UiT The Arctic University of Norway

Faculty of Health Sciences / Department of Community Medicine

The social gradient in Subjective Well-being (SWB)

A cross-sectional study with data from the UK, the US, and Canada

Jaya Adhikari

Master's thesis in Public Health, HEL-3950, November 2022

ACKNOWLEDGEMENTS

Abstract

Background: The Social gradient in Subjective wellbeing (SWB) exists in countries, and in individuals, either rich or poor, and the pattern can be seen when looking at the factors of Socio-economic Position (SEP) is a strong predictor of SWB and as well as a popular concept in health and happiness research.

Aim: The main aim of this paper is firstly, to determine whether there are socio-economic gradients in SWB, and secondly, to evaluate how are different socioeconomic variables are associated with different measures of SWB.

Method: This is a cross-sectional study that uses data from a survey titled "People's Views on Socioeconomic Position" that was conducted in three countries: the UK, the US, and Canada. The main analysis was conducted by means of multiple linear regression analysis, which was used to investigate the association of SEP with SWB, measured by four different SWB outcome variables: Global life Satisfaction (GLS), Personal wellbeing index (PWI), Job satisfaction, and Meaningfulness. Education, household income, relative income, Childhood financial circumstances (CFC), father´s education, mother´s education, and being born native along with demographic variables (age, sex, marital status, and country) are the independent variable.

Results: The four measures of SWB were significantly impacted by SEP. The relationship between the four SWB measures with education, relative income, and childhood financial circumstances all showed statistically significant associations. This indicates that higher education, relative income, and CFC influenced SWB positively. Marital status was significantly and positively associatied with SWB. The additional thing to note is, when relative income is considered, the magnitude of the link between absolute income and SWB broadly disappeared and turns insignificant.

Conclusion: This study reported indicates an existence of a social gradient in SWB. It was noticed that education, relative income, CFC and marital status has the greatest influence on SWB. Lower levels of education, low relative income, poor childhood financial circumstances, and being single predict lower SWB.

Keywords: Social Gradient, Subjective Wellbeing, Socio economic Position, Personal wellbeing Index, Global Life satisfaction, Job Satisfaction , Meaningfulness

ABBREVIATION

SWB	Subjective Wellbeing
SEP	Socio-economic Position
CFC	Childhood Financial circumstances
GLS	Global life Satisfaction
PWI	Personal wellbeing Index
US	United States
UK	United Kingdom

Table of Contents

List of Table

List of Figure

1 Introduction

Well-being has long been thought to be necessary for the development and maintenance of healthy and productive societies (1). In many context they use objective indicators of well-being, such as income, literacy, and life expectancy, as well as subjective indicators, such as how people perceive and experience life (2). This method of assessing perceptions and life experiences is known as subjective well-being (SWB). Researchers, policymakers, government statistical offices, the media, and the public all have been increasingly interested in SWB (3, 4). SWB refers to how and what extent does a person assess his or her own life and current situation (5). According to Robbins and Kliewer, SWB is the self-evaluation of life satisfaction which involves a multidimensional evaluation of life, including cognitive judgments of life satisfaction and affective evaluations of emotions and moods (5). Diener, one of the leading scholars in SWB research, defines it as "a person feeling and thinking his or her life is desirable regardless of how others see it"(6). This definition highlights the thinking and feeling dimensions of SWB e.g. health, work, family income or people´s actual feeling, both positive feelings such as happiness and pleasure, or negative feeling such as pain, worry and anger (6). SWB is most often thought of as having three components: Frequent positive affect, infrequent negative affect, cognitive evaluations of life satisfaction (7-9). In 1984, SWB was introduced as a measure of happiness and life satisfaction (6). Since its origin, SWB has grown in popularity as a measure of overall life satisfaction, happiness, and well-being. It is now commonly used in psychological research (7)and as a measure of individual and and societal health (10). Data on group level SWB can also be used to assess the effectiveness of various public health initiatives (11). The literature on SWB is extensive and spread across a variety of fields. Based upon psychology and public health literature, theoretical SWB studies fall into four major categories: fulfillment and engagement theories, personal orientation theories, evaluative theories, and emotional theories (11). Some economists use the term "SWB" as a synonym for "happiness,". However, happiness is a narrower notion in psychology than SWB (7). Happiness is typically delivered with SWB in literature, media,but both of these are widely regarded as the primary affective component and with the concept that SWB encompasses more than just happiness(12).

Socio-Economic Position (SEP)

The term "socioeconomic position"(SEP) refers to the social and economic factors that influence the positions that individuals or groups hold within a society's structure (13). SEP can broadly refer to an individual's or a group's position or class within a hierarchical social structure, as well as access to material and nonmaterial resources (14). The concept of SEP in epidemiological studies is commonly based on Karl Marx and Max Weber's social class theories. Marx defined social class as a two-dimensional division between exploited workers and exploiting capitalists, with an individual defined by their relationship to the means of production(15). Weber defined social class as having power and prestige in addition to property or wealth. He contended that owning property, such as factories or machinery, is only factor in determining a person's social class (16). In sociology, terms referring to socioeconomic circumstances, such as socioeconomic status, socioeconomic position, social class, and social stratification, have various contextual meanings. In epidemiology, however, these terms are frequently used interchangeably. All the terms mentioned above, as well as related terms, are treated and interpreted as equivalent to socioeconomic position in the current thesis. Education, income, and/or occupation are traditionally used to calculate SEP, either together or separately(17). SEP is a strong predictor of life satisfaction and Wellbeing (18) and as well as a popular concept in public health(13) .

1.1 Measuring Subjective well-being

Today, there is a growing interest in measuring and utilizing SWB for research and policy purposes. According to the literature, SWB can be measured in three ways, life evaluation, experienced well-being, and 'eudemonic' well-being(19). When people are asked to provide global assessments of their lives, SWB is measured as a life evaluation. Because of its prevalence in several surveys, as well as its conciseness and appeal to policymakers, this measure has been used most frequently in policy and/or research (20). In this study we used two ways in which these feelings can be tapped They are: A single item question where respondent asked to rate their global life satisfaction (GLS). This normally takes the form: "How satisfied are you with your life as a whole?" The second way is multi-item scales. This approach adopts a domain-level representation of SWB. Here, individual items refer to specific life domains (life aspects) and the scores are averaged to produce a measure of SWB.

Each of the seven domains (items) can be analyses as a separate variable, or the seven domain scores can be summed to yield an average score as Personal Wellbeing Score '(PWI)' score which represents one measure of SWB. In additional to the multi-items scale (PWI), Job satisfaction and meaningfulness were other SWB measure. Job satisfaction measure was created by the principal investigators of the project. This concept is based on the hypothesis that the type of profession is a strong predictor of socioeconomic position (21). Job satisfaction simply look at how people perceive themselves in the professional sphere. Because of the reward in life satisfaction, it was worth to investigate its different facets and their unique consequences. The meaningfulness measure is supposed to reflect eudaimonic wellbeing. It was inspired by a question they use in the Norwegian Institute of Public Health survey on quality of life, "Oppgi svært på en skala fra 0 til 10, der 0 betyr at du opplever det du gjør som svært lite meningsfylt og 10 betyr at du opplever det du gjør som svært meningsfylt "(22). Which is very similar to the one in this study questionnaire for meaningfulness. Thus, for this study, Global life Satisfaction (GLS), Personal wellbeing Index (PWI) , Job Satisfaction and Meaningfulness were the final four Measures of SWB.

1.2 Social gradient in subjective wellbeing

A number of evidence have shown the positive relationship between SWB and people's social standing in developed societies(23) ,which is also known as social gradient in SWB. The social gradient describes the phenomenon whereby people who are less advantaged in terms of socioeconomic position have worse health and wellbeing than those who are more advantaged. The social gradient exists in countries, or in individuals, either rich or poor (24), and the pattern can be seen when looking at factors such as income, level of education, (25). A social gradient is observed when a stepwise or decrease in SWB that comes with decreasing social position is noted. This implies that as socioeconomical circumstances improve, the chances of experiencing life satisfaction and pleasure increase. It is believed that the nature of high-status work provides greater freedom and, as a result, greater well-being. Higher SEP groups, possibly because of this association, have greater SWB than members of low SEP groups (26). One obvious mechanism for the relationship between SEP and SWB is that higher incomes associated with high SEP allow people to obtain goods and services that improve their overall quality of life (27).

1.3 SWB across the countries

Although early research on SWB focused on individual differences (28), recent work has examined differences in SWB between countries (29). Surveys of different countries have revealed significant variability in the mean levels of reported SWB (29, 30) but the explanations for this diversity have not been fully explored. It is possible that the differences are entirely due to true variability in SWB, but it is also possible that the differences are due to self-report measurement factors. Social, economic, and cultural characteristics of the nations may cause difference in SWB. A study from the national differences found that ,the USA has higher SWB based on its income per person (31). The interest in measuring SWB has grown in the UK over recent years. According to quality of Life in Europe (2003–2007) survey, the UK found someway down the 'ranking' around 7.5/10 of subjective wellbeing scores(32).

On most international surveys of well-being, Canada scores quite well. Canadians tend to score quite well on surveys of life-satisfaction. Although rankings change with the type of survey, the measurements used and the number of countries included. According to, UN (Sustainable development solutions network) (2013), Canada is customarily among the top ten of nations and often among the top five (33).

1.4 Determinants of subjective well-being

The main factors influencing SWB include socio-demographic traits, health and functioning, social supports, religion and culture, geography and infrastructure, and socio-economic variables(11). Personal elements, such as genetics and personality traits, play a significant role in determining SWB (34). However, the main topic of interest in this study is socio-economic variables.

1.4.1 Income (Absolute and Relative)

Longitudinal studies on Individuals' SWB in industrialized cultures have found decreases in well-being alongside higher income (35). Economists' discoveries of positive relationships between income and happiness, such as higher incomes allow people to purchase goods and services that improve their quality of life(27, 36, 37). This is one obvious mechanism underlying the relationship between SEP and SWB. People with higher incomes have better standard of living, which in turns is associated with better SWB(9, 38, 39). There is an overwhelming amount of evidence that shows a positive relationship between income and SWB within countries(40) . Easterlin examined 30 cross-sectional studies conducted within individual countries (41).

In a study, wealthier people were happier than poorer people in that country, and the difference was often significant (42). At between-nation level, Inglehart & Klingemann found a curvilinear relation(43) similar to that found for individuals (35), in which income differences matter most to SWB at low levels of wealth and have a significant impact(44). One explanation for why income matters most at low levels is that , increases at low levels of income are more likely to be related to inherent human needs, such as food and shelter, whereas increases at high levels of income simply lead to the purchase of more luxury items (30) Once basic needs are met, income has limited effect (45) and SWB does not necessarily rise with it. Although it appears that income and SWB are correlated (39) , debate has focused on whether this relationship is relative (42) or absolute(46). Relative income, the difference between an individual's income and the norm of a socially formed comparison group, is also a factor in determining SWB. Yasar 2018-, considered relative income as that of an individual relative to the average income of a given group(47). Rickardsson and Mellander (2017) noted that such a group consists of the people closest to the individual (i.e., relatives and neighbors)(48). Easterlin (1995) emphasized that relative income is simply the income of one person compared to that of others (49). He argued that it is not absolute income that matters, but relative income, and thus social comparison (42).Some asserted that both absolute and relative income may have an impact on SWB(48). One study found that, the shifts in relative income have more favorable consequences, indicating that only relative income or rank of income mattered (50).

