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## **Are adult learners in Europe happier than non-learners? Statistical evidence from the European Social Survey.**

**ABSTRACT:** This paper borrows insights from the literature on European welfare regimes to analyse the relationship between happiness and participation in adult education. The academic literature and policy discourses on adult education tend to claim that participation in learning is correlated with happiness despite the lack of strong European comparative empirical evidence on this topic. In this paper, we use data from the latest Wave of the European Social Survey to analyse the happiness perceptions of nearly 20,000 adults between the ages of 25 and 64 who live in 16 European countries (15 EU countries and the UK). Results indicate that while adult learners on average tend to be happier than non-learners, this correlation weakens when controlling for determinants of participation and happiness and for the countries in which these adults live. Confirming the importance of welfare regimes, we found that adults in Finland tend to be happier than those in other countries, regardless of their participation in adult education. Happiness scores were lowest in Bulgaria and Hungary, countries with low participation rates in adult education and with the biggest differences in happiness scores between learners and non-learners. It is argued that the presence of well-structured adult learning provision might be an important characteristic of welfare regimes but that happiness is determined by much more than being an adult learner.

## INTRODUCTION

This paper investigates the general assumption that participation in adult education is good for one's happiness and will do this through a quantitative investigation of European comparative data on the topic. According to the Cambridge Dictionary, 'happiness' refers to 'feeling, showing, or causing pleasure or satisfaction' (Cambridge University Press, 2013). Generally speaking, happiness is understood to be important for people's well-being and productivity (Lahat & Sened, 2019). The literature on happiness however does not always use one single definition but the concept tends to be closely related to subjective well-being and life satisfaction and is believed to generate positive outcomes (Diener & Biswas-Diener, 2008; Layard, 2011; Easterlin, 1974, 2013). For the purpose of this paper, we use the 'happiness measure' of the European Social Survey (further discussed below), which defines 'happiness' as part of adults' subjective well-being in a 'hedonistic' sense in its own background papers (Vanhoutte, 2015). This notion of happiness refers to humans' tendency to strive towards the experience of pleasure and the reduction of pain. This concept differs from subjective well-being in relation to the desire to flourish in life (eudemonia), although both concepts tend to be closely related to each other.

Happiness, used as a variable in a wide range of social sciences research projects, has shed light on its expected benefits more widely. The importance of happiness was underlined in a review of 160 studies by Diener and Chan (2011) who concluded that people who declare to be happy tend to live longer and score higher on health measures. Examples of wider benefits of happiness in the workplace have been reported in the literature too. Oswald et al (2015) found that the happiest employees were 11 percent more productive in their job than those who were not happy. De Neve and Oswald (2012) revealed that adolescents who reported high levels of happiness were more likely to earn higher salaries as adults than those who scored lower on a standardised happiness scale. Layard (2020) stated that unemployment can cause similar feelings of unhappiness as a bereavement. Losing a loved one is a major determinant of unhappiness, reducing pleasure and causing lots of pain. These findings relate to issues surrounding strained personal relationships

including separation and divorce, known to deeply affect happiness in a negative sense. Moving from the individual to the societal level, Easterlin (2013) claimed that happiness is not so much the result of economic growth in a country but that it can be influenced and steered by societies through increased levels of employment and stronger social safety nets, of which the education system forms an important part. Research by Deeming and Hayes (2012) extensively discussed the observation that adults in the social-democratic Nordic countries, characterised by stronger levels of social protection, tend to be happier than those in other European countries. This observation will be confirmed in our data presented below. Helliwell et al. (2015) confirmed the strong geographical differences in happiness, with adults in Western Europe scoring higher on happiness scores than those in Central and Eastern European countries. These findings also resonate with Wilkinson's and Pickett's discussions in 'The Spirit Level' on how factors like happiness, health and societal problems strongly correlate to incidences of economic inequalities in countries (Wilkinson & Pickett, 2009). From their data, it is clear that adults in Nordic countries with stronger social safety nets score higher on happiness measures.

## **RESEARCH AIMS**

Throughout this paper, starting with the section on the benefits of adult learning below, we will focus on the general tendency of research and policy discourses to be optimistic about the happiness benefits of adult education despite the lack of large scale European comparative empirical research on this topic. Given the positive outcomes of happiness reported in the psychological and social policy literature, it is understandable that societies would like to stimulate it among their citizens. Empirically testing the link between adult education and happiness in Europe will help to understand the role of learning throughout life and will contribute to new insights into debates on the benefits of lifelong learning across Europe.

This research idea will be developed as follows. Firstly, the paper will summarise and critique the evidence on the wider benefits of adult learning - which tends to claim a positive relationship between participation in adult education on happiness. Secondly, it will discuss the varieties of

welfare regimes present in the European Union and link this to their characteristics of the adult learning systems. Thirdly, our methodological approach, drawing on data from the European Social Survey, will be explained, followed by a discussion of our result. At the end of the paper, final conclusions on the link between participation in adult education, happiness and the role of welfare regimes are being linked to a set of recommendations for future research.

