Heresy or Enlightenment?
The Wellbeing Age U-Shape Effect is Really Flat!

Sonja C. Kassenboehmer and John P. Haisken-DeNew[1]
(RWI Essen and University of Bochum)

Abstract: The U-shaped age effect on life satisfaction well established in the literature is not as stable as originally thought. Blanchflower and Oswald (2007) have shown for more than 50 countries using cross-sectional life satisfaction data that there is a well established U-shaped pattern in age. Using data (1994-2006) from the German SOEP, the longest running European household panel, we find that although the U-shape results are clearly robust in pooled regressions, the results are rendered small and insignificant, when controlling for panel individual fixed-effects, respondent experience in the panel and interviewer characteristics. There is merely a U-shape observed in years of the respondent participating in the panel, controlling for age, whereas the age effect itself is negligible. This suggests that respondents overstate their true well being at first, and as they gain trust toward the interviewer, come close to their "true" levels of wellbeing. Respondents are more likely to report lower levels of well being to male interviewers and to more experienced interviewers. The combination of controls for unobserved individual heterogeneity, respondent panel experience, interviewer gender and interviewer experience render an otherwise strong and significant age effect small and insignificant. This suggests that only with panel data and detailed methodological controls can one identify the true age effects.

Keywords: Well Being, Life Satisfaction, Age, Interviewer Effects
JEL: I31, J14, C42

Contact: Sonja C. Kassenboehmer
RWI-Essen
Hohenzollernstr. 1-3
45128 Essen
Germany
kassenboehmer@rwi-essen.de

[1] The authors thank Thomas Bauer, Mathias Sinning and Christoph Schmidt for helpful comments on this paper.

1. Introduction

There seems to be an unrefutable law in the wellbeing literature that over the course of one's life, wellbeing changes in a systematic manner. At early ages, subjective wellbeing is high, whereas on through to the mid 30's to the mid 40's, subjective wellbeing seems to trough out and then rise again in old age. This is known as the age U-shape effect, found in almost all studies concerning subjective wellbeing or life satisfaction, with controls for the usual explanatory variables.

Indeed, Blanchflower and Oswald (2007) provide evidence for as many as 55 countries where subjective wellbeing is U-shaped in age using data from the World Values Surveys[2]. The great advantage of the data set is a homogeneous survey instrument for many countries, allowing an immediate international comparison. Some notable drawbacks are (i) the lack of panel data, i.e. repeated observations on the same individuals over time and (ii) the lack of detailed methodological information concerning the interviewers. Nonetheless, Blanchflower and Oswald (2007) find also 25 countries with no age-minimum, i.e. no U-shape.

It is not clear whether this age effect is indeed a true effect or whether there may be an omitted variables bias. In the sociological and economic literature, there is a long established history of methodological studies examining the role of interviewers and their direct effects on the response behaviour of surveyed persons. Bertrand and Mullainathan (2001) outline some of the drawbacks when using subjective wellbeing information and the role of interviewers. Nonetheless there have been countless studies in the meanwhile that have documented the informational content of subjective wellbeing studies (see Winkelmann and Winkelmann 1998, Frijters et al. 2004a/2004b, Frey and Stutzer 2002, Blanchflower and Oswald 2004, etc).

This paper provides some additional insights to the debate on the U-shape effect of age on subjective wellbeing. We use data from the German Socio-Economic Panel (SOEP), which is the longest running household panel study in Europe (see Haisken-DeNew and Frick 2005 and Wagner et al. 1994 for more information concerning the SOEP). The contribution of this paper is that for a large European country, we can provide not only extensive economic controls but also additional interviewer information in the analysis of subjective wellbeing. It

[2] See http://www.worldvaluessurvey.org/.

appears that the otherwise stable U-shaped effect of age on subjective wellbeing is effectively rendered small and insignificant, when controlling for (i) individual unobserved heterogeneity, (ii) respondent experience in the panel (i.e. years of actually responding in the panel), and (iii) detailed information on the interviewers responsible for collecting the information from the respondents. This suggests that one might need to reconsider the evidence provided by studies which cannot control for the three dimensions mentioned and the extent to which the studies can provide an adequate appraisal of the effects of age on subjective wellbeing.

The outline of the paper is as follows: Section 2 provides background information on the literature with respect to subjective wellbeing and also the role of interviewers. Section 3 describes the data used and the econometric analysis and discussion. Section 4 draws conclusions.

2. Background

Research based on sensitive data from social surveys relies on truthful answers of the respondents. It is common in social research to ignore that interviewer effects might be a potential source of non-sampling error in social science data, especially for data that contain sensitive questions. This is probably partly due to the fact that often interviewer characteristics are not available or incomplete for the data at hand and that researchers want to use the data despite its shortcomings because otherwise the research question cannot be investigated at all. Hence, it is not surprising that although the methodological literature points out the relevance of non-sampling bias due to interviewer effects (such as Steinert 1984, Scholl 1993, DeMaio 1984), the relationship between interviewer effects and response behaviour to survey questions has not yet been demonstrated convincingly.