1.4.2 Education

The use of education as a SEP indicator has its historical roots in the status domain of Weberian theory(51) and it aims to capture the person´s knowledge related qualities (25). Many studied have examined the association between income (or other economic variables) and SWB including some education-related control variables, but few focus on the direct effect of education on individual SWB and found correlations between them(52-55) . Jongbloed (2018) , found that higher education was significantly associated with wellbeing (55). One possible explanation is that higher education is associated with longer and healthier lives, as well as successful marriages. However, one study found that, when income and occupational position are taken into account, the advantages of education on SWB tend to decline disappear or even become negative (56), i.e., the higher the level of education, the lower the reported satisfaction level.

This is more difficult to interpret, but it may be consistent with the view that satisfaction is determined by the difference between outcomes and aspirations, and that education raises aspiration targets(57). The empirical evidence on the connection between education and SWB, is limited, inconsistent, and poorly understood. While many studies use education as a control variable in SWB models and thus report on associations between education and SWB(55) few discuss on how these associations can be interpreted.

1.4.3 Childhood Circumstances

There is by now a substantial literature on the relationship between childhood circumstances and later adult outcomes on wellbeing (58). Few studies highlight that the psychological well-being of an older person can be a function of his or her childhood financial status and they are also shaped by their parental education(59, 60). Evidence has shown childhood circumstances as important determining factor of wellbeing in later life, with poorer outcomes among those from lower socioeconomic backgrounds(60). During the transition period from childhood to adulthood to old age, they evaluate their entire life and become dissatisfied with what they have experienced in the past in the form of socioeconomic, cultural, and health changes (61). Those who had adverse childhood experiences at higher rates found to have a lower life satisfaction and lower well-being(62). CFC could therefore have an impact on an adult's SWB. However, limited research has compared influence of childhood financial status on well-being in later life. Also, the report on associations between parental education and subjective wellbeing are few and limited discussion on how these associations are interpreted.

1.5 Background for the Master Thesis

Recent years have shown a growth of studies using various determinants of SWB (5), and studies on SWB have become part of the larger academic area of quality of-life research(63) . The use of these outcomes is practical for policy purposes. For example.- The world happiness report 2016, highlighted that measurements of SWB can be used effectively to assess the progress of nations(64). It allows researchers to investigate the factors that may improve SWB. Even though most of the literature has been dedicated to the relationship between SEP and SWB, the present study not only builds on previous research investigating the relationship outcomes, but also aims to expand the scope of determinants by considering the association of different SEP indicators, (for e.g., relative income and Childhood circumstances variables) which were not frequently used with SWB. This paper examines socio-economic gradients in SWB based on a survey on people's views on socioeconomic position from the UK, Canada, and the US. The survey was conducted in these three countries with almost identical questionnaires (approximately N=1300 in each country sample). The data materials are unique with the detailed information on both SEP and SWB.The dataset contains a lot of socioeconomic information (such as education, income, occupation, subjective social status), also on different measures of health-related behavior, self-reported health, wellbeing, and the geographical origin of the respondents.

1.6 Aim of the study

The primary aims of the thesis were firstly, to determine whether there are socio-economic gradients in SWB, and secondly, how different socio-economic variables are associated with different measures of subjective well-being (GLS, PWI, Job satisfaction and Meaningfulness). This specified in the following objectives:

- o   How is Income (Absolute and Relative) associated with four measures of SWB?
- o   How is Education associate with four measures of SWB?
- o   How is Childhood Financial Circumstance and Parental Education associated with four measures of SWB?
- o   Is being born native in the country of residence associated with four measures of SWB?

2 Methods and Materials

2.1 Study design

This is a cross-sectional study that used data from a survey titled "People's Views on Socioeconomic Position" that was conducted during the spring of 2020 in three countries: the United Kingdom, the United States, and Canada. The three questionnaires are nearly identical, but differ on a few points based on the American, Canadian, and British contexts.

2.2 Study Sample and Data Collection

A Qualtrics online survey platform was used to create an anonymous survey (www.qualtrics.com). Cint (www.cint.com), a global panel company, selected the respondents among its panel members. The target sample size was approximately N=1300 for each country, composed based on demographic quotas to achieve representative sample (in terms of age and sex distribution). Respondents from the UK, the US, and Canada agreed and clicked the survey link. Panel participants were rewarded for their time and effort in completing the survey when it was completed.
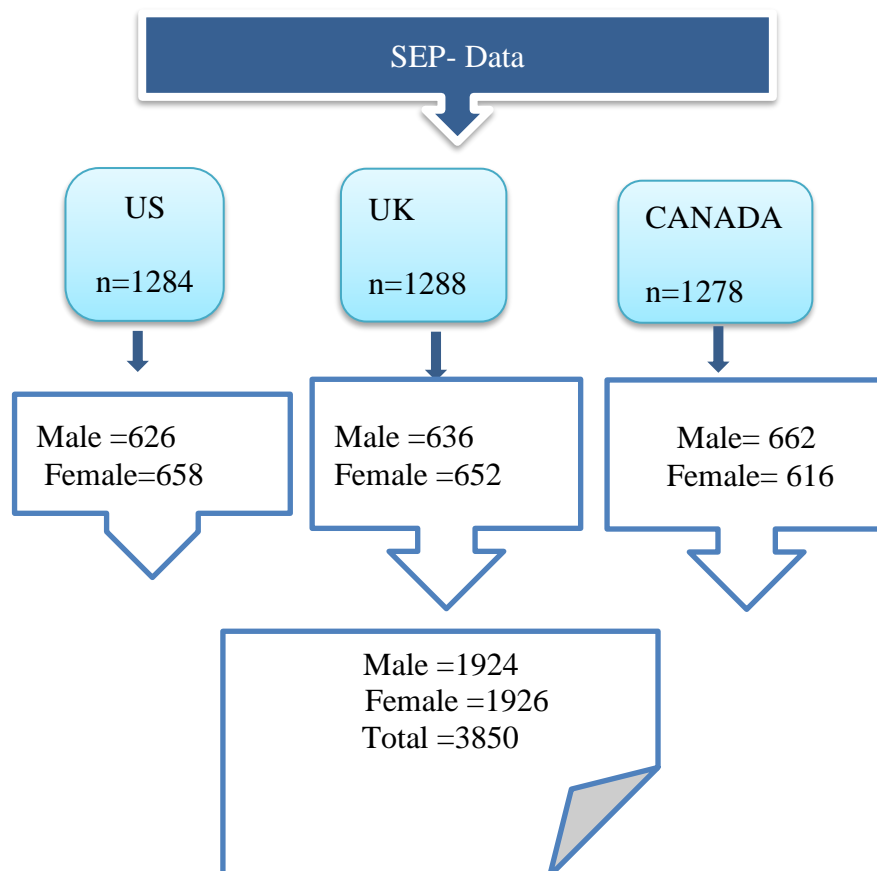
Figure 1:Flow chart of the studied sample

2.3 Inclusion and exclusion criteria

To be included in the sample participants had complete all the question in the questions. Respondents were excluded after they a) did not submit the survey or the sampling quota was saturated, or b) did not meet quality criteria, such as spending less than 5 minutes on the survey. After the exclusion, the sample sizes were 1284 in the US,1288 in the UK and 1278 in Canada.

2.4 Variables

2.4.1 Dependent Variable

2.4.1.1 Global Life Satisfaction

In this study, people were questioned on their level of global life satisfaction (GLS). This phrase came from an international wellbeing group 2013 (Australian center on quality of life) "When you consider your own life and personal circumstances, how satisfied are you with your life as a whole?". It measures how people evaluate their life rather as a whole than their current feelings. Score ranged from "0" to "10". Low scores reflect dissatisfaction, while high scores are associated with high levels of satisfaction. The midpoint of the scale coded "5" means "Neutral" or "not dissatisfied, neither satisfied (65).

2.4.1.2 Personal Wellbeing Index (PWI)

In this study, seven domains of wellbeing were examined as an index of seven items (listed below). The seven domain scores were added together to produce an average score that represents SWB (65).When asked to rate each domain satisfaction with life on a scale from "0 to 10". The score in a scale represent in a same way as GLS.

Questions   Domains

How satisfied are you with…?

1. your standard of living?   [Standard of Living]

2. your health?   [Personal Health]

3. what you are achieving in life?   [Achieving in Life]

4. your personal relationships?   [Personal Relationships]

5. how safe you feel?   [Personal Safety]

6. feeling part of your community?   [Community-Connectedness]

7. your future security?   [Future Security]

2.4.1.3 Job Satisfaction

In this study, job satisfaction was measured by the question - If you are currently in the workforce: how satisfied are you with your Job? The response scale for this question ranged from "0" to "10". The score in a scale represent in a same way as mentioned in GLS.

2.4.1.4 Meaningfulness

In this study, meaning in life was measured by the question -Overall, to what extent do you feel the things you do in your life are meaningful? Thus, the response scale for this question was an eleven-point scale ranging from "0" to "10". The score in a scale represent in a same way as mentioned in GLS

2.4.2 Socioeconomic Variables

2.4.2.1 Education

Education was recorded based on the highest completed education level of a person. There were four levels, - primary/secondary, Diploma, Bachelors, Postgraduates degree. For the analysis '*Primary/Secondary*' was used as the reference category.

2.4.2.2 Household Income

Income was recorded as the combined gross income of adults in the household, The variable in this survey was recorded as a response to the question: Please tick the level that best describes your pre-tax or gross annual income? There were 11 income brackets in the three samples. For the analyses in this study, household income was regrouped into four categorized as Low Income, Lower Middle, Upper Middle and High Income. For the study, '*Low Income*' was used as the reference category.

2.4.2.3 Relative income

For the relative income variable, the question asks If you were to compare your income with the average income of other people that you would normally socialize with, would you say your income is higher or lower and with the best possible five option like- Higher, slightly higher, same, slightly lower, and Lower. For the analysis '*Same*' was used as a reference category.

2.4.2.4 Childhood financial circumstances

The Childhood financial circumstances (CFC) variable was recorded as a response to the question: 'What was your family's financial situation during your childhood?', with five possible responses: very good, good, neither good nor bad, difficult and, very difficult. For this study '*Very difficult*' was used as a reference category.

2.4.2.5 Parental education

Parents' education was recorded based on the mother's and father's highest completed of four education levels, with the same categorization as for respondents' own education level: primary /secondary, Diploma, Bachelor, and Postgraduate. For the analysis '*Primary/secondary*' is used as the reference.

2.4.2.6 Born Native

The Born Native variable was recorded as a response to the question: 'Were you born in UK/US/Canada? Depending on the country's questionnaire', with two possible responses: Yes or No. Since the survey's questionnaire did not specify whether those who were not born native are immigrants, but for the analysis this thesis assume that this is the case.

2.4.3 Demographic Variables

The information collected as demographic variables include age, Sex, Marital status, and Country of residence (UK, US, and Canada). Sex was recorded as Men and Women. Age was grouped into five different categories: 18-22, 22-35, 36-55, 56-80 and 81+. This categorical variable was used in the regression. The continuous variable of age was reported in the descriptive statistics to give an overview of the included sample. Marital status was group into five different categories: married/living together, relationship but not living together, widowed, single and Divorced/Separated and unmarried. For the analysis in this study, it was regrouped into a dichotomous variable as, in a relationship and single.

2.5 Statistical Analysis

Sample characteristics are presented with means, and standard deviation (SD) for continuous variables and frequencies and proportion for categorical variables. They were reported for the full sample by sex and by country. The distribution of the four SWB measure - GLS, PWI, Job satisfaction and Meaningfulness were displayed using histograms and their means and SD were made visible in the figure.

