0.08)	-0.092 (0.079)	0.006 (0.052)	0.001 (0.054)
Employed FT	Reference	Reference	Reference	Reference
Employed PT	-0.038 (0.032)	-0.025 (0.032)	-0.002 (0.037)	-0.042 (0.035)
Student	0.023 (0.061)	0.064 (0.07)	0.024 (0.056)	0.024 (0.058)



Retired	0.007 (0.044)	0.056 (0.045)	-0.016 (0.038)	-0.006 (0.039)
Self-Employed	0.031 (0.045)	0.007 (0.045)	-0.091** (0.041)	-0.082** (0.041)
Unemployed (permanent)	-0.064 (0.058)	-0.015 (0.056)	-0.012 (0.048)	-0.033 (0.049)
Unemployed (looking)	-0.034 (0.067)	0.015 (0.063)	-0.047 (0.046)	-0.03 (0.047)
Educ: Graduate degree	Reference	Reference	Reference	Reference
Educ: Other	-0.049 (0.064)	-0.024 (0.067)	-0.059 (0.057)	-0.044 (0.055)
Educ: Secondary	0.001 (0.029)	-0.052 (0.029)	-0.098*** (0.03)	-0.104*** (0.031)
Educ: Uni/College	0.032 (0.026)	-0.016 (0.027)	-0.106*** (0.027)	-0.087*** (0.028)
Child: None	Reference	Reference	Reference	Reference
Child: 1	0.014 (0.029)	0.038 (0.029)	-0.026 (0.029)	-0.029 (0.029)
Child: 2	0.018 (0.033)	0.046 (0.033)	0.026 (0.033)	-0.01 (0.035)
Child: 3+	-0.072 (0.053)	-0.043 (0.057)	0.051 (0.048)	-0.017 (0.05)
<i>Income Bands (Reference: Inc1)</i>				
Inc2	0.054 (0.081)	0.041 (0.078)	0.051 (0.047)	-0.012 (0.047)
Inc3	0.113 (0.08)	0.103 (0.074)	0.016 (0.047)	0.003 (0.046)
Inc4	0.003 (0.088)	0.021 (0.084)	0.034 (0.048)	0.024 (0.048)
Inc5	0.127 (0.076)	0.112 (0.072)	-0.068 (0.049)	-0.06 (0.048)
Inc6	0.087 (0.079)	0.046 (0.075)	0.006 (0.053)	-0.032 (0.053)
Inc7	0.143 (0.083)	0.101 (0.079)	-0.103 (0.059)	-0.059 (0.06)
Inc8	0.074 (0.083)	0.104 (0.079)	-0.027 (0.054)	0.022 (0.052)
Inc9	0.13 (0.086)	0.127 (0.085)	-0.069 (0.05)	-0.071 (0.05)
Inc10	0.077 (0.088)	0.101 (0.09)	-0.085 (0.058)	-0.089 (0.059)
Inc11	0.131 (0.088)	0.159 (0.082)	-0.088 (0.067)	-0.032 (0.068)
<i>Ethnicity UK (Reference: White):</i>				
Asian	-0.042 (0.04)	-0.091** (0.043)		
Black	-0.146** (0.061)	-0.176*** (0.064)		
Mixed	-0.051 (0.063)	-0.126** (0.056)		
Other	0.228** (0.089)	-0.172 (0.104)		
<i>Ethnicity US (Reference: White) :</i>				
American Indian			0.042 (0.092)	-0.042 (0.105)
Asian			-0.019 (0.045)	-0.064 (0.047)
Hispanic			-0.051 (0.029)	-0.07** (0.029)
Black			-0.137*** (0.032)	-0.133*** (0.032)
Other			0.032 (0.064)	0.082 (0.06)
pseudo- $R^2$	0.125	0.083	0.112	0.078
$N$	6,015	6,015	6,009	6,009
$Pr(SWB_{High})$	0.506	0.534	0.543	0.571

*Notes:* Regressions are probits. Dependent variable denotes the selection of the life high in SWB. Coefficients are marginal effects. Robust standard errors clustered at the respondents level are reported in parentheses.  $Pr(SWB_{High})$  denotes the predicted probability of selecting the life high in SWB. Regressions control for question order effects.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$