## **THE BENEFITS OF ADULT LEARNING**

At the turn of the Millennium, the European Commission's focus on education and training was formalised through the Lisbon Treaty, more specifically through the implementation of a set of common indicators and benchmarks (European Commission, 2001). As of 2000, Member States were expected to reach a participation rate of 12.5 percent by 2010, measured on a four weeks' basis for those between the ages of 25 and 64. In 2009, this target was changed to 15 percent to be achieved by 2020 (European Commission, 2009). In 2021, the European Commission will move to new sets of benchmarks to reflect participation on an annual basis instead of a four weeks' basis. Generally speaking, the Education and Training benchmarks are underpinned by a desire to be the most competitive and knowledge-based economy globally and to put in place mechanisms to maintain adults' skills across the life span (Green, 2006; Schuetze, 2006). The strong economic focus of the Commission's education and training policies has been highly criticised (see Holford & Mohorcic-Spolar, 2012; Rasmussen, 2014; Antunes, 2019). In more general terms, adult education is believed to enhance a number of benefits, both in economic and non-economic terms, at the individual and the societal level (Dolan, 2014). Field (2009), in a lifelong learning review paper on 'well-being and happiness' claimed that learning throughout the life span enhances adults' well-being and that research evidence has demonstrated this quite consistently. The third Global Report on Adult Learning and Education (GRALE 3), published by the UNESCO Institute for Lifelong Learning (UIL, 2016) zoomed in on a review on the benefits of adult learning, not only in relation to employment, but also with regards to health and well-being and social, civil and community life. In Britain, a series

of studies undertaken by the Research Centre on Wider Benefits of Learning has extensively focused on this theme and core findings have been summarised by Schuller (2017) as part of a paper series for the Government Office of Science on the Future of Skills & Lifelong Learning. This work claims that adult education has positive effects for people's working lives as well as their health and well-being – a concept strongly related to the ESS's measure of happiness used in this paper. However, this type of research work has been strongly tailored towards the British context and is harder to find in other European contexts. Monahan and Clancy (2011) claimed that 'Lifelong learning is the secret to happiness in old age', citing research by McNair on the benefits of learning among older adults (McNair, 2006; 2012). In 2018, the European Commission's Electronic Platform for Adult Learning in Europe (EPALE) hosted a webchat for adult education practitioners and academics to focus on the 'promotion of happiness through quality learning', seemingly confirming the notion that adult learning enhances happiness, although mostly based on practitioners' somewhat anecdotal experiences (EPALE, 2018). Overall, however, it remains difficult to find a strong empirical knowledge base that confirms the hypothesis on a positive link between participation in adult education and happiness. It is also unclear how universal – or common across the European area – such a positive correlation between adult learning and happiness would be. Even in the British context where most research on benefits of participation in learning has been undertaken, Field's paper on 'well-being and happiness' acknowledges the limited research focus on 'happiness' (Field, 2009, p.11):

*'The paper says relatively little about happiness, partly because we still lack a rigorous evidence base linking happiness with adult learning, and partly because it is by no means clear what the relationship ought to be.'*

Ten years on, this research gap remains visible in the literature as, based on an extensive literature search using EBSCOhost and the university library catalogue, no specific studies on the link between happiness and adult learning can be found. Additionally, this issue has not been studied through a

European comparative lens, despite the European Commission's desire to see participation in education throughout life as a vehicle for economic prosperity and well-being, both at the individual and the societal level. Research in adult learning is also known to overly rely on small scale qualitative studies with little attention paid to issues like data saturation and the generalisability of results to wider populations (Fejes & Nylander, 2019). Given these observations and given the availability of data on happiness and adult learning in the ESS, it is worthwhile to run, present and discuss these analyses.

As will be discussed below, European member states significantly vary in their adult learning participation rates and the ways in which they stimulate the uptake of adult education. Happiness also tends to be sensitive to European welfare contexts. Given the structural differences, it remains unclear how universal it will be to claim that there is a significant link between participation in adult education and happiness or whether happiness is not that strongly related to participation in adult education after all. In order to fill this gap in the knowledge base, this paper aims to address the following research question:

*To what extent do levels of happiness differ between adult learners and non adult learners controlling for personal background characteristics and the distinct European member states in which they live?*

In order to address this question, analyses have been undertaken on data from the latest wave of the European Social Survey. Methodological procedures will be explained below. First, we provide a more detailed account on the variation of welfare contexts and the design of adult education systems within Europe.