To investigate the association of SEP and SWB, multiple regression analysis was used for each of the outcome variables. In Model 1, education, and household income along with the demographic variables (age, sex, marital status, and country) were regressed on the four SWB outcomes measures: GLS, PWI, job satisfaction and meaningfulness. Relative income was introduced in Model 2. Childhood financial circumstances, father´s education, mother´s education and born native were added in Model 3 as the complete model. Unstandardized beta coefficient (ß), confidence intervals (95% CI) and p-value were reported. F-test, R square, R-squared change and overall p-value for total model were reported to observe the change in variance as variable were added to the model. All statistical analyses were performed using IBM SPSS Statistics version 25 for Mac (33).

2.6 Ethical aspects

The study was approved by the Monash University Human Research Ethics Committee (project ID: 17490). The participants have given written informed consent.

3 Results

3.1 Sample characteristics

Out of a sample of 3850 respondents, the average age of the study sample was 45.14 years ranging from 18 to 82. There were 48.8 %(n=1878) men and 51.2%(n=1972) women in the study. Regarding the country, the proportion of the UK, the US and Canada was almost equal with 33.5% (n=1288) , 33.4% (n=1284) and 33.2% (n=1278) respectively. The details for country specific sample Characteristics are found in Table 2. The most common level of highest attained education is Bachelor´s degree in both genders with 34.6% in women and 34.2 % in men. While Postgraduate is the least common with 14.4 % in Women and 18.3 % in Men. Among all, the largest proportion of the sample are in a relationship with 51% (n=1005) Women and 50.8% (n=954) Men.

The highest level of household income is same in both genders. With the population of 37,6% in women and 36% on men Upper Middle income took the highest place. The least proportion of 10.5% women and 11% men falls on low Income categories. Similarly, Largest number of people respond to the same level of relative income with 38,8% in women and 39.5% in men. The CFC, the largest population with 33.4% in women and 35,6% in men reported that they had a good CFC. Equally important, the parents' education, most respondents reported that the highest attained level of parent's education is primary/secondary in the largest population at approximately 45%, followed by Diploma with 24.2 % in fathers and 27,3%in Mothers. The least number of parents has achieved the postgraduate level, 11.8% in fathers and 9.1% in mothers. In respond to whether they are born native, approximately 80-90 % the sample respond as a 'yes' in the respective three countries' samples.

Table 1:Distribution of the study sample by sex

Variables	SEX					
	Total		Women		Men	
	n	M/%	n	M/%	n	M/%
Age Mean (SD)	45.14 (16.17)		45.14 (16.14)		45.14 (15.90)	
Sex						
Women	1972	51.2	1972	0.51		
Men	1878	48.8			1878	0.49
Country						
Canada	1278	33.2	616	48.2	662	51.8
UK	1288	33.5	652	50.6	636	49.4
US	1284	33.4	658	51.2	626	48.2
Education level						
Postgraduate	628	16.3	284	14.4	344	18.3
Bachelor	1325	34.4	682	34.6	643	34.2
Diploma	1048	27.2	561	28.4	487	25.9
Primary/secondary	849	22.1	445	22.6	404	21.5
Marital Status						
In a relationship	1959	50.9	1005	51.0	954	50.8
Single	1891	49.1	967	49.0	924	41.2
Household Income						
High Income	1119	29.1	529	26.8	590	31.4
Upper middle Income	1417	36.8	741	37.6	676	36.0
Lower middle Income	900	23.4	495	25.1	405	21.6
Low Income	414	10.8	207	10.5	207	11.0
Relative Income						
Higher	294	7.6	109	5.5	185	9.9
Slightly higher	696	18.1	322	16.3	374	19.9
Same	1506	39.1	765	38.8	741	39.5
Slightly Lower	709	18.4	413	20.9	296	15.8
Lower	645	16.8	363	18.4	282	15.0
Childhood financial circumstances						
Very Good	457	11.9	220	11.2	237	12.6
Good	1328	34.5	659	33.4	669	35.6
Neither good nor Bad	1137	29.5	574	29.1	563	30.0
Difficult	740	19.2	405	20.5	335	17.8
Very Difficult	188	4.9	114	5.8	74	3.9
Father´s Education						
Postgraduate	455	11.8	220	11.2	235	12.5
Bachelor	722	18.8	352	17.8	370	19.7
Diploma	933	24.2	487	24.7	446.	23.7
Primary/secondary	1740	45.2	913	46.3	827	44.0
Mother´s Education						
Postgraduate	351	9.1	187	10.0	164	8.3
Bachelor	657	17.1	339	18.1	318	16.1
Diploma	1051	27.3	503	26.8	548	27.8
Primary/secondary	1791	46.5	849	45.2	942	47.8
Born Native						
Yes	3297	85.8	1671	84.9	1626	86.8
No	546	14.2	298	15.1	248	13.2

From table 2, the average age of the study sample was 45.21 years in UK, 44.38 in US and 45.82 in Canada ranging from 18 to 82. The gender division in all three countries is nearly equal. The reported education level is high in all three countries, although the UK sample has relatively larger proportion of the respondent reporting the primary/ secondary level. Approximately the half of the population are in a relation in all three countries.

Moving to the relative income, the largest population (39.8 % in UK, 39.1 % in US and 38.4% in Canada respond that they have the same level of income comparing to the most people they socialize with. Regarding CFC, largest proportion with 31.4% in UK, 37.8% in US, 34.3% in Canada respond they have `good` CFC. The largest proportion of both father and mother have highest attainable level of education is primary/secondary in UK and Canada with approximately 60% and 49%. while the largest proportion in the UK of both father and mother have highest attainable level of education in bachelor with 31.5% in Fathers and 35.3% in mothers. Moreover, in respond to the question whether they are born within the country, 88.4 % were born in UK, 90% in US and approximately 80% in Canada.

Table 2: Distribution of study sample by the three-country level (the UK, the US, and Canada)

Variable	UK		US		Canada	
	n= 1288/33.5%		n= 1284/33.4%		n=1278/33.2%	
	n	M/%	n	M/%	n	M/%
Age Mean/SD	45.21 (16.113)		44.38 (16.324)		45.82 (16.065)	
Gender						
Female	652	50.6	658	51.2	616	48.2
Male	636	49.4	626	48.2	662	51.8
Education level						
Postgraduate	209	16.2	240	18.7	179	14.0
Bachelor	410	31.8	479	37.3	436	34.1
Diploma	256	19.9	384	29.9	408	31.9
Primary/secondary	413	32.1	181	14.1	255	20.0
Marital Status						
In a relationship	709	55.0	570	44.4	680	53.2
Single	579	45.0	714	55.6	598	46.8
Household Income						
High Income	306	23.8	360	28.0	453	35.4
Upper middle Income	589	45.7	418	32.6	410	32.1
Lower middle Income	283	22.0	337	26.2	280	21.9
Low Income	110	8.5	169	13.2	135	10.6
Relative Income						
Higher	102	7.9	98	7.6	94	7.4
Slightly higher	218	16.9	242	18.8	236	18.5
Same	513	39.8	502	39.1	491	38.4
Slightly Lower	244	18.9	222	17.3	243	19.0
Lower	211	16.4	220	17.1	214	16.7
Childhood financial circumstances						
Very Good	147	11.4	167	13.0	143	11.2
Good	405	31.4	485	37.8	438	34.3
Neither good nor Bad	396	30.7	362	28.2	379	29.7
Difficult	275	21.4	209	16.3	256	20.0
Very Difficult	65	5.0	61	4.8	62	4.9
Father´s Education						
Postgraduate	128	9.9	186	14.5	141	11.0
Bachelor	198	15.4	302	23.5	222	17.4
Diploma	241	18.7	405	31.5	287	22.5
Primary/secondary	721	56.0	391	30.5	628	49.1
Mother´s Education						
Postgraduate	86	6.7	157	12.2	108	8.5
Bachelor	159	12.3	286	22.3	212	16.6
Diploma	268	20.8	453	35.3	330	25.8
Primary/secondary	775	60.2	388	30.2	628	49.1
Born Native						
Yes	1137	88.4	1155	90.0	1005	78.9
No	149	11.6	129	10.0	268	21.1

Distribution of the Outcome Variable

Figure 2 Global life satisfaction (GLS)   *Figure 3: Personal wellbeing Index (PWI)*
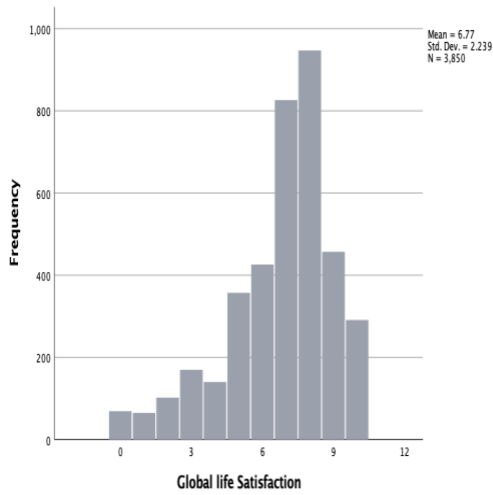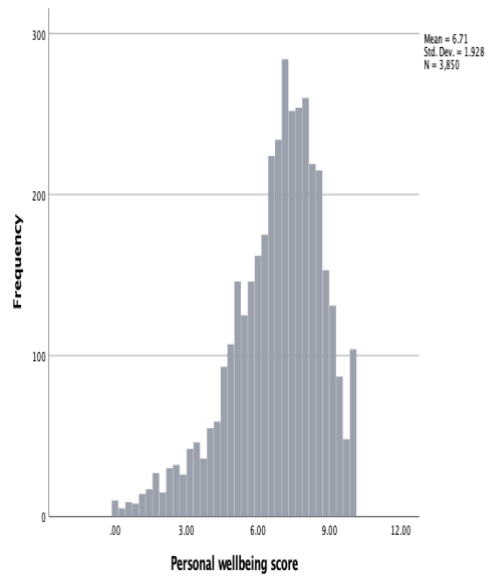
Figure 4: Job Satisfaction   *Figure 5: Meaningfulness*
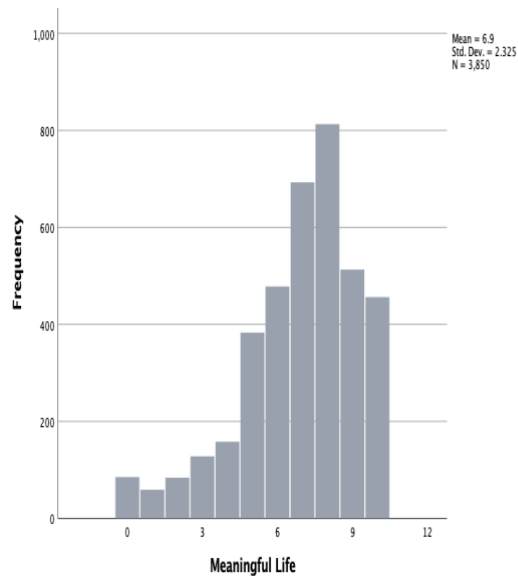
The figures present the histogram with the mean values for each SWB variable. figure 1 present the GLS, , figure 2 presents overall PWI, Figure 3 present the job satisfaction and Figure 4 presents the Meaningfulness. The mean score of different measures of SWB seems to be slightly on the upper middle range.