Our next approach sheds more light into the heterogeneity stemming from the opposing regarding the importance of health for happiness. In particular, we consider more closely the choices of those who hold clearly opposing beliefs. To avoid an abstract approach in determining levels of ‘low’ and ‘high’ beliefs based on the 0-10 response scale, we consider

the distribution of this variable and re-estimate our baseline model for those at the lowest and highest decile. This specification will provide additional insight into the preferences, for example, of those who hold the view that health is not as important for happiness—i.e. that health and happiness are rather distinct concepts (lowest decile,  $Q_1$ )—compared to those who hold the opposite view that health is rather important for happiness (highest decile,  $Q_{10}$ ).

Happiness in the scenario is consistently a significant determinant of those choices, with a broadly comparable coefficient between the two groups for each country. Interestingly, for both groups at either side of this belief spectrum, the provision of information or making the choice for a friend do not significantly determine choice. Some notable differences also appear for physical health. In both countries, those in relatively bad physical health who believe that health is not very important for happiness are more likely to choose the life high in subjective well-being. These determinants become insignificant, especially for the UK sample, when considering those who strongly hold the belief that health is important for happiness.

Related to the beliefs, people looking after their physical health is not a significant determinant of choice of the high-happiness life in either country for those not holding the view that health matters for happiness. In contrast, and perhaps not surprisingly, it is a significant negative determinant once we turn to the other extreme for those who do believe that health is important for happiness. For those holding the view that people should want to be happy, this positively affects choice for the happy life for those in the highest decile in the UK and the lowest decile in the US.

Once again, income and the remaining socio-demographic characteristics of respondents do not reveal a clear pattern regarding the determinants of choice and are seldom statistically significant. Some notable difference arise in ethnicity indicators in the US sample, with American Indian less likely to opt for the life high in subjective well-being in the low-belief group and those in a black ethnic background less likely to do so in the high-belief group.

Table 4: Deciles of importance of health for happiness

	UK		US	
	Lowest Decile	Highest Decile	Lowest Decile	Highest Decile
<i>SWB in Scenario:</i>				
Life Satisfaction	0.019 (0.017)	0.011 (0.017)	0.038 (0.025)	0.006 (0.015)
Happiness	0.10*** (0.017)	0.011*** (0.017)	0.062*** (0.023)	0.076*** (0.015)
Worthwhileness	Reference	Reference	Reference	Reference
Information	0.023 (0.037)	0.011 (0.043)	0.033 (0.051)	0.064 (0.035)
Choice for Friend	-0.001 (0.02)	0.028 (0.022)	0.027 (0.026)	0.019 (0.019)
<i>Respondent's SWB:</i>				
Own Life Satisfaction	-0.011 (0.017)	0.016 (0.02)	-0.005 (0.02)	0.018 (0.013)
Own Worthwhileness	0.025 (0.015)	0.016 (0.018)	0.027 (0.016)	0.02 (0.011)
Own Happiness	0.019 (0.011)	0.017 (0.017)	-0.002 (0.015)	0.018 (0.011)
Own Anxiety	-0.011 (0.009)	0.008 (0.007)	-0.02 (0.011)	0.01 (0.005)