Past studies have mainly focused on observable interviewer's characteristics such as age, and gender, mainly but not only in the context of analysing sexual behaviour, gender specific attitudes or response rates (see Johnson and Moore 1976, Johnson and DeLamater 1976, who find similar results). Concerning the effects of gender on sexual behaviour and gender attitudes, the results vary from finding no significant effects (Johnson and Moore 1993), to significant effects (such as Galla et al. 1981 and Lueptow et al. 1990, Cantania et al. 1996, Tu

and Liao 2007 as mentioned in Flores-Macias and Lawson 2008). However of those studies that did find significant effects, the direction of the effect differ from study to study. Some studies such as those by Kane and Macaulay 1993, Hudy et al. 1997 and Landis 1973 investigated the effect of gender of the interviewer concerning political questions, in general finding no significant effects. One recent study (Flores-Macias and Lawson 2008) found that the effects of interviewer gender were limited to gender-sensitive questions.

The effect of interviewer's age has not been investigated in such great detail as the effect of gender. Reinecke and Schmidt (1993) investigated among other interviewer characteristics, the effect of age on behaviour towards foreigners. Although it must be stated that their sample was relatively small (n=125), their results indicated that the older the interviewer, the more the respondent gave foreigner hostile answers.

A more convincing approach by Schräpler and Wagner (2001) shows, using the SOEP, that for negative well-being measures such as questions concerning worries, interviewer effects might play a role, especially the interviewer's age. Although they found only small effects in multivariate analysis, they suggest that each study should check for the existence of bias due to interviewer effects.

Especially in the medical literature, the interviewer effects are known to influence responses significantly on mental health. There is a strand of literature that tries to quantify this bias (such as Epstein et al 2001, Erdman et al 1992, Griest et al 1973) comparing answers given during a computer-based patient interview and during a face-to-face interview, all finding that the answers differ significantly. However, these studies do not investigate any further whether the effects are dependent on certain interviewer characteristics. A similar approach is conducted by a recent study from Schräpler (2007), using data from the SOEP, who investigated whether the change from the traditional Paper-and-Pencil Interviewing (PAPI) method to Computer-Assisted Personal Interviewing (CAPI) changes response behaviour.

Apart from observable interviewer characteristics, also non-observable characteristics have been acknowledged to influence survey responses, such as education and social status. It is assumed that the greater the differences in social group identification between respondent and interviewer, the greater the bias (Landis et al 1973, Schräpler and Wagner 2001).

The drawback of many of the studies mentioned above is that they have only investigated the effect of one or two of these interviewer characteristics, but not several simultaneously. Furthermore, the reason for the differing results of these studies is that they are either based on small samples, fail to include all relevant variables or use only cross-sections instead of panel analysis.

Much of the life satisfaction literature has focused on income or employment status, notwithstanding the critique of Bertrand and Mulainathan (2001). For studies on employment status, see for example Clark and Oswald (1994), Winkelmann and Winkelmann (1998), Clark (2006), Kassenboehmer and Haisken-DeNew (2007). For studies focussing on income effects of wellbeing, see for example Clark et al. (2006), Frijters et al. (2004a, 2004b). For articles giving an overview, see Frey and Stutzer (2002) or Frijters et al. (2004b). The aim of this paper is to merge the literature on life satisfaction together with that of interviewer effects to bring additional insight to the substantive question of whether an age U-shape in life satisfaction can indeed be identified.

3. Empirical Application

We use data from the German Socio-Economic Panel (SOEP), the longest running European household panel. Started in 1984 it examined persons in German and non-German households in West Germany. It expanded in 1990 to include the former East Germany. Since then there have been several expansions of the data set, such that in 2000 the data set was effectively doubled. See Haisken-DeNew and Frick (2005) and Wagner et al. (1994) for more information[3].

The dataset is particularly interesting in that it contains many different subsamples over a long time frame. This means that there are many respondents being interviewed for the first time and many others having already responded 20 years in a row. Of interest here are the persons

[3] The data used in this paper were extracted using the Add-On package PanelWhiz v2.0 (Sep 2007) for Stata. PanelWhiz was written by Dr. John P. Haisken-DeNew (john@panelwhiz.eu). The following authors supplied PanelWhiz SOEP Plugins used to ensure longitudinal consistency, John P. Haisken-DeNew (29), Markus Hahn and John P. Haisken-DeNew (18). The PanelWhiz generated DO file to retrieve the SOEP data used here and any Panelwhiz Plugins are available upon request. Any data or computational errors in this paper are my own. Haisken-DeNew and Hahn (2003) describes PanelWhiz in detail.

who drop out for a year or so and then rejoin the sample. This allows us to differentiate between age in years and years having responded in a survey. If we could not do this, age and years having responded would be perfectly collinear. Thus we are able to differentiate directly, whether one has simply become one year older and whether one has one additional year of experience in taking part of the survey. The SOEP is a full panel, in that persons are re-contacted over time and proxy interviews are effectively not allowed. Thus one is able to control for unobserved individual heterogeneity through person fixed effects quite readily.