3.2 Regression analyses

Table 3, Table 4, Table 5, and Table 6 shows the three regression models for each of the outcome variables: GLS, PWI, job satisfaction, and meaningfulness. In model 1, the pattern of association of education and household income with GLS (Table 3), PWI Index (Table 4), Job Satisfaction (Table 5), and Meaningfulness (Table 6) is similar. There was a nearly linear relationship between each increase in educational level, compared with the lowest education level. The association with the four outcome variables indicated linearity also for household income. In Model 2, relative income is added. With a higher relative income level, the coefficients for the relative income categories steadily rise and fall with lower relative income levels. This indicates enhanced GLS, PWI, job satisfaction, and meaningfulness with higher relative income level. With all four outcome variables, the education coefficients slightly decrease (remain significant) when including relative income. The association between household income with global life satisfaction (Table 3), PWI (Table 4), and Meaningfulness (Table 6) turn insignificant in Model 2. In case of job satisfaction, it is only the upper middle level that is significant at 5% level (Table 5).
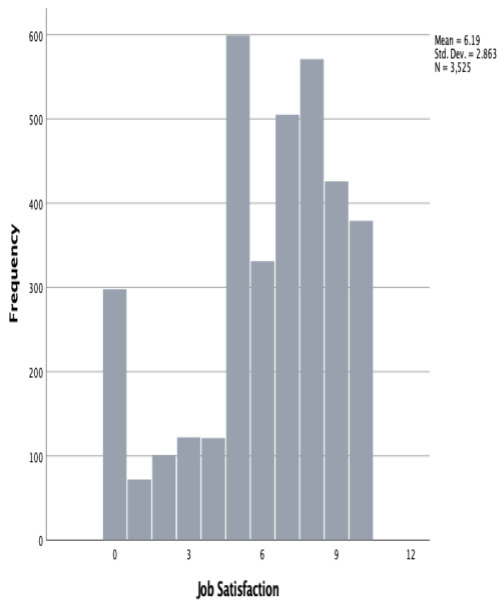
Model 3 additionally, include CFC, Father's education, mother's education, and born native There was a positive but smaller association of education with all the four-outcome measure- GLS, PWI, job Satisfaction, and meaningfulness. The education coefficients lightly decreased (more than in model 2) but remained statistically significant for bachelor and postgraduate level of education. The household income variable remains insignificant with GLS (Table 3), PWI (Table 4), and Meaningfulness (Table 6) but with Job Satisfaction (Table 5), it is only the upper middle level that is significant at the 5% level. CFC significantly contributed to the prospect of reporting a higher GLS, PWI, job Satisfaction and meaningfulness. There was nearly linear relationship between each increase in CFC level relative to very difficult CFC, indicating that reporting better CFC is associated with all the four-outcome measures. In the analyses of parents' education, the father's and mother's education was statistically insignificant with GLS (Table 3) and Job Satisfaction (Table 5) but mothers with a high level of education (postgraduate) showed a statistically significant positive association with PWI (Table 4) and Meaningfulness (Table 6). The born native is statistically insignificant with every four outcome variables.

Sex is statistically significant only with meaningfulness indicating that being female is associated with higher Meaningfulness (Table 6). The reporting of GLS is significantly higher only in the age group of (56-80) and 81+ (Table 3). The age group of only (56-80) is significantly associated with the PWI (Table 4) and Meaningfulness (Table 6). However, the three age categories (23-35), (36-55), and (56-80) have a positively significant association with Job satisfaction (Table 5). Marital status is statistically significant, indicating that being in a relationship is positive associated with GLS (Table 3), PWI (Table 4), Job Satisfaction (Table 5) and Meaningfulness (Table 6). Moreover, the US sample dummy showed the positive and statistically significant association (p<0.001) only with GLS (Table 3), PWI (Table 4) and Meaningfulness (Table 6) relative to the UK sample. Whereas the Canadian sample dummy was insignificant for all four measures of SWB.

Table 3:Multiple regression analysis of predictors of global life satisfaction (GLS). *Unstandardized B with 95% CI.*

	GLOBAL LIFE SATISFACTION (GLS)		
Explanatory Variables	**Model 1** β (95%CI)	**Model 2** β (95%CI)	**Model 3** β (95%CI)
Education *(Ref: Primary/secondary)*			
Diploma	0.229** (0.031,0.426)	0.149 (-0.038,0.336)	0.121 (-0.071,0.313)
Bachelors	0.498*** (0.306,0.690)	0.308*** (0.125,0.490)	0.265*** (0.071,0.458)
Postgraduate	0.728*** (0.499,0.956)	0.405*** (0.185,0.625)	0.326*** (0.095,0.558)
Household income *(Ref: Low Income)*			
Lower Middle	0.017 (-0.169, 0.203)	-0.168* (-0.346 ,0.010)	-0.144 (-0.0320,0.033)
Upper Middle	0.307*** (0.127 ,0.488)	-0.074 (-0.250,0.102)	-0.044 (-0.218,0.131)
High Income	0.555 *** (0.338,0.773)	0.008 (-0.205,0.220)	-0.004 (-0.214,0.207)
Relative Income *(Ref: Same)*			
Lower		-1.782*** (-1.977, -1.586)	-1.716*** (-1.912, -1.520)
Slightly lower		-0.590*** (-0.773, -0.408)	-0.577*** (-0.758 , -0.396)
Slightly higher		0.294** (0.109,0.479)	0.236** (0.052,0.421)
Higher		0.818*** (0.555,1.082)	0.604*** (0.332,0.877)
Childhood financial circumstances *(Ref: Very difficult)*			
Difficult			0.548*** (0.226,0.870)
Neither good nor Bad			0.605*** (0.291,0.918)
Good			0.929*** (0.615,1.242)
Very good			1.372*** (1.016,1.728)
Father's education *(Ref: primary/Secondary)*			
Diploma			0.053 (-0.135,0.241)
Bachelor			-0.094 (-0.314,0.125)
Postgraduate			-0.151 (-0.419-0.117)

Mother's Education			
(*Ref: Primary/secondary*)			
Diploma			-0.126
			(-0.307,0.056)
Bachelor			-0.009
			(-0.233,0.216)
Postgraduate			0.274
			(-0.020,0.569)
Born Native			-0.045
			(-0.232,0.142)
Demographic characteristics			
<u>Sex</u>			
(*Ref: Male*)			
Female	-0.119*	-0.009	0.007
	(-.255,0.016)	(-0.138,0.120)	(-0.121,0.135)
<u>Age group</u>			
(*Ref:18-22*)			
Age 23-35	-0.179	-0.050	0.021
	(-0.447,0.090)	(-0.304,0.205)	(-0.233,0.274)
Age 36-55	-0.531***	-0.212*	-0.113
	(-0.791, -0.272)	(-0.460,0.035)	(-0.363,0.137)
Age 56-80	0 .252*	0.581***	0.712***
	(-0.016,0.520)	(0.326,0.837)	(0.449,0.975)
Age 81+	3.096	4.387**	4.524**
	(-1.096 ,7.288)	(0.419,8.356)	(0.596,8.452)
<u>Marital Status</u>			
(*Ref: Single*)			
In a relationship	0.907***	0.699***	0.703***
	(0.758,1.056)	(0.557,0.841)	(0.562,0.845)
<u>Country</u>			
(*Ref: UK*)			
US	0.243*	0.255***	0.244***
	(0.073,0.414)	(0.093,0.416)	(0.080,0.408)
Canada	-0.031	0.011	0.005
	(-0.201,.138)	(-0.150,0.172)	(-0.155,0.166)
Constant	**5.96***	**6.383***	**5.627***
No. of observation	**3842**	**3842**	**3842**
R^2	**0.097**	**0.193**	**0.212**
R^2 CHANGE		**0.096**	**0.019**

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3, Model C indicated that relative income, childhood financial circumstances, and marital status shows the strongest associations. The R-squared change is 0.019 after controlling for demographics, education, and Income. Therefore, added variables explains an additional 1,9% of the variance in GLS.

Table 4: Multiple regression analysis of predictors of personal wellbeing Index (PWI). *Un*standardized B with 95% CI.

PERSONAL WELLBEING INDEX (PWI)

Explanatory Variables	Model 1 β (95%CI)	Model 2 β (95%CI)	Model 3 β (95%CI)
Education *(Ref: Primary/secondary)*			
Diploma	0.213** (0.045,0.382)	0.137* (-0.021,0.295)	0.120 (-0.042,0.282)
Bachelor	0.0506*** (0.343,0.670)	0.327*** (0.173,0.481)	0.288 *** (0.125,0.451)
Postgraduate	0.728*** (0.533,0.923)	0.423*** (0.237,0.609)	0.343*** (0.148,0.537)
Household income *(Ref: Low Income)*			
Lower Middle	0.137* (-0.021,0.296)	-0.023 (-0.174,0.128)	0 .001 (-0.147,0.150)
Upper Middle	0.405*** (0.251,0.559)	0.055 (-0.094,0.204)	0.084 (-0.063,0.231)
High Income	0.617*** (0.431,0.802)	0 .106 (-0.073,0.286)	0.095 (-0.082,0.272)
Relative Income *(Ref: Same)*			
Lower		-1.604*** (-01.769, -01.439)	-1.544*** (-1.709, -1.379)
Slightly lower		-0.612*** (-0.766, -0.458)	-0.599*** (-0.751, -0.447)
Slightly higher		0.308*** (0.152,0.465)	0.250*** (0.095,0.405)
Higher		0.786*** (0.564,1.009)	0.569*** (.0340,0.798)
Childhood financial circumstances *(Ref: Very Difficult)*			
Difficult			0.458*** (0.187,0.729)
Neither good nor Bad			0 .534*** (0.270,0.798)
good			0.849*** (0.585,1.113)
Very good			1.269*** (0.970,1.569)
Fathers' education *(Ref: Primary/Secondary)*			
Diploma			0.036 (-0.122,0.194)
Bachelor			-0.079 (-0.263,0.106)
Postgraduate			-0.104 (-0.329,0.122)

Mothers Education *(Ref: Primary/secondary)*			
Diploma			-0.151* (-0.304,0.002)
Bachelor			0.014 (-0.175,0.203)
Postgraduate			0.271** (0.024,0.519)
Born Native			0.006 (-0.151,0.163)
Demographic characteristics			
Sex *(Ref: Male)*			
Female	-0.053 -0.169,0.063	0.053 (-0.056,0.162)	0.070 (-0.037,0.178)
Age Group *(Ref:18-22)*			
Age 23-35	-0.290** (-0.519, -0.061)	-0.172 (-0.387,0.043)	-0.099 -(0.313,0.114)
Age 36-55	-0.561*** (-0.782, -0.339)	-0.265** (-0.474, -0.056)	-0.159 (-0.369,0.051)
Age 56-80	0.051 (-0.178,0.279)	0.359*** (0.144,0.575)	0.495*** (0.274,0.716)
Age 81+	1.537 (-2.040,5.114)	2.693 (-0.659,6.045)	2.828 (-0.476,6.132)
Marital Status *(Ref: Single)*			
In a relationship	0.832*** (0.705,0.959)	0.638*** (0.517,0.758)	0.645*** (0.526,0.764)
Country *(Ref: UK)*			
US	0.206*** (0.060,0.351)	0.216*** (0.080,0.353)	0204*** (0.066,0.342)
Canada	-0.033 (-0.178,0.112)	0.008 (-0.128,0.144)	0.006 (-0.129,0.141)
CONSTANT	**5.924***	**6.331***	**5.598***
No. of Observations	**3842**	**3842**	**3842**
R^2	**0.113**	**0.223**	**0.248**
R^2 change		**0.11**	**0.025**

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4, Model C indicated that relative income, childhood financial circumstances, and Marital status shows the strongest associations. The R-squared change is 0.025 after controlling for demographics, education, and Income. Therefore, added variables explains an additional 2,5% of the variance in PW