<i>Background Qs:</i>				
<i>State of Physical Health (Reference: Excellent)</i>				
Very Good	0.136 (0.074)	-0.035 (0.061)	-0.046 (0.121)	-0.021 (0.052)
Good	0.137 (0.08)	0.086 (0.075)	0.122 (0.118)	0.081 (0.056)
Fair	0.269*** (0.065)	0.075 (0.087)	0.183*** (0.089)	0.264*** (0.067)
Poor	0.241*** (0.059)	0.187 (0.125)	0.206*** (0.062)	-0.005 (0.107)
<i>State of Mental Health (Reference: Excellent)</i>				
Very Good	-0.106 (0.073)	0.026 (0.058)	-0.075 (0.082)	-0.085 (0.046)
Good	-0.165** (0.072)	0.092 (0.072)	-0.07 (0.10)	-0.042 (0.059)
Fair	-0.156 (0.085)	0.151 (0.092)	-0.212 (0.115)	-0.034 (0.08)
Poor	-0.02 (0.095)	0.252** (0.12)	-0.249 (0.146)	-0.038 (0.111)
<i>Beliefs:</i>				
Worried: Death	-0.019** (0.009)	-0.026*** (0.009)	-0.034*** (0.011)	0.006 (0.008)
Die way you want	-0.006 (0.011)	0.005 (0.01)	-0.007 (0.012)	0.01 (0.009)
Die how and where	0.01 (0.012)	0.009 (0.011)	0.021 (0.012)	0.007 (0.009)
People look after physical health	-0.002 (0.012)	-0.059*** (0.022)	-0.019 (0.012)	-0.036** (0.015)
People should want happiness	0.011 (0.01)	0.045*** (0.017)	0.03*** (0.01)	0.015 (0.015)
Religious beliefs affect life	0.002 (0.007)	0.01 (0.007)	0.008 (0.01)	0.001 (0.005)
<i>Demographics:</i>				
Male	-0.088** (0.041)	-0.112** (0.044)	-0.04 (0.056)	0.032 (0.041)
Age: 18-29	Reference	Reference	Reference	Reference
Age: 30-44	-0.058 (0.061)	-0.249*** (0.052)	-0.04 (0.079)	-0.155*** (0.054)
Age: 45-59	-0.208*** (0.071)	-0.247*** (0.056)	-0.271*** (0.09)	0.244*** (0.054)
Age: 60+	-0.181 (0.118)	-0.354*** (0.07)	-0.005 (0.105)	-0.393*** (0.059)
Single	Reference	Reference	Reference	Reference
Divorced	-0.097 (0.12)	0.052 (0.111)	0.114 (0.072)	-0.08 (0.078)
Partner	-0.029 (0.056)	-0.041 (0.069)	0.001 (0.112)	0.15** (0.062)
Married	-0.046 (0.061)	-0.069 (0.067)	-0.001 (0.074)	0.049 (0.053)
Separated	-0.157 (0.158)	-0.033 (0.203)	-0.034 (0.138)	0.091 (0.132)
Widowed	-0.105 (0.122)	0.253 (0.176)	-0.135 (0.13)	0.032 (0.096)
Employed FT	Reference	Reference	Reference	Reference
Employed PT	-0.018 (0.062)	-0.079 (0.059)	0.071 (0.062)	-0.009 (0.072)
Student	0.176*** (0.062)	0.036 (0.177)	0.045 (0.109)	-0.06 (0.109)
Retired	0.071 (0.102)	0.072 (0.009)	-0.104 (0.088)	0.041 (0.07)
Self-Employed	0.015 (0.07)	-0.065 (0.087)	-0.127 (0.109)	-0.143** (0.062)
Unemployed (permanent)	0.015 (0.095)	-0.221** (0.096)	-0.019 (0.104)	-0.094 (0.081)
Unemployed (looking)	0.009 (0.068)	-0.137 (0.106)	-0.126 (0.11)	-0.273 (0.062)
Educ: Graduate degree	Reference	Reference	Reference	Reference
Educ: Other	-0.08 (0.147)	0.131 (0.129)	0.193*** (0.046)	-0.026 (0.084)
Educ: Secondary	-0.039 (0.058)	0.073 (0.058)	-0.121 (0.07)	-0.006 (0.053)
Educ: Uni/College	-0.051 (0.051)	0.116** (0.052)	-0.013 (0.067)	-0.103** (0.048)
Child: None	Reference	Reference	Reference	Reference
Child: 1	0.023 (0.051)	0.074 (0.061)	-0.032 (0.074)	-0.071 (0.052)
Child: 2	0.029 (0.062)	0.047 (0.067)	0.048 (0.076)	0.086 (0.054)
Child: 3+	-0.099 (0.102)	0.121 (0.107)	0.025 (0.093)	0.07 (0.72)
<i>Income Bands (Reference: Inc1)</i>				
Inc2	-0.034 (0.092)	0.054 (0.015)	-0.023 (0.10)	0.042 (0.089)