A file added in 2007 to the regular distribution of the SOEP includes detailed information on the interviewers themselves. As most interviews in the SOEP include having an interviewer present, whether he writes down the answers for the respondent or is simply present during the interview process. As in general, the same interviewer year after year comes to the same homes and interviews the same persons, a sort of trust relationship develops between interviewer and respondent. Thus at the beginning of the relationship, a respondent would be perhaps overstating his wellbeing, in the same manner, when asked on the street as to one's wellbeing, one responds with "fine" regardless of the true state. However, as the trust relationship develops, there is a convergence toward the (lower) true state of wellbeing. Over the entire time frame of the SOEP, there is also information on gender and years of experience of the interviewers having worked for the data collection agency "Infratest Sozialforschung", responsible for collecting the SOEP data.

The SOEP asks respondents to give on a 0 (low) to 10 (high) scale the level of their life satisfaction or general wellbeing. The question is particularly good, as it is always asked at the end of the survey and this repeatedly over all years. It also has consistently a particularly low item non-response. Following Ferrer-i-Carbonell and Frijters (2004) we will ultimately use fixed effects panel regression without substantial loss of ordinal interpretability (allowing us to avoid using the conditional ordered logit model as in Chamberlain 1994) to estimate the following life satisfaction (LS) regression:

$$
\begin{aligned}
LS_{it} = {} & a + a_i && + bX_{it} + \\
& c1*\text{Age}_{it} && + c2*\text{Age}^2_{it} + \\
& d1*\text{Years\_Panel}_{it} && + d2*\text{Years\_Panel}^2_{it} + \\
& e1*\text{Gender}_{INT} && + e2*\text{Years\_Experience}_{INTxT} + \\
& e_{it}
\end{aligned}
\qquad (1)
$$

where X is a vector of usual time-varying control variables; coefficients *c1* and *c2* refer to the quadratic of the respondent's age; coefficients *d1* and *d2* refer to the quadratic of the actual number of years a respondent has taken part in the survey; coefficient *e1* refers to the gender of the interviewer and *e2* the years of experience the interviewer has with the data collection agency.

The list of standard control variables include: whether currently unemployed; out of labor force; entering into unemployment because of being fired, voluntarily or company closing; entry into out of labor force; entry into employment; marital status and shocks; health indicators; real household net income; household composition. See Kassenboehmer and Haisken-DeNew (2007) for a more detailed explanation of the explanatory variables. We shall not comment much further on the standard control variables X except that the all have the expected sign, magnitude and significance for all regressions (see Tables 1-3).

To show the applicability of the results to other non-panel studies we first examine a pooled regression, as shown in Table 1. Column 1 using pooled regression displays the strong and highly significant effect of age (*c1* = -0.11184; *c2* = 0.00123). Even when controlling for the number of years in panel as in Column 2 or its quadratic in Column 3, the age effect is still highly robust (*c1* = -0.09403; *c2* = 0.00105).

We augment the models now with linear fixed effects panel regression in Table 2. Column 1 indicates that the main effect of age has dropped significantly as well as the secondary effect (*c1* = -0.06574; *c2* = 0.00036), however both coefficients are still significantly different from zero. Column 2 augments for the number of years the respondents have actually participated in panel and Column 3 its quadratic (*c1* = 0.00909; *c2* = 0.00030) with now only *c2* being actually significant. We split the sample between those who have had an interviewer and those who have not. Column 4 provides the results for those having had an interviewer present. The quadratic in age as indicated by the coefficients c1 and *c2* are now both much smaller and insignificant. Column 5 display the results for those not having had an interviewer present with only the secondary coefficient *c2* being significant, indicating a small ever-increasing effect of age.

We augment the full-sample model even further to include the interviewer specific controls. In Table 3, Column 1 presents the sample of those having had an interviewer controlling explicitly for interviewer gender and the number of years experience the interviewer has had. One sees immediately that male interviewers (*e1* = -0.0407) elicit a significantly lower life satisfaction ceteris paribus and the more experienced the interviewer is also lowers the recorded life satisfaction of the respondent (*e2* = -0.00615). This is plausible as perhaps older men are seen by respondents to be authority figures in the community, who are trustworthy warranting more truthful responses (i.e. lower levels). We do some robustness checks in Column 2 to remove the quadratic effect of years in panel, rendering the secondary effect of age to be small but significant (c2 = 0.00020). Column 3 and 4 provide the same regression models for simple pooled OLS as opposed to fixed effects regression in Columns 1 and 2. Here we see that the pooled OLS results still render a strong and significant effect for *c1* and *c2*. This illustrates that it is important not only to control for interviewer effects but also unobserved heterogeneity using fixed-effects panel. Both conditions are necessary, and neither alone is sufficient.