Table 5:Multiple regression analysis of predictors of job satisfaction. *Unstandardized B with 95% CI.*

JOB SATISFACTION

Explanatory Variables	Model 1 β (95%CI)	Model 2 β (95%CI)	Model 3 β (95%CI)
Education *(Ref: Primary/secondary)*			
Diploma	0 .350* (0.080,0.620)	0.237* (-0.020,0.494)	0.222* (-0.043,0.486)
Bachelor	0.769*** (0.508,1.030)	0.510*** (0.261,0.760)	0.444*** (0.180,0.709)
Postgraduate	1.224*** (0.916,1.531)	0.778 *** (0.481,1.074)	0.659*** (0.346,0.972)
Household income *(Ref: Low income)*			
Lower Middle	0.378*** (0.125,0.630)	0.204* (-0.039,0.448)	0.236* (-0.005,0.478)
Upper Middle	0.728*** (0.485,0.970)	0.283** (0.046,0.520)	0.299** (0.064,0.535)
High Income	0.960*** (0.668,1.253)	0.262* (-0.024,0.548)	0.236* (-0.047,0.520)
Relative Income *(Ref: Same)*			
Lower		-2.042*** (-2.312 , -1.772)	-1.969*** (-2.239, -1.698)
Slightly lower		-0.778*** (-1.026, -0.530)	-.759*** (-1.005, -0.513)
Slightly higher		0.655*** (0.407,0.902)	0.576*** (0.329,0.823)
Higher		1.343*** (0.992,1.694)	1.104*** (0.739,1.468)
Childhood financial circumstances *(Ref: Very difficult)*			
Difficult			0.489** (0.044,0.934)
Neither good nor Bad			0.681*** (0.249,1.114)
Good			1.082*** (0.651,1.514)
Very good			1.396*** (0.910,1.883)
Fathers' education *(Ref: primary/Secondary)*			
Diploma			-0.052 (-0.308,0.203)
Bachelor			-0.100 (-0.398,0.197)
Postgraduate			-0.024 (-0.388,0.340)

	Model A	Model B	Model C
Mothers Education			
(Ref: Primary/secondary)			
Diploma			-0.076
			(-0.323,0.170)
Bachelor			0.218
			(-0.086,0.521)
Postgraduate			0.382*
			(-0.013,0.777)
Born Native			0.285**
			(0.035,0.534)
Demographic characteristic			
Sex			
(Ref: Male)			
Female	-0.238*	-0.081	-0.055
	(-0.421, -0.055)	(-0.256, 0.094)	(-0.228, 0.118)
Age group			
(Ref:18-22)			
Age 23-35	0.450*	0.593***	0.687***
	(0.092,0.808)	(0.253,0.933)	(0.348,1.027)
Age 36-55	0.152	0.551***	0.707***
	(-0.195,0.498)	(0.220,0.882)	(0.372,1.041)
Age 56-80	0.410*	0.852***	1.041***
	(0.044,0.775)	(0.503,1.202)	(0.682,1.400)
Age 81+	3.351	4.905*	5.047*
	(-2.071,8.773)	(-0.239,10.049)	(-0.050,10.145)
Marital Status			
(Ref: Single)			
In a relationship	0.697***	0.429***	0.455***
	(0.495,0.898)	(0.236,0.621)	(0.263,0.646)
Country			
(Ref: UK)			
US	-0.019	-0.013	-0.063
	(-0.249,0.212)	(-0.232,0.205)	(-0.286,0.159)
Canada	-0.026	0.026	0.036
	(-0.256 ,0.204)	(-0.193,0.244)	(-0.182,0.254)
Constant	**4.675***	**5.112***	**3.920***
No. of Observation	**3517**	**3517**	**3517**
R²	**0.077**	**0.171**	**0.189**
R² change		**0.094**	**0.018**

*Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

Table 5, Model C indicated that relative income, childhood financial circumstances and Marital status shows the strongest associations. The R-square change is 0.018 after controlling for demographics, education. and income. Therefore, added variables explains an additional 1,8% of the variance in job satisfaction.

Table 6: Multiple regression analysis of predictors of Meaningfulness. *Unstandardized B with 95% CI.*

MEANINGFULNESS

Explanatory Variables	Model 1 β (95%CI)	Model 2 β (95%CI)	Model 3 β (95%CI)
Education *(Ref: Primary/secondary)*			
Diploma	0.289*** (0.083,0.495)	0.208** (0.010,0.406	0.169 (-0.035,0.373)
Bachelor	0.540*** (0.340,0.740)	0.358*** 0.165,0.551)	0.316*** (0.110,0.521)
Postgraduate	0.887*** (0.648,1.126)	0.565*** 0.332,0.798)	0.479*** (0.233,0.725)
Household income *(Ref: Low income)*			
Lower Middle	0.116 (-0.078 ,0.310)	-0.032 (-0.220,0.157)	-0.012 (-0.199,0.176)
Upper Middle	0.300*** (0.111,0.488)	-0.027 (-0.213,0.159)	-0.011 (-0.197,0.174)
High Income	0.550*** (0.323,0.777)	0.043 (-0.182,0.267)	0.029 (-0.195,0.252)
Relative Income *(Ref: Same)*			
Lower		-1.507*** (-1.714, -1.300)	-1.463*** (-1.671, -1.255)
Slightly lower		-0.443*** (-0.636, -0.250)	-0.437*** (-0.629, -0.245)
Slightly higher		0.411*** (0.215,.607)	0.354*** (0.159,0.550)
Higher		0.971*** (0.692,1.251)	0 .748*** (0.459,1.037)
Childhood financial circumstances *(Ref: Very difficult)*			
Difficult			0.294 * (-0.048,0.636)
Neither good nor Bad			0.350** (0.017,0.683)
Good			0.672*** (0.339,1.004)
Very good			0.992*** (0.614,1.370)
Fathers' education *(Ref: primary/secondary)*			
Diploma			0.130 (-0.069,0.330)
Bachelor			-0.021 (-0.254,0.212)
Postgraduate			-.095 (-0.379,0.190)

Mothers Education *(Ref: Primary/secondary)*			
Diploma			-0.146
			(-0.339,0.047)
Bachelor			-0.017
			(-0.255,0.222)
Postgraduate			0.423 ***
			(0.110,0.736)
Born Native			0 .153
			(-0.045 ,0.352)
Demographic characteristics			
Sex *(Ref: Male)*			
Female	0.130*	0.235***	0.253***
	(-0.012,0.272)	(0.099,0.372)	(0.117,0.388)
Age group *(Ref:18-22)*			
Age 23-35	-0.098	0.015	0.089
	(-0.378,0.183)	(-0.255,0.284)	(-0.180,0.359)
Age 36-55	-0.303**	-0.009	.101
	(-0.574 -0.032)	(-0.271,.253)	(-0.164,0.366)
Age 56-80	0.303**	0.612***	0.753***
	(0.023,0.583)	(0.341,0.882)	(0.474,1.032)
Age 81+	2.264	3.407	3.562*
	(-2.114 ,6.643)	(-0.795,7.609)	(-0.609,7.732)
Marital Status *(Ref: Single)*			
In a relationship	0.865***	0.673***	0.684***
	0.709,1.020)	(0.522,0.823)	(0.534,0.834)
Country *(Ref: UK)*			
US	0.363***	0.378***	0.345***
	(0.185,0.542)	(0.207,0.549)	(0.171,0.519)
Canada	0.036	0.077	0.085
	(-0.141,0.213)	(-0.093,0.248)	(-0.085,0.256)
Constant	**5.700*****	**6.022*****	**5.313*****
No. of Observation	**3848**	**3842**	**3842**
R^2	**0.086**	**0.160**	**0.176**
R^2 change		**0.074**	**0.016**

*Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

Table 6, Model C indicated that relative income, childhood financial circumstances, sex and marital status shows the strongest associations. The R-square change is 0.016 after controlling for demographics, education, and income. Therefore, added variables explains an additional 1,6% of the variance in meaningfulness.

4 Discussion

4.1 Summary of main findings

The two main aims of the current study were to 1) determine whether there exist socioeconomic gradients in subjective well-being (SWB) and 2) identify how various socioeconomic variables relate to different measures of(SWB). The data materials is based on an online survey on people's views on socioeconomic position in Canada, the UK, and the US. The major findings indicated that four measures of SWB- (global life satisfaction, personal well-being index, job satisfaction, and meaningfulness) were significantly impacted by SEP (education, household income, relative income, and childhood financial circumstances). The relationship with the four SWB measure between education, relative income, and childhood financial circumstances all shows statistically significant association. This indicates that higher education, relative income and better CFC influenced SWB positively. Marital status significantly and positively associated with SWB. The additional thing to consider is, when relative income is considered, the magnitude of the link between absolute income and SWB broadly disappeared and turns insignificant.

4.2 Interpretation of the results

4.2.1 Social Gradient in Subjective Wellbeing (SWB)

The social gradient is present in both rich and poor nations and individuals(24). This indicates that the chances of experiencing better SWB increase as their circumstances improve. Numerous studies have found a favorable correlation between a person's SEP and their SWB, which is common in industrialized countries (23, 35). According to the current study's results, there are noticeable social gradients in SWB that rise in magnitude from the lowest to the highest SEP groups. From table 3 to table 6, associations between all the variables under investigation are displayed. Numerous significant associations exist, with rising SEP being favorably correlated with the measures of subjective wellbeing. The association between education, relative income, CFC, and SWB are by far the strongest. Why is there a social gradient in SWB? The sense of having control over life's events grows along with SEP (66). Higher SEP can influence SWB directly through access to financial resources and indirectly through the ability to access a variety of cultural and social resources. Indeed, people from high social classes benefit from a variety of benefits, including increased influence, better opportunities and better health (67).

Considering these significant, it seems probable that individuals from higher SEP, would have higher SWB. Thus, higher SEP is found to be linked to improved SWB (68-70), which corroborates the results of this thesis.

4.2.2 Education

Few research has investigated how education and SWB are related (71-73). There have been reports of a positive (74, 75), favorable only at moderate levels of education (76) neutral(77) and negative (78-80) relationship with SWB. Education is positively correlated with SWB in the current study, showing that higher levels of education relate to higher levels of GLS, PWI, job satisfaction, and meaningfulness and this finding is corroborated by several studies (55, 75). The study's results could suggest that education creates additional professional, social, and financial options that improve people's SWB to explain this positive association.The other possibility with education is, it raise income levels and it develop their identity and encounter all aspects of society, all of which might impact their SWB (81). The relationship between education and job satisfaction is interesting. According to Clark and Oswald (1996) , the reason why education and SWB are negatively correlated when it comes to job satisfaction is that highly educated individuals have very high expectations from their work (56). According to some studies, there is no overall correlation between education and job Satisfaction, indicating that education does not guarantee access to fulfilling employment (82). Contrarily, this research illustrates that, among all the other SWB measures, the data indicate that 'education has the strongest association with job satisfaction. A study found that greater job resources (income, job autonomy, and job variety) were more likely to be found among those with higher levels of education, and these resources were linked to lower levels of job stress and higher levels of job satisfaction (83).

4.2.3 Income (absolute and relative)

Most people think that having money makes them happier. This study's key finding is that, increasing absolute income has a beneficial impact on SWB as mention on other studies (84, 85). One of the most contentious topics in the study of SWB is the connection between income and well-being (86-88) . Some claimed that SWB could be influenced by both absolute and relative income, while others said that only relative income or rank of income mattered (50).