## **ADULT EDUCATION IN EUROPE**

The European Commission's benchmarks and indicators in the field of education and training need to be understood in light of the Open Method of Coordination (Souto-Otero et al., 2008; Lange &

Alexiadou, 2010; Barcevicius et al., 2014). Member States remain responsible for the organisation of adult education for their own citizens but are put under pressure through soft power mechanisms such as benchmarking to increase their participations rates and the skill levels of their population. Each year, the Commission produces a monitoring report to show Member States' progress towards these benchmarks and working groups have been established to undertake in-depth analyses of nations' strengths and weaknesses in implementing and maintaining their adult learning systems (see European Commission, 2019). The European Commission's benchmark on participation is currently calculated using data from the Eurostat Labour Force Survey (Widany et al., 2019; Eurostat, 2020) and demonstrates that only seven countries succeeded to comply with the 15 percent benchmark by 2020, measured on a four weeks' basis (Sweden (29.2%); Finland (28.5%); Denmark (23.5%); The Netherlands (19.1%); France (18.6%); Luxembourg (18%) and Austria (15.1%)). Participation remains unsatisfactory low in countries that entered the European Union at a later stage (Romania (0.9%); Bulgaria (2.5%); Croatia (2.9%)). This measure of participation includes engagement in formal, credential-based courses as well as non-formal non-credential-based training, which largely includes workplace learning but is different from the one used in ESS. Therefore, the statistical focus on participation in the remainder of this paper will focus on ESS data. Adult education participation data demonstrate variation at two levels (Desjardins et al., 2006; Desjardins, 2017). At the individual level, it is generally accepted that those with the lowest levels of education, without a job or with a routine blue-collar job, and older adults participate less than the highly educated, those in professional jobs and adults in their twenties and thirties. At the societal level, huge variation exists between the different Member States of the European Union.

In broad terms, participation in adult education follows a North-South and West-East pattern. The Nordic model of lifelong learning has been extensively discussed by Rubenson (2006). The structuring of employment and the region's Active Labour Market Policies, its focus on industrial relations and the role of civil society have been cited as core factors in generating high participation rates. Much of these debates on adult education system characteristics have been linked to the



traditional classification of welfare states distinguishing social-democratic, conservative-corporatist and Anglo-Saxon liberal models by Esping-Andersen (1989) and extended categorisations including Eastern European countries, for example by Bohle and Greskovits (2007), Fenger (2007) and Nolke and Vliegthart (2009). Further thinking about welfare typologies in the context of education has further developed in the past 15 years (see Green, 2006; Busemeyer & Trampusch, 2011; Roosmaa & Saar, 2017). Participation rates for the Anglo-Saxon countries UK and Ireland are not as high as for the Nordic ones but are moderate. Especially in the UK, funding for adult education has significantly decreased in recent years and access to training becomes more dependent on the private investment made by individuals or their employers (Fraser & Harman, 2018). Among all European countries, adult learning systems are most obviously underpinned by neo-liberal discourses. The Dutch and German-speaking conservative countries also generate moderate participation rates but are differently structured (see Bol & Van de Werfhorst, 2013). These Member States historically have an extensive focus on vocational education and training in initial education, moving these types of courses less into the adult education sphere (Scandurra & Calero, 2020). Alternatively, their strongly stratified initial education system tends to incorporate feelings of success and failure at a young age, potentially discouraging adults to further engage with education throughout their lives (Groenez et al., 2007). The strong academic-vocational divide tends to represent social structures among the population with those from stronger socio-economic backgrounds more likely to follow academic routes that result into professional and managerial jobs with more opportunities for adult education. The Southern European countries, often characterised by strong family-oriented cultures but weaker provisions in relation to adult education, score below average. This is especially the case for Italy and Greece, countries labelled in the welfare regime literature as Mediterranean types (Ferrera, 1997; Gal, 2010; Mari-Klose & Moreno-Fuentes, 2013). These countries have been hit hard by the economic and financial crisis of the late 2000s, making it more difficult to create new jobs and invest in education and training beyond the initial levels. Initiatives such as apprenticeships are less well developed compared to the Dutch and German speaking countries. The Eastern European

countries, many of which joined the European Union in 2004 – now more than 15 years ago – are still in the process of implementing their own adult education systems and have weaker support mechanisms in place for skills development, for example as part of Active Labour Market Policies (Kogan et al., 2008; Kalenda et al., 2020). Nolke and Vliegthart (2009) labelled the Eastern European countries as ‘dependent market economies’. Nevertheless, variation is visible at the level of Eastern European countries too. For example, Roosmaa and Saar (2017) made a distinction between post-socialist neoliberal countries (Estonia, Latvia, Lithuania) with medium but unequally distributed levels of participation in adult education, post-socialist embedded neoliberal countries such as Hungary, Poland and Slovakia that have low participation rates but also lower issues of inequalities, and post-socialist Balkan countries in which both participation rates and levels of inequalities are problematic. These are Bulgaria, Romania and Croatia. Somehow, the European Commission has invested in adult education across these countries, for example through funding projects using European Social Funds. Using this money, training providers have been able to implement programmes to upskill and reskill adults. Nevertheless, these types of funding are often short term in focus and do not encourage countries to establish strong national provision. This is different from for example the Nordic region that has a system of Folk High Schools in place, as well as recognised provision for adult basic education. Poor provision in these Eastern European countries, especially the post-socialist Balkan and embedded neoliberal types has led to a situation in which low-educated adult learners are hardly visible within statistics on participation in adult education across the European Union (Eurydice, 2020).