Illustrating these effects graphically in Figure 1, we see that for the pooled OLS models a minimum can be identified around the ages 44-46. However, even in the fixed effects regression without any further controls, the effect of age is steadily declining in the relevant area (age 20-64) even though the significant quadratic coefficients suggest a minimum. The results for Table 3, Column 1 are not shown as the coefficients are insignificant.

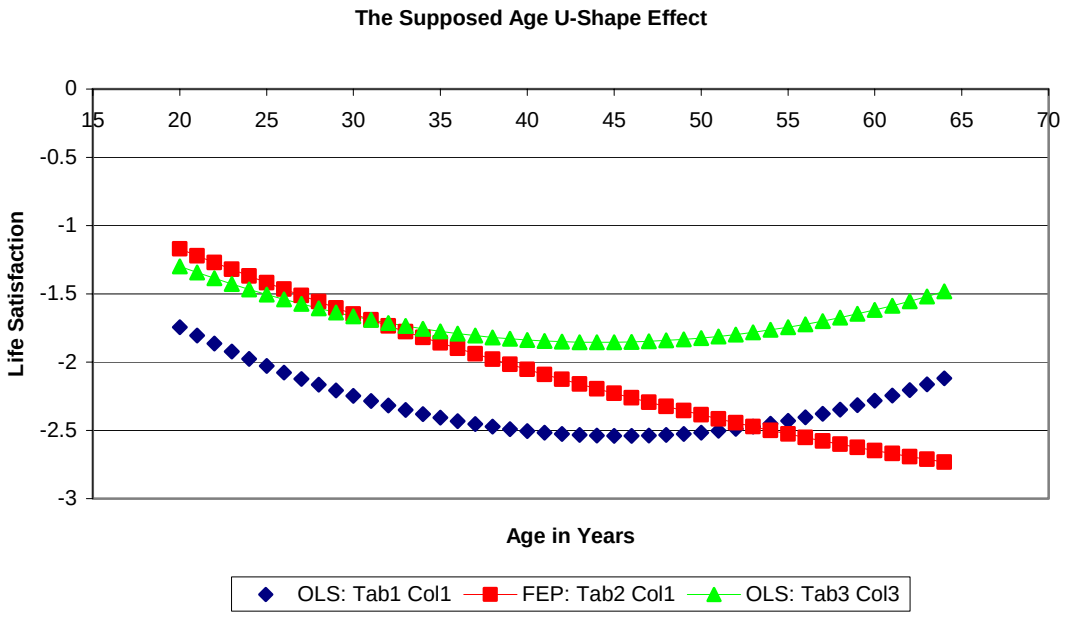

Figure 1: Age U-Shape Only in Pooled OLS

We clearly have shown that the standard age effect on life satisfaction disappears in Table 3, Column (1) when controlling for (i) individual unobserved heterogeneity, (ii) the number of years a respondent has actually taken part in the sample, and (iii) the gender and experience of the interviewer himself. This suggests that previous studies that do not take this into account are most likely overstating the effect of age on wellbeing dramatically simply due to an omitted variable bias.

4. Conclusions

This paper has illustrated the importance of interviewer and other methodological effects with regard to subjective responses in large scale household panel surveys. It appears that analyses using only cross-sectional data, as in Blanchflower and Oswald 2007, or in general, not being able to control for unobserved heterogeneity is a very much a serious drawback when analyzing subjective response data. Using data from the German SOEP, we can identify a U-shape in age only when using pooled OLS regression. We are able to control directly for unobserved individual heterogeneity using fixed-effects panel, and reduce significantly the age U-shape effect. In fact for those specifications, where the quadratic in age is at all significant, life satisfaction is always falling in age over the relevant age rage (20-64). Controlling further for interviewer effects such as the interviewers' gender or experience as an interviewer, renders age and age squared small and insignificant. Although the findings in this paper only refer to one single country (Germany) and not a plethora of countries as in Blanchflower and Oswald (2007), there is still informational content in both studies. One must however keep in mind the potential for omitted variable bias resulting from misspecified regressions due to otherwise unobserved interviewer effects in non-panel data sets.

References

Bertrand, M. and Mullainathan, S. (2001). Do People Mean What They Say? Implications for Subjective Survey Data, *American Economic Review* 91(2): 67-72

Blanchflower, D. G. and Oswald, A. (2004). Well-Being Over Time in Britain and the USA, *Journal of Public Economics* 88(7-8): 1359-1386.

Blanchflower D.G. and Oswald, A (2007). Is Wellbeing U-Shaped Over the Life Cycle, *IZA Discussion Paper* 3075, Bonn (forthcoming 2008 in *Social Science & Medicine*)

Catania, J., Binson, D., Canchola, J., Pollack, L. M., Hauck, W., & Coates, T. J. (1996). Effects of interviewer gender, interviewer choice, and item wording on responses to questions concerning sexual behaviour, *Public Opinion Quarterly* 60: 345–375.