Although it has been argued that increases in income assist the poor meet their most basic requirements, rising expectations and relative income gaps are expected to become more significant in determining SWB as societies become richer (89). Similarly, the results of the current study revealed, if relative income is considered, the magnitude of the link between absolute income and SWB broadly disappeared and turns insignificant (Model 3). One explanation why relative income took place over absolute is that individuals may base their evaluations of life-satisfaction not on their absolute income and wealth but rather on relative standing and social comparisons with other people(90). More likely, where they see themselves standing on the income rank influence their SWB and larger relative income greatly enhances one's SWB (76, 87, 91). Absolute income has been linked to increased social tolerance and better health however relative income is critical to the happiness and well-being (42). If a person's incomes grow more slowly than others, then he/she could end up feeling worse off, despite the increases in their absolute incomes.

4.2.4 Childhood financial circumstances

The effects of CFC are expected to last over time because they greatly affect early-life and young adult outcomes, which are known to continue to have an impact on SWB (92). The results of this study reveal that having better financial conditions as a child has a considerably favorable impact on one's SWB, indicating that the negative influences on children persist into later age. Previous studies support this conclusion (93, 94). Independent of one's education level or income, one's financial situation during childhood has a long-lasting effect on their SWB. Studies have found that in comparison to the general population, those who experienced adverse childhood financial experiences such as early childhood poverty at higher rates were found to have lower income levels, negative effects on adult education, career opportunities, earnings, and work hours, (92, 95, 96) which could leads to lower SWB. Additionally, according to a study, individuals with greater childhood SEP were more likely to have strong social ties that improved SWB (95).

4.2.5 Parent's education

It was confirmed that the importance of the mother's higher education (Postgraduates) influenced PWI, Job Satisfaction, and Meaningfulness in a significant way. However, fathers' education did not demonstrate any significant association with respondents' reporting of SWB. This is consistent with the findings that the mother's education was more significant for child's wellbeing and health than the father's (97).

4.2.6 Born Native

Some of the studies indicate that there are no significant well-being differences between migrants and natives (98). Similarly ,in this study being born native as a predictor of SWB did not get significant attention but there is some evidence indicating that immigrants often have lower SWB than recently settled residents, which can be related to assimilation demands and the accessibility of resources, but these disparities diminish with duration of stay (99, 100).

4.2.7 Demographic variables

Age, according to majority of the studies, is U-shaped relationship with SWB with a low point occurring between the mid-30s and mid-50s (74). From young adulthood until midlife, life satisfaction appears to decrease. At this point, it turns upward again (101). According to several studies, (SWB) is either stable or growing as people get older (102) . Older persons reported greater satisfaction in every domain except health(103). Similar tendencies claims are made for GLS, PWI, and meaningfulness in this study. Other studies indicate a gradual increase in satisfaction with age, but it appears that young people are more sensitive to both positive and negative emotions (104). Thus, while older people prefer to see younger self life favorable, young people appear to feel higher levels of happiness(105). There is general agreement that strong SWB in older people is mostly the product of adaptability, emotional control, and accommodating methods like reducing goals and modifying aspirations to the current condition (106). In the current study, it is found that age group exhibits a considerable positive relationship with Job satisfaction. A study found that older workers tend to have higher job satisfaction, which may be attributable to the benefits of having a lengthy career, such as better pay, better benefits, and success at work(107). Studies that focused on sex produced conflicting findings; for instance, being a woman was found to be both favorably (108, 109) and negatively (110, 111) related with SWB. However, there is widespread agreement that women are more likely than men to experience strong affective reactions because they express more negative and positive feelings than men do in comparable circumstances (112, 113). In this study, Sex did not significantly associate with respondents' reports of SWB, excepts for meaningfulness, for which there was a positive association for women. According to Schnell (2020), the sources of meaning for men and women differed in their emphasis on self-development and self-assertion (114).

Marriage often provides emotional, social, and financial support amongst couples, increasing their satisfaction (115) . It could also be viewed as a suitable way of expressing one's social and personal position (116). In the current study, being in a relationship was significantly associated with SWB as in other studies (117). In terms of country dummies, the respondents from the US demonstrated a positive association with PWI, meaning fulness, and GLS relative to the UK sample. However, the results indicate that there is not so remarkable difference between the respondent of three countries in terms of association with subjective wellbeing. These three wealthier nations are possibly driven by similar human rights, individualism, national features. As it is commonly accepted that SWB of nation is driven by these factors and more over the social equality, social trust, and quality governance (system of governing) (31). The prospect of reverse causality exists. For instance, decreases in SWB could result in political change in a country (118), or better SWB could lead to economic growth(119).

4.3 Strengths and Limitations of the Study

4.3.1 Strengths

The major strength of this study is that the questionnaire asked a range of questions that are commonly available in surveys, for example: the magnitude of the socioeconomic variable that are not necessarily covered in another questionnaire. This thesis also contains the information from three countries (the UK, the US and Canada) so that it provides the opportunity to observe the difference in SEP and they influence their SWB depending on their country of residence. Another strength of the study is the outcome variable ´SWB`. The study used the broad approach for measuring SWB, which include range of perspective. The GLS, PWI, meaningfulness" and work-related wellbeing i,e, Job Satisfaction It is people's own views that are the subject of interest. Lastly, the data set is generated from survey platform that was design to limit the number of missing values.

4.3.2 Limitations

Firstly, the limitations of this master's thesis study are primarily related to the study design. Cross-sectional studies assess exposure and outcome at the same timepoint, making any temporal relationship impossible to draw (120). As a result, establishing cause and effect for the association between SEP and SWB or other factors for this type of study is impossible. Even if an association is discovered, there will be no proof that the exposure caused the outcome.

Secondarily, this is based on self-report data. People are often biased when they report on their own experiences especially recall and misclassification bias might be an issue affecting the results. For e.g.-CFC, the participants to answer based on thoughts from long period of time. The current mood and circumstances affecting the individual study participant in the time of answering the questionnaire could affect and skew the results and therefore not give a true estimate for the point of time. Many individuals are either consciously or unconsciously influenced by "social desirability"(121). That is, they are more likely to report experiences that are socially acceptable or preferred. For e.g.- income often inflated when low and deflated. Thirdly, the numerical scales also can be inexact and subject to individual inclination to give an extreme or middle response to all questions. Lastly, the sample size here are quite small, and there are so many other factors that these samples probably do not pick up on (e.g., lifestyle factor), it is risky to boldly state that we can generalize the results for the entire population of the US, the UK and Canada.

4.4 Implication of the research

The aims of this master's thesis project were to explain and investigate the social gradient in SWB and - how socioeconomic variables and SWB are related. It is hoped that these findings will help with continued efforts to gather and examine as much information as possible about SEP and SWB. This study indicated social gradients in SWB, for those with higher education, higher relative income, and better CFC, the higher the SWB." However, such study design did not allow for an explanation of why such a gradient existed. A longitudinal study design will more accurately reflect the impact of SEP, as well as the effects of SEP on individuals' SWB at various time points throughout their lives. Future research should also investigate other social factors that can influence SWB, such as community services and social support. This study confirmed earlier studies of a link between SEP and SWB (23, 35). Given the goal of reducing social inequalities in SWB, more research on the causal mechanisms is required. Furthermore, this research has some practical implications. The gradients discovered in this study imply that the most important question is what causes wellbeing inequality at the individual level, and what can be done to reduce it. Social inequalities in SWB are unavoidable. However, individual, regardless of SEP, should have equal opportunities for SWB and steps should be taken to reduce them to the greatest extent possible. This study suggests that we should pay closer attention to children from low-income families to emphasize the consequences of lower SWB since, adult SWB may be influenced by CFC (122).

It is critical to provide financial assistance to their families to ensure their basic living security. From a public health standpoint, efforts such as reducing social position in the population through more stringent progressive taxation are critical for reducing differences in SWB. Increasement in financial and social security rates are some other ways to deal with income gradient. Invest more resources in low-income, underfunded schools to increase educational equality. Supporting an economy that raises taxes on the wealthy will allow for adequate support and funding of public sectors such as public education and assistance to low-income families.

5 Conclusion

This study reported and explained social gradients in SWB. The discovery indicates an existence of a social gradient in SWB. It was noticed that education, relative income, CFC, and marital status have the greatest influence on SWB. Lower levels of education, low income, poor childhood financial circumstances, and being single predict lower SWB.

Future research should concentrate on conducting longitudinal study which will more accurately reflect the impact of childhood socioeconomic conditions, as well as the effects of SEP on individuals' SWB at various time points throughout their lives.

6 Reference

1. Ruggeri K, Garcia-Garzon E, Maguire Á, Matz S, Huppert FA. Well-being is more than happiness and life satisfaction: a multidimensional analysis of 21 countries. Health and quality of life outcomes. 2020;18(1):1-16.
2. Durand M. The OECD better life initiative: How's life? and the measurement of well-being. Review of Income and Wealth. 2015;61(1):4-17.
3. Stone AA, Mackie CE. Subjective well-being: measuring happiness, suffering, and other dimensions of experience: National Academies Press; 2013.
4. Iacus SM, Porro G. Subjective Well-Being and Social Media: CRC Press; 2021.
5. Robbins SB, Kliewer WL. Advances in theory and research on subjective well-being. 2000.
6. Diener E. The science of well-being: The collected works of Ed Diener: Springer; 2009.
7. Diener E. Subjective well-being. Psychological Bulletin. 1984;95(3):542-75.
8. Busseri MA, Sadava SW. A review of the tripartite structure of subjective well-being: Implications for conceptualization, operationalization, analysis, and synthesis. Personality and Social Psychology Review. 2011;15(3):290-314.
9. Diener E. The remarkable changes in the science of subjective well-being. Perspectives on Psychological Science. 2013;8(6):663-6.
10. Diener E, Pressman SD, Hunter J, Delgadillo-Chase D. If, why, and when subjective well-being influences health, and future needed research. Applied Psychology: Health and Well-Being. 2017;9(2):133-67.
11. Das KV, Jones-Harrell C, Fan Y, Ramaswami A, Orlove B, Botchwey N. Understanding subjective well-being: perspectives from psychology and public health. Public Health Reviews. 2020;41(1):1-32.
12. Van Hoorn A. A short introduction to subjective well-being: Measurement, correlates and policy uses. 2008.
13. Krieger N, Williams DR, Moss NE. Measuring social class in US public health research: concepts, methodologies, and guidelines. Annual review of public health. 1997;18:341.
14. Graham H. EBOOK: Unequal Lives: McGraw-Hill Education (UK); 2007.
15. Marx K. Karl Marx: Economy, class and social revolution. 1972.
16. Weber M. Bureaucracy. Social Theory Re-Wired: Routledge; 2016. p. 287-92.
17. Galobardes B, Shaw M, Lawlor DA, Lynch JW, Smith GD. Indicators of socioeconomic position (part 1). Journal of Epidemiology & Community Health. 2006;60(1):7-12.
18. Chanfreau J, Lloyd C, Byron C, Roberts C, Craig R, Feo D, et al. Predicting wellbeing2014.
19. McGillivray M, Clarke M. Understanding human well-being: United Nations University Press; 2006.
20. Donovan N, Halpern D, Sargeant R. Life satisfaction: The state of knowledge and implications for government: Cabinet Office, Strategy Unit; 2002.
21. Fujishiro K, Xu J, Gong F. What does "occupation" represent as an indicator of socioeconomic status?: Exploring occupational prestige and health. Social science & medicine. 2010;71(12):2100-7.
22. (EHIS) EHIS. "Livskvalitet: Anbefalinger for et bedre målesystem". 2015.
23. Haring MJ, Stock WA, Okun MA. A research synthesis of gender and social class as correlates of subjective well-being. Human relations. 1984;37(8):645-57.