Inc3	0.106 (0.077)	0.206 (0.147)	-0.019 (0.086)	0.033 (0.086)
Inc4	-0.16 (0.119)	0.12 (0.176)	0.07 (0.09)	0.067 (0.089)
Inc5	0.039 (0.072)	0.177 (0.137)	-0.026 (0.107)	-0.09 (0.086)
Inc6	-0.003 (0.088)	0.209 (0.147)	0.067 (0.099)	0.033 (0.092)
Inc7	-0.021 (0.118)	0.10 (0.164)	0.109 (0.136)	-0.129 (0.101)
Inc8	0.153** (0.073)	0.04 (0.151)	-0.023 (0.11)	0.061 (0.102)
Inc9	0.003 (0.12)	0.266 (0.162)	0.113 (0.078)	-0.111 (0.088)
Inc10	0.06 (0.141)	0.025 (0.182)	-0.107 (0.134)	-0.115 (0.092)
Inc11	0.099 (0.098)	0.351** (0.156)	-0.254 (0.188)	-0.176 (0.098)
Ethnicity UK (Reference: White):				
Asian	0.055 (0.066)	-0.079 (0.066)		
Black	-0.279** (0.137)	-0.20** (0.082)		
Mixed	-0.07 (0.104)	-0.106 (0.108)		
Other	0.355** (0.151)	0.099 (0.175)		
Ethnicity US (Reference: White) :				
American Indian			-0.617*** (0.143)	0.045 (0.087)
Asian			-0.267 (0.141)	-0.121 (0.079)
Hispanic			-0.029 (0.076)	-0.078 (0.047)
Black			-0.064 (0.087)	-0.104** (0.048)
Other			0.156 (0.08)	0.294*** (0.08)
pseudo- $R^2$	0.111	0.167	0.23	0.154
$N$	2,448	2,532	1,296	3,342
$Pr(SWB_{High})$	0.68	0.394	0.769	0.457

*Notes:* Regressions are probits. Dependent variable denotes the selection of the life high in SWB. Coefficients are marginal effects. Robust standard errors clustered at the respondents level are reported in parentheses.  $Pr(SWB_{High})$  denotes the predicted probability of selecting the life high in SWB. Regressions control for question order effects.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$

### 3.4 Credibility

The credibility of the hypothetical lives presented to participants is critical in order for the elicitation of preferences to be of any value. We consider this point by asking respondents “how likely do you think it is that someone would have a life like [the one described in Life A, B]?” , with responses on a 0-10 scale ranging from ‘not very likely’ to ‘very likely’.

Table 5 presents the distribution of proportions for these credibility scores. In all cases, and in both countries, the general result suggests that lives high in subjective well-being and low in health are conceived to be relatively credible, with only a small percentage of respondents rating these between 0-4 (around 23% at a maximum and in most cases below 20%, in both the UK and the US).

Table 5: Credibility of hypothetical lives

<i>Credibility Score</i> →	0-2	3-4	5-6	7-8	9-10
<i>Panel A: UK</i>					
High LS, Low Health	8.35	13.75	34.78	32	11.13
Low LS, High Health	4.01	9.73	24.58	34.62	27.05
1-6 High W, Low Health	4.78	10.58	32.03	34.49	18.12
Low W, High Health	3.47	9.71	27.97	35.65	23.19
1-6 High H, Low Health	7.94	15.41	33.54	33.53	9.58
Low H, High Health	3.45	9.13	24.1	35.18	28.14
<i>Panel B: US</i>					
High LS, Low Health	10.84	13.41	23.49	31.02	21.23
Low LS, High Health	4.68	8.43	22.75	32.23	31.92
1-6 High W, Low Health	4.15	9.48	28	35.26	23.12
Low W, High Health	6.07	9.34	26.22	31.41	26.96
1-6 High H, Low Health	8.74	10.54	26.2	34.34	20.18
Low H, High Health	3.92	8.29	20.78	30.42	36.6

*Notes:* Figures represent proportions of respondents selecting the respective scores.

## 4 Discussion

What are the relative weights of an individual’s physical health and happiness as components of the individual’s well-being? In seeking to maximise overall well-being—by which we mean either the unweighted aggregation of individual well-being, or some weighted function of total well-being that accounts for the distribution of well-being—how much importance should policymakers place on health and how much should they place on happiness?