Chamberlain, G. (1980). Analysis of Covariance with Qualitative Data, *The Review of Economic Studies* 47(1): 225-38.

Clark, A. E. (2006). A Note on Unhappiness and Unemployment Duration, *Discussion Paper 2406*, IZA, Bonn.

Clark, A. E., Frijters, P. and Shields, M. A. (2006). Income and Happiness: Evidence, Explanations and Economic Implications, *Paris-Jourdan Sciences Economiques Working Paper* Technical Report 24.

Clark, A. E. and Oswald, A. J. (1994). Unhappiness and Unemployment, *Economic Journal* 104(424): 648-59.

Couper, Mick P., and Benjamin R. Rowe. 1996. "Evaluation of a Computer-Assisted Self-Interview Component in a Computer-Assisted Personal Interview Survey." *Public Opinion Quarterly* 60:89–105.

DeMaio, T. (1984). Social desirability and survey measurement: A review. In *Surveying Subjective Phenomena*, Volume 2 (C. F. Turner, E. Martin, eds.), 257-282. Russel Sage Foundation, New Russel Sage Foundation, New York.

Epstein, Joan Faith, Peggy Ripley Barker, Larry A. Kroutil (2001) Mode Effects in Self-Reported Mental Health Data, *The Public Opinion Quarterly*, 65(4): 529-549

Erdman, Harold P., Marjorie H. Klein, John H. Griest, Stacey S. Skare, John J. Husted, Lee N. Robins, John E. Helzer, Evelyn Goldring, M. Hamburger, and J. P. Miller. 1992. "A Comparison of Two Computer-Administered Versions of the NIMH Diagnostic Interview Schedule." *Journal of Psychiatric Research* 26(1): 85–95.

Griest, John H., Marjorie H. Klein, and Lawrence J. Van Cura. 1973. "A Computer Interview for Psychiatric Patient Target Symptoms." *Archives of General Psychiatry* 29:247–53.

Ferrer-i-Carbonell, A. and Frijters, P. (2004). How Important is the Methodology for the Determinants of Happiness?, *The Economic Journal* 114(497): 641-59.

Frey, B. S. and Stutzer, A. (2002). Can Economists learn from Happiness Research?, *Journal of Economic Literature* 40(2): 402-35.

Frijters, P., Haisken-DeNew, J. P. and Shields, M. A. (2004a). Money does matter! Evidence from Increasing Real Incomes in East Germany Following Reunification, *American Economic Review* 94(3): 730-741.

Frijters, P., Haisken-DeNew, J. P. and Shields, M. A. (2004b). Investigating the Patterns and Determinants of Life Satisfaction in Germany Following Reunification, *The Journal of Human Resources* 39(3): 649-674.

Fryer, D. and Payne, R. (1986). Being Unemployed: A Review of the Literature on the Psychological Experience of Unemployment, *in* C. L. C. und Ivan T. Robertson (ed.), *International Review of Industrial and Organizational Psychology*, Vol. 1, John Wiley and Sons, London, pp. 235-77.

Flores-Macias, Francisco and Chappell Lawson (2008). Effects of Interviewer Gender on Survey Responses: Findings from a Household Survey in Mexico, *International Journal of Public Opinion Research*

Galla, J. P., Frisone, J. D., Jeffrey, L. R., & Gaer, E. P. (1981). Effect of experimenter's gender on responses to a sex-role attitude questionnaire, *Psychological Reports* 49: 935–940.

Haisken-DeNew, J. P. and Frick J. (2005). Desktop Companion to the German SocioEconomic Panel Study (GSOEP), *Technical report*, German Institute for Economic Research, Berlin.

Haisken-DeNew, John P. and Markus Hahn (2006). PanelWhiz: A Flexible Modularized Stata Interface for Accessing Large Scale Panel Data Sets, mimeo, http://www.panelwhiz.eu

Huddy, L., Billig, J., Bracciodieta, J., Hoeffler, L., Moynihan, P. J., & Pugliani, P. (1997). The effect of interviewer gender on the survey response. *Political Behavior*, 19: 197–220.

Jensen, P. and Smith, N. (1990). Unemployment and Marital Dissolution, *Journal of Population Economics* 3(3): 215-229.

Johnson, Weldon T. and John D. Delamater (1976) Response Effects in Sex Surveys, *The Public Opinion Quarterly* 40(2): 165-181

Kane, E., & Macaulay, L. (1993). Interviewer gender and gender attitudes, *Public Opinion Quarterly*, 57: 1–28.

Landis, J., Sullivan, D., & Sheley, J. (1973). Feminist attitudes as related to sex of the interviewer, *Pacific Sociological Review*, 16: 305–314.

Lueptow, L. B., Moser, S. L., & Pendleton, B. F. (1990). Gender and response effects in telephone interviews about gender characteristics, *Sex Roles* 22: 29–42.