24.   Weinberg D, Stevens GW, Currie C, Delaruelle K, Dierckens M, Lenzi M, et al. Country-level meritocratic beliefs moderate the social gradient in adolescent mental health: a multilevel study in 30 European countries. Journal of Adolescent Health. 2021;68(3):548-57.

25.   Lynch J, Kaplan G. Socioeconomic position: Social epidemiology. New York: Oxford University Press; 2000.

26.   Shaked D, Williams M, Evans MK, Zonderman AB. Indicators of subjective social status: Differential associations across race and sex. SSM-population health. 2016;2:700-7.

27.   Tella RD, MacCulloch RJ, Oswald AJ. The macroeconomics of happiness. Review of Economics and Statistics. 2003;85(4):809-27.

28.   Diener E. Subjective well-being. The science of well-being. 2009:11-58.

29.   Diener E, Tay L, Oishi S. Rising income and the subjective well-being of nations. Journal of personality and social psychology. 2013;104(2):267.

30.   Veenhoven R. Is happiness relative? Social Indicators Research. 1991;24(1):1-34.

31.   Diener E, Suh EM, Smith H, Shao L. National differences in reported subjective well-being: Why do they occur? Social indicators research. 1995;34(1):7-32.

32.   Rose R, Munro N, Wallace C. Second European Quality of Life Survey: Quality of Life in Europe 2003–2007: Publications Office of the European Union; 2009.

33.   Helliwell JF, Wang S. World happiness: Trends, explanations and distribution. UN SDSN (Sustainable Development Solutions Network); 2013.

34.   Khan A, Husain A. Social support as a moderator of positive psychological strengths and subjective well-being. Psychological Reports. 2010;106(2):534-8.

35.   Diener E, Sandvik E, Seidlitz L, Diener M. The relationship between income and subjective well-being: Relative or absolute? Social indicators research. 1993;28(3):195-223.

36.   Hagerty MR, Veenhoven R. Wealth and happiness revisited–growing national income does go with greater happiness. Social indicators research. 2003;64(1):1-27.

37.   Inglehart R, Foa R, Peterson C, Welzel C. Development, freedom, and rising happiness: A global perspective (1981–2007). Perspectives on psychological science. 2008;3(4):264-85.

38.   Diener E, Lucas RE, Oishi S. Subjective well-being: The science of happiness and life satisfaction. Handbook of positive psychology. 2002;2:63-73.

39.   Diener E, Biswas-Diener R. Will money increase subjective well-being? Social indicators research. 2002;57(2):119-69.

40.   Larson R. Thirty years of research on the subjective well-being of older Americans. Journal of Gerontology. 1978;33(1):109-25.

41.   Easterlin RA, Sawangfa O. Happiness and economic growth: Does the cross section predict time trends? Evidence from developing countries. International differences in well-being. 2010:166-216.

42.   Easterlin RA. Does Economic Growth Improve the Human Lot? Some Empirical Evidence. In: David PA, Reder MW, editors. Nations and Households in Economic Growth: Academic Press; 1974. p. 89-125.

43.   Inglehart R, Klingemann H-D. Genes, culture, democracy, and happiness. Culture and subjective well-being. 2000:165-83.

44.   Lucas RE, Schimmack U. Income and well-being: How big is the gap between the rich and the poor? Journal of Research in Personality. 2009;43(1):75-8.

45.   Kahneman D, Deaton A. High income improves evaluation of life but not emotional well-being. Proceedings of the national academy of sciences. 2010;107(38):16489-93.

46.   Veenhoven R. The utility of happiness. Social indicators research. 1988;20(4):333-54.

47.   Yasar R. Subjective well-being and income: a compromise between Easterlin paradox and its critiques. Economics. 2018;12(1).

48.   Rickardsson J, Mellander C. Absolute vs relative income and life satisfaction: Royal Institute of Technology, CESIS; 2017.

49.   Easterlin RA. Will raising the incomes of all increase the happiness of all? Journal of Economic Behavior & Organization. 1995;27(1):35-47.

50.   Boyce CJ, Brown GD, Moore SC. Money and happiness: Rank of income, not income, affects life satisfaction. Psychological science. 2010;21(4):471-5.

51.   Liberatos P, Link BG, Kelsey JL. The measurement of social class in epidemiology. Epidemiologic reviews. 1988;10(1):87-121.

52.   Nikolaev B, Rusakov P. Education and happiness: an alternative hypothesis. Applied Economics Letters. 2016;23(12):827-30.

53.   Swiatek L. Education for sustainable happiness and well-being. Taylor & Francis; 2017.

54.   Nikolaev B. Does higher education increase hedonic and eudaimonic happiness? Journal of happiness Studies. 2018;19(2):483-504.

55.   Jongbloed J. Higher education for happiness? Investigating the impact of education on the hedonic and eudaimonic well-being of Europeans. European Educational Research Journal. 2018;17(5):733-54.

56.   Clark AE, Oswald AJ. Satisfaction and comparison income. Journal of public economics. 1996;61(3):359-81.

57.   Chen X, Hesketh T. Educational Aspirations and Expectations of Adolescents in Rural China: Determinants, Mental Health, and Academic Outcomes. International Journal of Environmental Research and Public Health. 2021;18(21):11524.

58.   Flèche S, Lekfuangfu WN, Clark AE. The long-lasting effects of family and childhood on adult wellbeing: Evidence from British cohort data. Journal of Economic Behavior & Organization. 2021;181:290-311.

59.   Nomaguchi K, Milkie MA. Parenthood and well-being: A decade in review. Journal of Marriage and Family. 2020;82(1):198-223.

60.   Luo Y, Waite LJ. The impact of childhood and adult SES on physical, mental, and cognitive well-being in later life. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences. 2005;60(2):S93-S101.

61.   Case A, Fertig A, Paxson C. The lasting impact of childhood health and circumstance. Journal of health economics. 2005;24(2):365-89.

62.   Hughes K, Lowey H, Quigg Z, Bellis MA. Relationships between adverse childhood experiences and adult mental well-being: results from an English national household survey. BMC public health. 2016;16(1):1-11.

63.   Skevington SM, Böhnke JR. How is subjective well-being related to quality of life? Do we need two concepts and both measures? Social Science & Medicine. 2018;206:22-30.

64.   Helliwell JF, Huang H, Wang S. The distribution of world happiness. World Happiness. 2016;8.

65.   Cummins R, Eckersley R, Pallant J, van Vugt J, Misajon R. Personal wellbeing index. The New Zealand Attitudes and Values Study 2009: Questionnaire Items and Details for Researchers. 2013:19.

66.   Manstead AS. The psychology of social class: How socioeconomic status impacts thought, feelings, and behaviour. British Journal of Social Psychology. 2018;57(2):267-91.

67.   Akinola M, Mendes WB. It's good to be the king: Neurobiological benefits of higher social standing. Social Psychological and Personality Science. 2014;5(1):43-51.

68.   Adler NE, Epel ES, Castellazzo G, Ickovics JR. Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. Health psychology. 2000;19(6):586.

69.   Anderson C, Kraus MW, Galinsky AD, Keltner D. The local-ladder effect: Social status and subjective well-being. Psychological science. 2012;23(7):764-71.
70.   Diener E, Ng W, Harter J, Arora R. Wealth and happiness across the world: material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. Journal of personality and social psychology. 2010;99(1):52.
71.   Yakovlev P, Leguizamon S. Ignorance is not bliss: On the role of education in subjective well-being. The Journal of Socio-Economics. 2012;41(6):806-15.
72.   Felici M, Agarwala M. The heterogeneous relationship of education with wellbeing. 2022.
73.   Witter RA, Okun MA, Stock WA, Haring MJ. Education and subjective well-being: A meta-analysis. Educational Evaluation and Policy Analysis. 1984;6(2):165-73.
74.   Blanchflower DG, Oswald AJ. Well-being over time in Britain and the USA. Journal of public economics. 2004;88(7-8):1359-86.
75.   Kristoffersen I. Great expectations: Education and subjective wellbeing. Journal of Economic Psychology. 2018;66:64-78.
76.   Stutzer A. The role of income aspirations in individual happiness. Journal of Economic Behavior & Organization. 2004;54(1):89-109.
77.   Flouri E. Subjective well-being in midlife: The role of involvement of and closeness to parents in childhood. Journal of Happiness Studies. 2004;5(4):335-58.
78.   Headey B, Wooden M. The effects of wealth and income on subjective well-being and ill-being. Economic record. 2004;80:S24-S33.
79.   Shields MA, Wheatley Price S, Wooden M. Life satisfaction and the economic and social characteristics of neighbourhoods. Journal of Population Economics. 2009;22(2):421-43.
80.   Dockery AM. Education and happiness in the school-to-work transition: National Centre for Vocational Education Research; 2010.
81.   Bücker S, Nuraydin S, Simonsmeier BA, Schneider M, Luhmann M. Subjective well-being and academic achievement: A meta-analysis. Journal of Research in Personality. 2018;74:83-94.
82.   Quinn RP, Baldi de Mandilovitch MS. Education and Job Satisfaction, 1962-1977. Vocational Guidance Quarterly. 1980;29(2):100-11.
83.   Solomon BC, Nikolaev BN, Shepherd DA. Does educational attainment promote job satisfaction? The bittersweet trade-offs between job resources, demands, and stress. Journal of Applied Psychology. 2022;107(7):1227.
84.   Frey B, Stutzer A. The economics of happiness. WORLD ECONOMICS-HENLEY ON THAMES-. 2002;3(1):25-42.
85.   Stevenson B, Wolfers J. Economic growth and subjective well-being: Reassessing the Easterlin paradox. National Bureau of Economic Research; 2008.
86.   Frey BS, Stutzer A. What can economists learn from happiness research? Journal of Economic literature. 2002;40(2):402-35.
87.   Ferrer-i-Carbonell A. Income and well-being: an empirical analysis of the comparison income effect. Journal of public economics. 2005;89(5-6):997-1019.
88.   Easterlin RA. Happiness, growth, and public policy. Economic Inquiry. 2013;51(1):1-15.
89.   Diener E, Seligman ME. Beyond money: Toward an economy of well-being. Psychological science in the public interest. 2004;5(1):1-31.
90.   Duesenberry JS. Income, saving, and the theory of consumer behavior1949.
91.   McBride M. Relative-income effects on subjective well-being in the cross-section. Journal of Economic Behavior & Organization. 2001;45(3):251-78.

92. Duncan GJ, Ziol-Guest KM, Kalil A. Early-childhood poverty and adult attainment, behavior, and health. Child development. 2010;81(1):306-25.

93. Duncan GJ, Magnuson K, Kalil A, Ziol-Guest K. The importance of early childhood poverty. Social Indicators Research. 2012;108(1):87-98.

94. McCarty AT. Child poverty in the United States: A tale of devastation and the promise of hope. Sociology compass. 2016;10(7):623-39.

95. Cohen S, Janicki-Deverts D, Chen E, Matthews KA. Childhood socioeconomic status and adult health. Annals of the new York Academy of Sciences. 2010;1186(1):37-55.

96. Duncan GJ, Magnuson K. The long reach of early childhood poverty. Economic stress, human capital, and families in Asia: Springer; 2013. p. 57-70.

97. Chen Y, Li H. Mother's education and child health: Is there a nurturing effect? Journal of health economics. 2009;28(2):413-26.