Despite the stark variation in participation rates across EU Member States, patterns of inequalities based on the most powerful individual determinants such as age, educational attainment and occupation are visible in each of the Member States, also in the Nordic ones (Desjardins, 2017). For example, tertiary level educated adults in Finland have much higher chances to participate than someone who did not finalise secondary school. However, given the structural variation across Europe, low qualified adults in Finland are still much more likely to access adult education compared

to tertiary educated adults in Bulgaria. Overall, these observations of variation in participation rates and education and training structures are important to take into account when investigating the links between adult education and other life spheres such as happiness. Deeming and Hayes (2012) explored welfare regimes from the viewpoint of happiness and well-being using data from the World Values Survey and observed significant differences between varying types of welfare regimes. Our analyses extend this work by including participation in adult education. We will now turn our attention to the methodological details of our study.

## **METHODOLOGY**

In order to answer the research question presented above, we analysed data from the European Social Survey (ESS, 2020). The ESS is a bi-annual survey which started in 2002 and is coordinated by a team at City University London. In January 2020, it was announced that the ESS received funding from the European Commission under the Horizon 2020 research programme (City University London, 2020). The core focus of the survey is on collecting and analysing data on attitudes and behaviour among citizens living in European countries. This includes migrants who were born outside of Europe but who live there. It is one of the leading European instruments that help understand social change in Europe as a whole as well as within the distinct countries. The ESS is a cross-sectional survey, not a longitudinal one and is thus not designed to follow-up on individual lives, but to monitor changes at societal level. Each dataset can also be used in its own right to undertake analyses based on data gathered within a given year. The questionnaires used for ESS differ for each round but consist of core repeated and rotating modules. Core modules include questions on media and internet use, social trust, politics, well-being and inclusion, and the collection of typical socio-economic and socio-demographic background characteristics such as sex, age, occupation and education. Six point Likert scales are used to get an indication of people's values such as respect and care for others, feeling recognised and appreciated. Examples of rotating modules include measurements of attitudes towards climate change, voting intentions in potential

EU referenda, perceptions on the quality of welfare services, the judgement of fairness and the timing of key life events.

The analyses presented in this paper draw on data from Wave 9 which was conducted in 2018. This is the latest dataset currently available for research purposes and can be downloaded from the ESS website. We selected the ESS to answer our research question based on a number of key observations. First of all, the ESS contains data on both participation in adult education and happiness. Research on adult education in Europe typically relies on three micro-level datasets: the Eurostat Labour Force Survey and Adult Education Survey and the OECD's Survey of Adult Skills, part of the Programme on International Assessment of Adult Skills (PIAAC) (see Widany et al., 2019). However, these three datasets do not contain measures of happiness and are therefore not suitable for the purpose of this research. Secondly, the ESS is a large-scale survey that aims to be representative for Europe's population. As indicated on the ESS' website, a common sampling frame is used across countries, relying on 'strict random probability measures' (ESS, 2020). Countries are required to set a sample size of at least 1,500 individuals, which can be reduced to 800 for small nations with a population of under 2 million inhabitants. Weighting variables have been included for analytical purposes.

In line with the European Commission's benchmark on adult participation in lifelong learning, we focused on adults between the ages of 25 and 64. We included all countries of the EU and kept the UK in the sample. This led us to work with the following European database of 19302 adult between the ages of 25 and 64: Austria (n=1682), Belgium (n=1122), Bulgaria (n=1217), Cyprus (n=508), Czech Republic (n=1553), Germany (n=1456), Estonia (n=1188), Finland (n=1064), France (n=1243), Hungary (n=1049), Ireland (n=1401), Italy (n=1583), The Netherlands (n=1054), Poland (n=927), Slovenia (n=823) and the United Kingdom (n=1432).

Data selected for the purpose of the analyses had to reflect on participation in adult education and happiness. The variable *'improve knowledge and skills: course/lecture/conference in the last 12*

*months'* most closely represented the content of the Labour Force Survey variable used to monitor participation in adult education (Widany et al., 2019). While the Labour Force Survey uses a reference period of four weeks, ESS used a period of 12 months which is in line with the approach used in the Adult Education Survey and the Survey of Adult Skills. Happiness was measured using a 10-point scale. Respondents were asked the question '*How happy are you?*' and could indicate a score ranging from 0 – extremely unhappy – to 10 – extremely happy.