Reinecke, Jost and Peter Schmidt (1993) Explaining interviewer effects and respondent behavior: Theoretical models and empirical analysis, *Quality and Quantity* 27:219-247, 1993.

Scholl, A. (1993): Die Befragung als Kommunikationssituation. Westdeutscher Verlag, Opladen.

Steinert, H. (1984). Das Interview als soziale Interaktion. In *Soziale Realität im Interview* (H. Meulemann, K.-H. Reuband, eds.), 17-61. Campus, Frankfurt/Main

Schräpler, Jörg-Peter and Gert G. Wagner (2001). Das Verhalten von Interviewern - Darstellung und ausgewählte Analysen am Beispiel des Interviewer-Panels des Sozio-oekonomischen Panels, *Allgemeines Statistisches Archiv* 85(1): 45-66.

Schräpler, Jörg-Peter (2007). A Study of Mode-Effects of A Change from PAPI to CAPI *Schmollers Jahrbuch - Zeitschrift für Wirtschafts- und Sozialwissenschaften*, 127(1).

Tu, S. H., & Liao, P. S. (2007). Social distance, respondent cooperation and item nonresponse in sex survey. *Quality and Quantity*, 41: 177–199.

Winkelmann, L. and Winkelmann, R. (1998). Why Are the Unemployed So Unhappy? Evidence from Panel Data, *Economica* 65(257): 1-15.

Table 1: Pooled OLS Life Satisfaction Regressions

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS
Age	**-0.11184****	**-0.09719****	**-0.09403****
	(0.00301)	**(0.00310)**	**(0.00312)**
Age²	**0.00123****	**0.00109****	**0.00105****
	(0.00004)	**(0.00004)**	**(0.00004)**
Years in Panel	**---**	**-0.01614****	**-0.04188****
	---	**(0.00083)**	**(0.00311)**
Years in Panel²	**---**	**---**	**0.00120****
	---	**---**	**(0.00014)**
Unemployed	-1.03711**	-1.05012**	-1.04876**
	(0.02178)	(0.02176)	(0.02176)
Out of Labor Force (OLF)	-0.11908**	-0.11620**	-0.11326**
	(0.01401)	(0.01399)	(0.01399)
Entry Unemployment: Fired	0.01419	0.01665	0.01910
	(0.03955)	(0.03950)	(0.03950)
Entry Unemployment: Voluntary	0.11957**	0.11544**	0.11600**
	(0.04043)	(0.04038)	(0.04037)
Entry Unemployment: Company Closed	-0.11732	-0.11450	-0.11715
	(0.07189)	(0.07179)	(0.07178)
Entry OLF	0.03652	0.03433	0.03001
	(0.03291)	(0.03287)	(0.03287)
Entry Employment	-0.43165**	-0.44691**	-0.44464**
	(0.02653)	(0.02651)	(0.02650)
Married	0.12963**	0.12998**	0.13621**
	(0.01204)	(0.01202)	(0.01204)
Shock: Separated	-0.45085**	-0.45039**	-0.45283**
	(0.03389)	(0.03385)	(0.03384)
Shock: Divorced	-0.01561	-0.01911	-0.01757
	(0.05864)	(0.05856)	(0.05855)
Shock: Spouse Died	-1.40240**	-1.40406**	-1.39983**
	(0.09753)	(0.09740)	(0.09738)
Shock: Child born	0.39880**	0.39800**	0.39975**
	(0.02325)	(0.02323)	(0.02322)
Work Disability	-0.36762**	-0.36885**	-0.36984**
	(0.02271)	(0.02268)	(0.02268)
Registered Handicap	-0.59589**	-0.58789**	-0.58850**
	(0.01588)	(0.01586)	(0.01586)
Nights Stayed in Hospital	-0.01661**	-0.01663**	-0.01654**
	(0.00065)	(0.00064)	(0.00064)
Log Net Real Household Income	0.67108**	0.66772**	0.65959**
	(0.00920)	(0.00919)	(0.00924)
Years of Education	0.01104**	0.00713**	0.00727**
	(0.00174)	(0.00175)	(0.00175)
Number of Children: 1	-0.04775**	-0.04950**	-0.05037**
	(0.01205)	(0.01204)	(0.01204)
Number of Children: 2	-0.02305	-0.02037	-0.02030
	(0.01410)	(0.01408)	(0.01408)
Number of Children: 3+	-0.03744*	-0.03315	-0.03301
	(0.02056)	(0.02054)	(0.02053)
Constant	4.06753**	3.94744**	4.04397**
	(0.08737)	(0.08747)	(0.08817)
R^2	0.125	0.128	0.128
Adj-R^2	0.125	0.127	0.128
N	149190	149190	149190