The stated-preference survey analyzed in this study was intended to help address these basic questions regarding tradeoffs between health and happiness. In earlier work (Adler et al., 2017), we used a novel stated-preference format to gain insight into individuals’ strength of preference for SWB as compared to other dimensions of life (income, family, career, education and health). Respondents were asked to choose between two hypothetical lives: one high in SWB and low in a non-SWB dimension, the other low in SWB and high in a non-SWB dimension. We found that respondents were substantially likelier to prefer health as opposed to the other non-SWB dimensions in these choices between hypothetical lives. The current survey was designed to drill down on the health versus happiness question: to understand *why* so many individuals prefer health over happiness.

To be sure, the precise relevance of individuals’ health-versus-happiness preferences to well-being policy is a normative question. One normative view, which originates with Bentham (1789), is endorsed by philosophers working in the Benthamite tradition, and is implicitly or explicitly adopted by many SWB researchers, is that well-being is equivalent to SWB. On such a view, the fact that some individuals prefer health rather than SWB does

not change government’s goal: to maximize overall SWB. Still, the fact that some individuals do not seek to maximize their own SWB would be quite important in designing policies to maximize overall SWB.

A different normative view, adopted in traditional welfare economics and in a substantial portion of the philosophical literature (see, for example, Harsanyi 1997), is that an individual’s well-being depends upon her preferences. We maximize an individual’s well-being by maximizing her utility, understood as a representation of individual preferences (Becker and Rayo, 2008). Health and happiness are simply two possible arguments in the utility function, and their relative weight is a matter for the individual to decide. On such a view, the strength of individual preference for happiness versus health has quite direct relevance to governmental policy. Government should maximize overall preference-utility; and how it should make tradeoffs between health and happiness depending upon the relative weight of these two life dimensions in individuals’ utility functions.

In this paper, we do not take a stand on this basic normative question. We believe our findings are relevant *both* to policymakers seeking to maximize SWB *and* to policymakers seeking to maximize preference-utility (with SWB and health as components thereof), albeit in different ways.

Our first key finding is to confirm the finding of Adler et al. (2017), that a substantial fraction of respondents prefer health over SWB when asked to choose between a high SWB/low health and low SWB/high health life. In our U.K. sample, 50.4% choose the high-SWB/low-health life for themselves (that is, almost 50% choose the high-health/low-SWB life); in the U.S. sample, 53.7% choose the high-SWB/low-health life. Regression-based estimates of the probability of choosing the high-health/low-SWB life are within a few percentage points of these descriptive statistics.

Second, consistently with Adler et al. (2017), the type of SWB matters. In making health/SWB tradeoffs, respondents have a substantially stronger preference for the affective dimension of SWB as opposed to the evaluative or eudaimonic dimension. This might be because people might have a more intuitive understanding of ‘happiness’ as compared to other dimensions of SWB. Whatever the reason, this finding suggests that—in addition to the evaluative dimension—the affective dimension of SWB should not be neglected in research and policy circles (Dolan, 2014; Adler et al., 2017).

A third set of findings concerns the role of *beliefs* about the impact of health on happiness and of *information* regarding such impact, which may change individuals’ beliefs. Note that an individual who states a preference for the high-health/low-SWB life might do so because she believes health to be instrumental to happiness: her ultimate preference is for happiness, but she believes that the low-health/high-SWB life will eventually morph into a low-health/low-SWB life. For short, let’s call such a preference structure an “*SWB-derivative*” preference for health (derivative of its role in producing SWB).

We designed our survey to screen out SWB-derivative health preferences; telling respondents that “each life in the imagined states will remain consistent over time”. We

posed a credibility question to check whether respondents found the hypothetical lives to be plausible; only a small percentage of respondents gave low credibility scores to high-SWB/low-health lives (or, for that matter, low-SWB/high-health lives). But we also tested directly for SWB-derivative health preferences, via the provision of information about the extent to which people typically adapt to poor health. We found that information provision significantly reduced the likelihood of choosing the high-health life: our regression-based estimate is that it does so by 4.2% in the UK sample, and 7% in the U.S. sample. Still (based on the regression) we estimate that more than 40% of UK and nearly 40% of US respondents with information still prefer the high-health/low-SWB life.