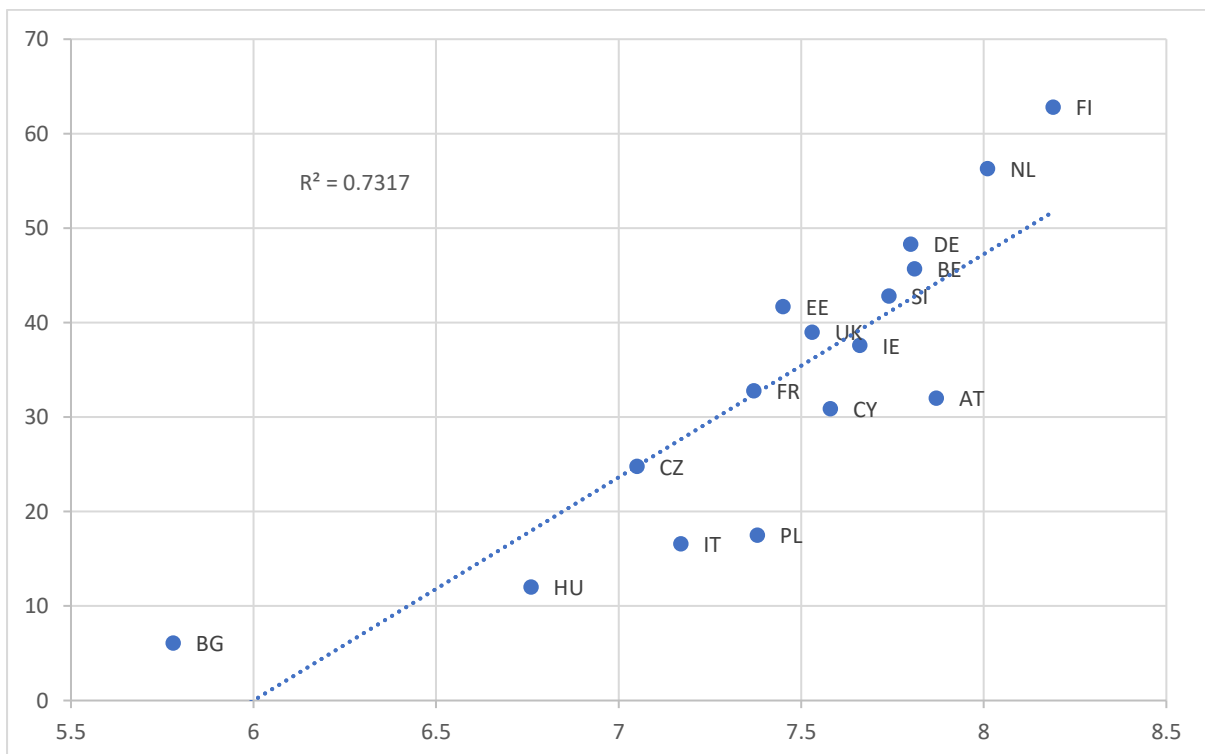
Analyses linking these two variables have been carried out through correlation and regression analyses. The latter analyses have been supplemented by control variables. Age, gender, having a job and having tertiary level qualification have been included as they represent core determinants of participation in adult education (see Desjardins, 2017) but also as these were used as independent variables in previous happiness research on welfare regimes such as by Deeming and Hayes (2012). The experience of a divorce during one's lifetime has been used to represent a major relational variable linked with happiness – as claimed in the happiness literature (Layard, 2020). Analyses have been undertaken at two levels. Regressions on the pooled European dataset included a final control variable distinguishing between the different Member States to account for the diversity of welfare regimes visible within the European Union and the United Kingdom. In order to understand correlations between participation in adult education and happiness at the country level, additional regression analyses have been carried out for each of the EU member states in the dataset, as well as for the UK.

## **RESULTS**

We started our analyses by exploring the descriptive statistics on adult education participation and happiness for each of the European Member states in our ESS Wave 9 dataset. We then correlated these and presented them in a scatterplot. As can be seen from Figure 1, there is a positive correlation between the two variables. Bulgaria, the post-socialist Balkan country in the dataset, was

the only country to have a participation rate lower than 10 percent but also the only country to have an average happiness score below 6. Hungary, a post-socialist embedded neoliberal dependent country, has the second lowest score on both measures. At the other end of the scales, we found Finland and The Netherlands, each with participation rates above 50 percent and happiness scores above 8. The UK and Ireland score average on both measures, both in relation to happiness and participation in adult education. Adults in the Dutch and German speaking countries seem on average happier than those in the Southern and Eastern European countries. Estonia and Slovenia perform better on both measures compared to other Eastern European countries. With an R-square of .73 there is a clear correlation between the two measures. Adults in countries with higher participation rates in adult education tend to be happier.