98. Mehrbrodt T. Connected. Can the differences in subjective wellbeing between migrants and natives be explained by social networks. Working Paper Series 30-2017. SHARE-ERIC. Retrieved from www. share-project. org; 2017.

99. Sand G, Gruber S. Differences in subjective well-being between older migrants and natives in Europe. Journal of immigrant and minority health. 2018;20(1):83-90.

100. Uppal S. Impact of the timing, type and severity of disability on the subjective well-being of individuals with disabilities. Social science & medicine. 2006;63(2):525-39.

101. Oswald AJ. Happiness and economic performance. The economic journal. 1997;107(445):1815-31.

102. Diener E, Suh ME. Subjective well-being and age: An international analysis. Annual review of gerontology and geriatrics. 1997;17(1):304-24.

103. Campbell A. Subjective measures of well-being. American psychologist. 1976;31(2):117.

104. Diener E, Sandvik E, Larsen RJ. Age and sex effects for emotional intensity. Developmental Psychology. 1985;21(3):542.

105. Twenge JM, Sherman RA, Lyubomirsky S. More happiness for young people and less for mature adults: Time period differences in subjective well-being in the United States, 1972–2014. Social Psychological and Personality Science. 2016;7(2):131-41.

106. Shmotkin D. Subjective well-being as a function of age and gender: A multivariate look for differentiated trends. Social indicators research. 1990;23(3):201-30.

107. Borjas GJ. Job satisfaction, wages, and unions. Journal of Human Resources. 1979:21-40.

108. Lee A, Browne MO. Subjective well-being, sociodemographic factors, mental and physical health of rural residents. Australian Journal of Rural Health. 2008;16(5):290-6.

109. Ozcakir A, Oflu Dogan F, Cakir YT, Bayram N, Bilgel N. Subjective well-being among primary health care patients. PloS one. 2014;9(12):e114496.

110. Calys-Tagoe B, Hewlett SA, Dako-Gyeke P, Yawson AE, Bad-Doo NA, Seneadza NAH, et al. Predictors of subjective well-being among older Ghanaians. Ghana medical journal. 2014;48(4):178-84.

111. Liu Z, Wu D, Huang J, Qian D, Chen F, Xu J, et al. Visual impairment, but not hearing impairment, is independently associated with lower subjective well-being among individuals over 95 years of age: A population-based study. Archives of gerontology and geriatrics. 2016;62:30-5.

112. Braun PMW. Psychological well-being and location in the social structure. 1978.

113. Chou K-L. Social support and subjective well-being among Hong Kong Chinese young adults. The Journal of Genetic Psychology. 1999;160(3):319-31.

114. Schnell T. The psychology of meaning in life: Routledge; 2020.

115. Rostami A, Ghazinour M, Richter J. Marital satisfaction: The differential impact of social support dependent on situation and gender in medical staff in Iran. Global Journal of Health Science. 2013;5(4):151.

116. Greenstein TN. Gender, marital status and life satisfaction. 2016.

117. Ndayambaje E, Pierewan AC, Nizeyumukiza E, Nkundimana B, Ayriza Y. Marital status and subjective well-being: Does education level take into account? Cakrawala Pendidikan. 2020;39(1):120-32.

118. Diener E, Suh EM. Culture and subjective well-being: MIT press; 2003.

119. Kenny C. Does growth cause happiness, or does happiness cause growth? Kyklos. 1999;52(1):3-25.

120. Wang X, Cheng Z. Cross-sectional studies: strengths, weaknesses, and recommendations. Chest. 2020;158(1):S65-S71.

121. Althubaiti A. Information bias in health research: definition, pitfalls, and adjustment methods. Journal of multidisciplinary healthcare. 2016;9:211.

122. Oshio T, Sano S, Kobayashi M. Child poverty as a determinant of life outcomes: Evidence from nationwide surveys in Japan. Social Indicators Research. 2010;99(1):81-99.

7 Appendices

Default Question Block

EXPLANATORY STATEMENT

Project ID: 17490

Project title: Investigating people's views on socio-economic position

Associate Professor Gang Chen	*Professor Jan Abel Olsen*
Centre for Health Economics	*Department of Community Medicine*
Monash University, Australia	*University of Tromsø, Norway*
Phone: +61 39905 0502; 0425 811 029	*Phone: +47 7764 4832*
Email: gang.chen@monash.edu	*Email: jan.abel.olsen@uit.no*

You are invited to take part in this study. Please read this Explanatory Statement in full before deciding whether or not to participate in this research. If you would like further information regarding any aspect of this project, you are encouraged to contact the researchers via the phone numbers or email addresses listed above.

1

What does the research involve?

People differ in terms of their socio-economic position in society. Positions in society is often associated with individual's education, occupation and income. The relative importance of these factors may differ across cultures and countries. The purpose of this study is to find out what factors you think determine a person's socio-economic position, or their status in society.

If you are willing to help us with this research project, we would be grateful for your assistance with completing an online questionnaire. The questionnaire contains three main sections. Section A involves a series of pairwise comparison tasks to understand participants' preferences on how education, occupation and income determine a person's socio-economic position in society. Section B contains validated instruments measuring participants' own health and subjective wellbeing. Second C contains participants' personal backgrounds. We expect that this questionnaire will take no more than 20 minutes to complete.

Please note that the survey is compatible for PC and laptops only (and not mobiles).

Why were you chosen for this research?

You have been invited because we would like to understand and compare the views held by representative samples of people from different countries.

You have been contacted by your panel company. The company is sending you this questionnaire based on the information you have provided. The researchers do not have access to your personal information.

Source of funding

The project is being funded by the University of Tromsø in Norway, and Monash University in Australia.

Consenting to participate in the project and withdrawing from the research

Following the online informed consent, you indicate that you understand the information and that you give your consent to participate in this research project. Participation in this study is voluntary and you may refuse to answer any questions or withdraw at any time. However, after submitting the survey online, you will not be able to revise the result or withdraw from the study since all responses will be anonymised.

All information collected will remain confidential and seen only by the researchers involved. Participants will not and could not be identified in any publication.

Possible benefits and risks to participants

There is unlikely to be any direct benefit to you personally from taking part in this study.

We do not anticipate that you will be exposed to any risk by taking part in this study. The methods we used to understand your preferences have been used widely in other contexts. However, some people could find answering some of the questions uncomfortable. If this happens you may choose to withdraw from the study at any stage.

Payment

You will be reimbursed by your panel company.
Confidentiality

The online survey responses will be transferred to a secure password protected spreadsheet, the password being known only to the chief investigators working on the project and their nominated staff. All responses will be anonymised. You will not be identifiable by name in any presentation or publication arising from the results of the survey.

Storage of data

All the information collected by the project will be stored on the Monash University server and University of Tromsø server and on computers in locked offices at the Centre for Health Economics at Monash University and Department of Community Medicine at University of Tromsø. The data will be kept for 10 years from publication. After this time the information will be destroyed by Monash University and University of Tromsø.

Associate Professor Gang Chen

Monash University

3

Results

The results of this study will be submitted for presentations in conferences and for publication in research journals. You will not be provided with the results of the study since all responses will be anonymised.

Complaints

Should you have any concerns or complaints about the conduct of the project, you are welcome to contact the Executive Officer, Monash University Human Research Ethics Committee (MUHREC):

<div style="border:1px solid;">

Executive Officer

Monash University Human Research Ethics Committee (MUHREC)

Room 111, Chancellery Building D,

26 Sports Walk, Clayton Campus

Research Office

Monash University VIC 3800

Tel: +61 3 9905 2052   Email: muhrec@monash.edu   Fax: +61 3 9905 3831

</div>

Thank you,

Professor Jan Abel Olsen

University of Tromsø

46

Project ID: 17490

Project title: Investigating people's views on socio-economic position

Chief Investigator: Associate Professor Gang Chen & Professor Jan Abel Olsen

I have been asked to take part in the Monash University and University of Tromsø research project specified above. I have read and understood the Explanatory Statement and I hereby consent to participate in this project.

- I understand that my participation is voluntary, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way. However, after submitting the survey online, you will not be able to revise the result or withdraw from the study since all responses will be anonymised.

- I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.

- I understand that data from this online survey will be kept in a secure storage and accessible to the research team.

I AGREE TO PARTICIPATE ◯

I DO NOT AGREE TO PARTICIPATE ◯

6

Section B – Your personal wellbeing and health

The following nine questions ask how <u>satisfied</u> you feel, on a scale from zero to 10. **Zero** means you feel no satisfaction at all and **10** means you feel completely satisfied.

B1

B1.1. "Thinking about your own life and personal circumstances, how satisfied are you **with your life as a whole** ?"

No satisfaction at all										Completely Satisfied
0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.2. "How satisfied are you **with your standard of living** ?"

No satisfaction at all										Completely Satisfied
0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.3. "How satisfied are you **with your health** ?"

No satisfaction at all										Completely Satisfied
0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.4. "How satisfied are you **with what you are achieving in life** ?"

No satisfaction at all										Completely Satisfied
0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.5. "How satisfied are you **with your personal relationships** ?"

No
satisfaction
at all   Completely
Satisfied

0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.6. "How satisfied are you **with how safe you feel** ?"

No
satisfaction
at all   Completely
Satisfied

0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.7. "How satisfied are you **with feeling part of your community** ?"

No
satisfaction
at all   Completely
Satisfied

0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.8. "How satisfied are you **with your future security** ?"

No
satisfaction
at all   Completely
Satisfied

0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.9. *If you are currently in the workforce*: How satisfied are you **with your job** ?

No
satisfaction
at all   Completely
Satisfied

0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

B1.10. Overall, to what extent do you feel **the things you do in your life are meaningful** ?

Not at all
worthwhile   Completely
Worthwhile

0	1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O	O

48

Section C – Personal background

Finally, we would like to ask some questions about your background:

C1. Your are

- O Female
- O Male

C2. Your age: (years)

[   ]

C3. Which of these best describes your current marital status?

- O Married/living together
- O In a relationship, but not living together
- O Widowed
- O Single
  Divorced/Separated

C11. Please choose the level that best describes your own education:

- O Postgraduate Degree
- O Bachelor Degree
- O Certificate or Diploma
- O Primary or Secondary School

49

C16. Please tick the level that best describes your pre-tax or gross annual **household** income:

- ○ £ 150,001 or more
- ○ £ 100,001 – £ 150,000
- ○ £ 70,001 – £ 100,000
- ○ £ 50,001 – £ 70,000
- ○ £ 40,001 – £ 50,000
- ○ £ 30,001 – £ 40,000
- ○ £ 20,001 – £ 30,000
- ○ £ 15,001 – £ 20,000
- ○ £ 10,001 – £ 15,000
- £ 5,001 – £ 10,000

C17. If you were to compare your income with the average income of other people that you would normally socialize with (e.g. friends, colleagues, neighbours), would you say your income is higher or lower:

- ○ Higher
- ○ Slightly higher
- ○ About the same
- ○ Slightly lower
- ○ Lower

C21. How was your family's financial situation during your childhood?

- ○ Very good
- ○ Good
- ○ Neither good nor bad
- ○ Difficult
- ○ Very difficult

C22. What is/was your father's highest education level?

○ Postgraduate Degree
○ Bachelor Degree
○ Certificate or Diploma
○ Primary or Secondary School

C23. What is/was your mother's highest education level?

○ Postgraduate Degree
○ Bachelor Degree
○ Certificate or Diploma
○ Primary or Secondary School

C26. Were you born in UK?

○ Yes
○ No

Thank you very much for taking the time to complete this survey!

Powered by Qualtrics