* p<0.1, ** p<0.05

Table 2: Fixed Effects Panel Life Satisfaction Regressions

	(1) FE-Panel	(2) FE-Panel	(3) FE-Panel	(4) Interview	(5) No Interview
Age	**-0.06574****	**-0.00051**	**0.00909**	**0.04419**	**-0.02876**
	(0.00513)	**(0.02460)**	**(0.02474)**	**(0.03932)**	**(0.04363)**
Age²	**0.00036****	**0.00038****	**0.00030****	**-0.00002**	**0.00091****
	(0.00006)	**(0.00006)**	**(0.00006)**	**(0.00008)**	**(0.00016)**
Years in Panel	**---**	**-0.06691****	**-0.08189****	**-0.11308****	**-0.02866**
	---	**(0.02468)**	**(0.02501)**	**(0.03952)**	**(0.04436)**
Years in Panel²	**---**	**---**	**0.00050****	**0.00125****	**-0.00205****
	---	**---**	**(0.00013)**	**(0.00015)**	**(0.00039)**
Unemployed	-0.62326**	-0.62594**	-0.62631**	-0.59085**	-0.64983**
	(0.02273)	(0.02275)	(0.02275)	(0.02736)	(0.04695)
Out of Labor Force (OLF)	-0.10271**	-0.10367**	-0.09962**	-0.08548**	-0.19148**
	(0.01829)	(0.01829)	(0.01833)	(0.02047)	(0.04725)
Entry Unemployment: Fired	-0.06022*	-0.05774*	-0.05749*	-0.04031	-0.08525
	(0.03365)	(0.03366)	(0.03366)	(0.03981)	(0.06798)
Entry Unemployment: Voluntary	0.03782	0.03978	0.03898	0.01361	0.11493*
	(0.03416)	(0.03417)	(0.03417)	(0.04124)	(0.06573)
Entry Unemployment: Company Closed	-0.22538**	-0.22237**	-0.22468**	-0.22049**	-0.22359**
	(0.05861)	(0.05862)	(0.05862)	(0.07155)	(0.10723)
Entry OLF	-0.05091*	-0.04945*	-0.05256*	-0.05264*	0.03406
	(0.02855)	(0.02855)	(0.02856)	(0.03107)	(0.07587)
Entry Employment	-0.01769	-0.01831	-0.01907	0.03541	-0.07008
	(0.02253)	(0.02253)	(0.02253)	(0.02701)	(0.04384)
Married	0.01084	0.01117	0.01335	0.00634	0.03534
	(0.01978)	(0.01978)	(0.01979)	(0.02329)	(0.04566)
Shock: Separated	-0.32503**	-0.32502**	-0.32505**	-0.32258**	-0.31799**
	(0.02802)	(0.02802)	(0.02802)	(0.03255)	(0.05825)
Shock: Divorced	-0.00419	-0.00521	-0.00332	-0.01827	0.05740
	(0.04831)	(0.04831)	(0.04831)	(0.05666)	(0.09701)
Shock: Spouse Died	-1.32812**	-1.32767**	-1.32591**	-1.44846**	-1.06070**
	(0.07807)	(0.07806)	(0.07806)	(0.08959)	(0.17184)
Shock: Child born	0.21654**	0.21677**	0.21709**	0.20371**	0.21011**
	(0.01931)	(0.01931)	(0.01931)	(0.02148)	(0.04602)
Work Disability	-0.20300**	-0.20277**	-0.20321**	-0.20024**	-0.13956**
	(0.01895)	(0.01895)	(0.01895)	(0.02121)	(0.04419)
Registered Handicap	-0.20187**	-0.20282**	-0.20279**	-0.21440**	-0.12882**
	(0.02300)	(0.02300)	(0.02300)	(0.02608)	(0.05646)
Nights Stayed in Hospital	-0.00899**	-0.00898**	-0.00896**	-0.00790**	-0.01184**
	(0.00056)	(0.00056)	(0.00056)	(0.00062)	(0.00145)
Log Net Real Household Income	0.32437**	0.32544**	0.32415**	0.29343**	0.41864**
	(0.01256)	(0.01256)	(0.01257)	(0.01446)	(0.02994)
Years of Education	0.01583**	0.01563**	0.01592**	0.01244**	0.01461
	(0.00545)	(0.00545)	(0.00545)	(0.00632)	(0.01399)
Number of Children: 1	0.05680**	0.05667**	0.05721**	0.07938**	0.01447
	(0.01421)	(0.01421)	(0.01421)	(0.01672)	(0.03317)
Number of Children: 2	0.04389**	0.04384**	0.04620**	0.04357**	0.06628
	(0.01871)	(0.01871)	(0.01872)	(0.02211)	(0.04538)
Number of Children: 3+	0.08428**	0.08462**	0.08834**	0.07400**	0.15542**
	(0.02961)	(0.02961)	(0.02962)	(0.03396)	(0.07696)
Constant	6.36654**	4.18194**	4.00172**	3.69355**	3.23140**
	(0.14211)	(0.81825)	(0.81964)	(1.30913)	(1.41824)
R^2	0.039	0.039	0.039	0.038	0.040
Adj-R^2	-0.156	-0.156	-0.156	-0.183	-0.245
N	149190	149190	149190	116885	32305