[FIGURE 1 HERE – Correlation Participation in Adult Education and Happiness]



AT=Austria; BE=Belgium; BG=Bulgaria; CY=Cyprus; CZ=Czech Republic; DE=Germany; EE=Estonia; FI=Finland; FR=France; HU=Hungary; IE=Ireland; IT=Italy; PL=Poland; SI=Slovenia; NL=The Netherlands; UK=United Kingdom

While data on happiness were collected between 0 and 10, boxplots and Q-Q plots of the happiness variable revealed skewed data with respondents in the different countries scoring lower than 4

being indicated as outliers ( $z=-1.090$ ). In undertaking multivariate analyses, several alternative statistical techniques were carried out in order to guarantee the robustness of our research. Linear and multinomial regression analyses have been undertaken on the pooled dataset. For the linear regressions, outliers were removed from the analyses although regressions have been re-run recoding categories 0-4 into 4. The procedure of working with data without outliers allowed us to proceed with data with an overall skewness score reduced from -1.103 to -.500. Similar analyses with the same control variables have been run using a multinomial model of four happiness groups: adults scoring between 0-6 (24.1%), those scoring 7 (19%), those scoring 8 (30.1%) and those scoring 9-10 (16.9%). Overall, regardless of our choice of statistical technique, similar results and conclusions were found.

Before showing the results of the linear regression analyses, Table 1 presents the descriptive statistics of the control variables included in our models. All variables are nominal variables that add up to 100 percent. We divided age into four groups representing 10 years each. In line with expectations, the dataset contains a higher proportion of adults in the second half of their labour market active life stage. There are more male respondents in the dataset and more than 3 out of 4 adults were in a paid employment in the past seven days. Nearly 30 percent of adults hold a degree of tertiary education.

[TABLE 1 HERE – descriptive statistics of control variables]

<i>Age</i>		<i>Countries</i>	
Age 25-34	20.1	Austria	8.7
Age 35-44	24.6	Belgium	5.8
Age 45-54	28.2	Bulgaria	6.3
Age 55-64	27.1	Cyprus	2.6
		Czech Republic	8.0
<i>Sex</i>		Estonia	6.2
Male	46.9	Finland	5.5
Female	53.1	France	6.4
		Germany	7.5
<i>Paid employment in last 7 days</i>		Hungary	5.4
No Job	23.7	Ireland	7.3
Job	76.3	Italy	8.2
		Poland	4.8
<i>Educational Attainment</i>		Slovenia	4.3

No Tertiary Education	70.8	The Netherlands	5.5
Tertiary Education	29.2	United Kingdom	7.4
<i>Experienced Divorce</i>			
No Divorce	15.8		
Divorce	84.2		

Regression analyses were carried out in four stages, reflecting on theoretical determinants of participation in adult education and happiness. For Model 1, we regressed participation in adult education on happiness, the core interest of this paper. In Model 2, we included the leading socio-economic and socio-demographic background characteristics determining participation in adult education (see Desjardins, 2017). We included the life experience of going through a divorce in Model 3 as the quality of personal relationships has been described in the literature as having a strong correlation with happiness (Layard, 2020). Model 4 controls for the different EU Member States for the analyses undertaken on the pooled dataset.

Beta and Standard Error coefficients have been reported as well as significance indicators. Missing values were deleted from the data to run the four models with exactly the same respondents.

Multicollinearity scores (Tolerance scores and Variance Inflation Factors) were inspected for each regression model and no problems were found.

[TABLE 2 HERE – Regression models, dependent variable Happiness]

	<b>MODEL 1</b>	<b>MODEL 2</b>	<b>MODEL 3</b>	<b>MODEL 4</b>
	B (S.E) p	B (S.E) p	B (S.E) p	B (S.E) p
Constant	7.500 (.013) ***	7.538 (.034) ***	7.545 (.034) ***	6.419 (.054) ***
LLL participation	.444 (.023) ***	.354 (.025) ***	.359 (.025) ***	.123 (.025) ***
Age 25-34 (ref)				
Age 35-44		-.094 (.033) **	-.081 (.033) *	-.063 (.031) *
Age 45-54		-.181 (.032) ***	-.153 (.032) ***	-.137 (.031) ***
Age 55-64		-.139 (.032) ***	-.105 (.033) **	-.114 (.032) ***
Male (ref female)		-.114 (.022) ***	-.121 (.022) ***	-.138 (.021) ***
Job (ref no job)		.139 (.028) ***	.141 (.028) **	.197 (.055) ***
Degree (ref no degree)		.166 (.025) ***	.162 (.025) ***	.161 (.025) ***
Divorce (ref no divorce)			-.159 (.031) ***	-.205 (.030) ***
Bulgaria (ref)				.627 (.064) ***
Hungary				.757 (.058) ***
Czech Republic				