This suggests that a large fraction of respondents have a preference for health that is not SWB-derivative. To examine more closely the role of beliefs in health preference, we broke down the sample into those with the strongest belief that health is important for happiness (top decile of answers to the question, “*How important is physical health for happiness?*”) and those with the weakest such belief (bottom decile of answers to this question). Even for the latter group, the estimated probability of choosing the high-health/low-SWB life is 32% in the UK (23% in the US). This latter group (we posit) is most likely to believe that a low-health/high-SWB life will remain consistently so over time. Even so, 32%/23% of these respondents still choose the high-health/low-SWB life.<sup>5</sup>

Our fourth set of findings, concerning the effect of *respondent characteristics* on preferences for health, are potentially the most impactful. Here, perhaps the most dramatic finding is the negative effect of the respondent’s own physical health. In our UK sample, respondents whose self-rated physical health is “fair” are 20% likelier than a respondent with “excellent” health to choose the high-SWB life, and those with “poor” self-rated physical health almost 25% likelier (the U.S. numbers are 16% and 19%).

This finding might, in part, be the result of differential beliefs about the information—those in poor health are likeliest to believe that poor health and high SWB are compatible. But this is not the full story. Respondents were asked, first, to choose between the hypothetical lives for themselves and, then, for a friend. The respondents’ fair or poor health state had a much larger impact on choice-for-self as opposed to choice-for-friend. It is difficult to see how beliefs about the role of health in producing happiness would explain this self-friend divergence. A different explanation points to adaptive preferences (Dolan and Bradford, 2010): individuals in poor health place less weight on health in their utility functions. It follows that this preference may not carry across to estimations of the utility function of others. This finding calls for more research when it comes to divergence in making choices for others as compared to making choices for oneself (Polman, 2012).

We found that other respondent characteristics—namely gender, ethnicity and age—also had a significant effect on the likelihood of choosing the high-SWB/low-health life. Males are generally more likely to prefer health, as is broadly the case with non-white ethnic

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<sup>5</sup>Note that information provision does not significantly affect the choices of either of these “extreme” groups.

backgrounds. Older individuals are more likely to prefer health. Also in line with Dolan and Bradford’s (2010) explanation, this may be because their lives are already high in the SWB dimension: there is ample evidence suggesting that older people tend to be happier than younger people in general (Rauch, 2018). Putting this together with the findings regarding respondent health, we have a striking juxtaposition: *ceteris paribus*, individuals in poor health have a weaker preference for health; but, *ceteris paribus*, older individuals have a stronger preference.

In general, respondent characteristics—specifically health, age, and ethnicity—were the strongest predictors of choices between hypothetical lives (as measured by the magnitude of regression coefficients), as compared with other significant predictors, *i.e.*, information, beliefs, self vs. friend choice, and type of SWB.

Further research is needed to fully understand the drivers of individual preferences for health. *Why* is there so much heterogeneity—by health state, age, and ethnicity—in health/SWB tradeoffs? To what extent is this variation the result of differential beliefs? To what extent does it reflect variation in non-derivative health preferences? Why do individuals want health, except as an input to SWB? Is this because health is considered an “intrinsic good”, or because health is seen as instrumental to other non-SWB life dimensions, such as accomplishing goals or interacting with friends and family? These questions might, to some degree, imply, a different wording for the hypothetical scenarios trading-off health and happiness. Future research could, for example, incorporate the persistence of the low-SWB life straight in the description of the scenario by considering SWB states framed as “you feel chronically depressed”; or offer a different range for the health state described in the scenario (framed as ‘poor’ vs. ‘excellent’ here). We hope that our findings will encourage researchers to pursue these questions since a better understanding of these preferences will get us ever closer to maximizing social welfare.



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# Appendix

Table A1: Choosing the life High in SWB — Yourself vs. Friend

	UK choice for:		US choice for:	
	Yourself	Your Friend	Yourself	Your Friend
<i>Panel A: Without Information</i>				
Life Satisfaction	0.458	0.476	0.471	0.516***
Worthwhile	0.445	0.47**	0.483	0.497
Happiness	0.573	0.558	0.566	0.57
<i>Panel B: With Information</i>				
Life Satisfaction	0.484	0.529***	0.559	0.59***
Worthwhile	0.479	0.537***	0.528	0.578***
Happiness	0.587	0.616**	0.617	0.634

Notes: Figures are proportions of choosing the life high in subjective well-being.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$

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