* p<0.1, ** p<0.05

Table 3: FE-Panel and Interviewer Controls - Life Satisfaction Regressions

	(1) FE-Panel	(2) FE-Panel	(3) Pooled OLS	(4) Pooled OLS
Age	**0.03887**	**0.01594**	**-0.08397****	**-0.08518****
	(0.03933)	**(0.03923)**	**(0.00344)**	**(0.00342)**
Age²	**-0.00001**	**0.00020****	**0.00095****	**0.00097****
	(0.00008)	**(0.00007)**	**(0.00004)**	**(0.00004)**
Years in Panel	**-0.10370****	**-0.06885***	**-0.03170****	**-0.01985****
	(0.03954)	**(0.03930)**	**(0.00338)**	**(0.00091)**
Years in Panel²	**0.00119****	**---**	**0.00056****	**---**
	(0.00015)	**---**	**(0.00015)**	**---**
Interviewer Male	**-0.04047****	**-0.04074****	**-0.00814**	**-0.00783**
	(0.01740)	**(0.01740)**	**(0.00950)**	**(0.00950)**
Interviewer Years Experience	**-0.00615****	**-0.00660****	**-0.00013**	**-0.00013**
	(0.00093)	**(0.00093)**	**(0.00051)**	**(0.00051)**
Unemployed	-0.59079**	-0.58977**	-1.09576**	-1.09637**
	(0.02736)	(0.02736)	(0.02505)	(0.02506)
Out of Labor Force (OLF)	-0.08421**	-0.09209**	-0.12959**	-0.13091**
	(0.02047)	(0.02045)	(0.01517)	(0.01517)
Entry Unemployment: Fired	-0.03965	-0.03989	0.08097*	0.08017*
	(0.03980)	(0.03981)	(0.04578)	(0.04578)
Entry Unemployment: Voluntary	0.01208	0.01404	0.18122**	0.18152**
	(0.04123)	(0.04125)	(0.04784)	(0.04784)
Entry Unemployment: Company Closed	-0.22100**	-0.21785**	-0.05640	-0.05387
	(0.07154)	(0.07156)	(0.08672)	(0.08673)
Entry OLF	-0.05320*	-0.04750	0.02035	0.02164
	(0.03107)	(0.03107)	(0.03543)	(0.03543)
Entry Employment	0.03590	0.03635	-0.39120**	-0.39196**
	(0.02702)	(0.02703)	(0.03138)	(0.03138)
Married	0.00480	-0.00176	0.14036**	0.13785**
	(0.02328)	(0.02328)	(0.01351)	(0.01349)
Shock: Separated	-0.32292**	-0.32261**	-0.46378**	-0.46284**
	(0.03254)	(0.03255)	(0.03916)	(0.03916)
Shock: Divorced	-0.01862	-0.02542	-0.05804	-0.05933
	(0.05665)	(0.05666)	(0.06839)	(0.06840)
Shock: Spouse Died	-1.44968**	-1.45324**	-1.51555**	-1.51832**
	(0.08957)	(0.08960)	(0.10960)	(0.10961)
Shock: Child born	0.20372**	0.20466**	0.37262**	0.37152**
	(0.02147)	(0.02148)	(0.02570)	(0.02570)
Work Disability	-0.20039**	-0.19875**	-0.38177**	-0.38121**
	(0.02120)	(0.02121)	(0.02512)	(0.02513)
Registered Handicap	-0.21731**	-0.21731**	-0.63430**	-0.63422**
	(0.02608)	(0.02609)	(0.01748)	(0.01748)
Nights Stayed in Hospital	-0.00786**	-0.00794**	-0.01586**	-0.01591**
	(0.00062)	(0.00062)	(0.00070)	(0.00070)
Log Net Real Household Income	0.29479**	0.29916**	0.60381**	0.60700**
	(0.01446)	(0.01445)	(0.01024)	(0.01020)
Years of Education	0.01245**	0.01173*	0.01502**	0.01505**
	(0.00631)	(0.00632)	(0.00195)	(0.00195)
Number of Children: 1	0.07780**	0.07498**	-0.04826**	-0.04782**
	(0.01672)	(0.01672)	(0.01348)	(0.01348)
Number of Children: 2	0.04081*	0.03233	-0.02192	-0.02199
	(0.02211)	(0.02210)	(0.01574)	(0.01574)
Number of Children: 3+	0.07079**	0.05788*	-0.04015*	-0.04070*
	(0.03395)	(0.03392)	(0.02231)	(0.02231)
Constant	3.93365**	4.32235**	4.20767**	4.16148**
	(1.30933)	(1.30884)	(0.09805)	(0.09723)
R^2	0.038	0.038	0.127	0.127
Adj-R^2	0.183	0.183	0.127	0.127
N	116876	116876	116876	116876

* p<0.1, ** p<0.05