Italy				1.003 (.058) ***
France				1.065 (.061) ***
Poland				1.095 (.065) ***
Estonia				1.121 (.062) ***
Cyprus				1.236 (.078) ***
Ireland				1.310 (.059) ***
United Kingdom				1.348 (.059) ***
Slovenia				1.362 (.067) ***
Belgium				1.369 (.062) ***
Germany				1.451 (.059) ***
The Netherlands				1.541 (.064) ***
Austria				1.574 (.057) ***
Finland				1.770 (.064) ***
F-value (df)	376.121 (1) ***	73.973 (7) ***	68.143 (8) ***	86.507 (23)
Adjusted R2	.020	.027	.028	.096
N	18537	18537	18537	18537

\*\*\*p<=.001; \*\*p<=.010; \*p<=.050

Model 1 confirms that adults who participate in learning activities tend to achieve a higher happiness score. Model 2 keeps a positive Beta coefficient for the participation variable but highlights the importance of individual characteristics. Younger adults under the age of 35 tend to be happier and those with a job and degree holders score higher too. Similar statistics appear in Model 3. Consistent with the literature on happiness, those who experienced a divorce during their life so far score lower on the happiness scale and directions and strength of other individual background characteristics remain similar in comparison to Model 2. In Model 4, we observe that the strength of the participation in adult education variable weakens. However, the results for the different countries – with Bulgaria as the reference category – tend to be stronger indicators of happiness. While the participation in adult education coefficient remains positive, the contribution of this variable is small in comparison to the extra points respondents now receive for their predicted happiness score when they live in for example Finland or the Dutch and German speaking countries. Beta coefficients for the dummy country variables are positive for all countries compared to the reference category Bulgaria. In keeping all variables included in Models 1, 2 and 3 constant, predicted scores in Hungary increase with .627 in comparison to Bulgaria and are even higher in the other countries, up to an additional 1.770 points for adults in Finland. Similar multinomial logistic regressions can be found in Appendix of this paper. Results indicate similar results. Participation in

adult education is positively correlated with happiness but stronger variation exists according to the countries in which adults live and the scores and the ‘happiness bonus’ received for participation in adult education is clearly lower in Model 4 compared to the simple comparison between the two core variables in Model 1.

Additional analyses have been run at the national level, including the variables in Models 1, 2 and 3. Table 3 lists the change in the adult education participation variable for Models 1 versus 3. Data have been weighted to N=1250 per country to work with similar sample sizes across the different EU Member States and the UK. As in the analyses presented above, additional ‘bonus points’ for happiness were present among adult learners although Beta coefficients tended to be small and reduced in size after the inclusion of control variables. In Model 3, the coefficient for Ireland turned negative. The country with the highest level of happiness points for participation in adult education is Bulgaria, followed by Hungary, countries that score lowest on the happiness and participation in adult education variables. Beta coefficients remained above .250 for Slovenia, The Netherlands and the United Kingdom.

[TABLE 3 HERE – Regression models per country, dependent variable Happiness, scores for participation in adult education]

	<b>MODEL 1</b>	<b>MODEL 3</b>
	B (S.E.) p	B (S.E.) p
Austria	.120 (.076) n.s.	.080 (.083) n.s.
Belgium	.182 (.074) *	.113 (.081) n.s.
Bulgaria	.787 (.210) ***	.538 (.215) *
Cyprus	.137 (.142) n.s.	.122 (.158) n.s.
Czech Republic	.270 (.089) **	.128 (.092) n.s.
Estonia	.302 (.090) ***	.069 (.097) n.s.
Finland	.120 (.073) n.s.	.012 (.079) n.s.
France	.191 (.090) *	.075(.094) n.s.
Germany	.058 (.075) n.s.	.029 (.081) n.s.
Hungary	.586 (.148) ***	.400 (.155) **
Ireland	.021 (.080) n.s.	-.013 (.086) n.s.
Italy	.255 (.095) **	.160 (.102) n.s.
Poland	.289 (.138) *	.120 (.147) n.s.
Slovenia	.454 (.107) ***	.296 (.119) *
The Netherlands	.286 (.066) ***	.252 (.073) ***
United Kingdom	.338 (.081) ***	.256 (.087) **

The results presented in Tables 2 and 3 are interesting. As an answer to our Research Question, we can conclude that adult learners across Europe tend to be slightly happier than those who are not. Happiness significantly differs across European countries. While adult learners on average retain a small happiness advantage, the country of residence far outweighs this situation. To go back to the idea of contrasting Finland and Bulgaria, it is clear that adult learners in Bulgaria are happier than those who are not, but these learners are still significantly less happy than those who do *not* engage with adult education in Finland. Having presented these results, we return to our initial discussion on welfare regimes, reflect on the limitations of this type of research and formulate recommendations for future studies.

## **DISCUSSION AND CONCLUSION**

Empirical research by Deeming and Hayes (2012) concluded that adults living in Nordic social-democratic countries tend to be happier than those living in liberal or conservative European countries. These findings were also visible in other publications, for example by Wilkinson and Pickett (2009), Easterlin (2013) and Helliwell et al. (2015). While a wider discussion could be opened on what exactly it means to be 'happy', mainstream definitions seem to mainly relate happiness to issues of subjective well-being. Our analyses presented above reach similar conclusions to the ones reported in the previous literature and we can argue that the national differences in happiness are even starker in contrast with the Eastern and Southern European countries. In our analyses, the lowest happiness scores were found in the post-socialist Balkan country Bulgaria and the post-socialist embedded neoliberal country Hungary. Different from previous research on happiness, the analyses reported in this paper included a measure on participation in adult education in the 12 months preceding ESS data collection. This inclusion was of particular interest as benefits of adult education are often reported to include claims on happiness and well-being, despite the lack of

previous European comparative research in the area of happiness. While univariate statistics demonstrated that participants in adult education tend to be happier than those who do not, this result needs to be nuanced when controlling for personal background characteristics and the countries in which adults live.

Overall, the results presented in this paper might indicate that happiness and participation in adult education are not that strongly correlated when taking control factors into account. Previous research, for example by Wilkinson and Pickett (2009) claims that more equal societies reach better levels of well-being among their citizens. From the adult education literature, we can argue that the availability of equal chances to participate in learning activities is part of what characterises strong inclusive societies (Desjardins, 2017). This argument has especially been explored by Rubenson (2006) as part of the Nordic Model of adult education. Finnish adults are happy regardless of their participation in adult education in the previous 12 months. Given the strong presence of adult learning opportunities, both in the formal education system as in non-formal organisations, the chances that they will participate at certain phases throughout their lives are higher. In making these reflections, it is important to refer to other domains of social policy, including the labour market and social security. As Easterlin (2013) claims, happiness is an individual perception but can be influenced by governments through the creation of employment and the presence of social safety nets for all. Working towards the creation of these stronger social characteristics might be an important feature for post-socialist countries, especially Balkan state Bulgaria and neoliberal embedded Hungary, which are still very reliant on support from, for example, the European Social Fund (Boeren, 2016). Elements of these social security and labour market systems can include initiatives for adult education although it is fair to say that strong welfare systems encompass broader characteristics like education alone.

The core limitation of studying happiness in relation to participation in adult education through a European comparative lens is the absence of longitudinal data. The analyses presented above used

data from the European Social Survey, which is a cross-sectional survey. As such, findings in this paper need to be interpreted as patterns appearing across the different countries and between learners and non-learners. Undertaking more sophisticated analyses to predict happiness as a result of participation requires other types of data. With the leading surveys on adult education – such as PIAAC, the Adult Education Survey and Labour Force Survey – being cross-sectional in nature, it remains difficult to push forward this research agenda on the benefits of adult learning in Europe. Large research grants might trial longitudinal approaches in certain countries but ultimately, it will be the leading intergovernmental organisations such as the European Commission and the OECD who will have to be convinced of this data need. This type of data collection and research will help to reach a more sophisticated level of insights in which macro level characteristics potentially relate to happiness. Additionally, a wider range of data would be useful to work with. In the current analysis, only one Nordic country – Finland – was included as data for Sweden and Denmark were not available. The need to interpret data beyond the level of welfare regimes will be important too. The United Kingdom and Ireland are typically included in a similar welfare type category representing liberal regimes although results indicated more evidence of happiness bonus points for adult learners in the United Kingdom compared to Ireland. Similar differences were found between adults in Germany and The Netherlands. Analyses including data from a wider range of macro structural characteristics from the broader social policy literature might help to further unpack these observations.

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**ANNEX**

MULTINOMIAL

	Group 1 versus Group 2			Group 1 versus Group 3			Group 1 versus Group 4		
	Exp(B)	S.E.	p	Exp(B)	S.E.	p	Exp(B)	S.E.	p
Model 1 LLL participation	1.994	.052	***	2.657	.046	***	2.909	.047	***
Model 2 LLL participation + Age, gender, education, work	1.600	.055	***	2.054	.049	***	2.306	.050	***
Model 3 LLL participation + Age, gender, education, work + Divorce	1.612	.055	***	2.076	.049	***	2.329	.050	***
Model 4 LLL participation + Age, gender, education, work + Divorce + Countries	1.271	.058	***	1.385	.053	***	1.445	.054	***
N	19,302								
Model Chi-Square (df)	2956.825 (69) ***								
-2LL	12308.183								
Nagelkerke R-Square	.152								