Quality of life of the youth: assessment methodology development and empirical study in human capital management

Manuela Tvaronavičienė, Nataliia Mazur, Halyna Mishchuk & Yuriy Bilan

Routledge
Taylor & Francis Group

Quality of life of the youth: assessment methodology development and empirical study in human capital management

Manuela Tvaronavičienė[a] [iD], Nataliia Mazur[b] [iD], Halyna Mishchuk[b] [iD] and Yuriy Bilan[c] [iD]

[a]Department of Business Technologies and Entrepreneurship, Vilnius Gedominas Technical University, Vilnius, Lithuania; [b]Department of Labour Resources and Entrepreneurship, National University of Water and Environmental Engineering, Rivne, Ukraine; [c]Faculty of Management, Rzeszow University of Technology, Rzeszow, Poland

ABSTRACT

Based on existing approaches to assessing the quality of life and similar concepts in human capital management, a quality of life index for young people is proposed. It takes into account the factors of four groups that determine the subjective satisfaction with the quality of life: Economic environment; Socio-political environment; Social environment; Natural environment. Partial factors and their corresponding quality of life indicators are adapted to the assessments of young people, whose needs and interests differ significantly from other age groups due to differences in the values of generations and features of economic activity at a young age. The methodology developed by the authors is based on taking into account subjective assessments of the level of satisfaction with quality of life factors, as well as their importance based on the determination of weights. As a result of testing the methodology, it was found that the most important factors for a positive perception of quality of life are the social environment, in particular, family relationships and health. Economic and environmental factors have approximately the same effect. Socio-political environment factors have the least influence. Due to material well-being and the quality of socio-political life, satisfaction with the life of employed youth is slightly higher (by 3%). Instead, respondents who do not work are more satisfied with social comfort. The integrated index of quality of life of the interviewed youth is 3,438 points out of 5 maximum. The methodology and results of the assessment are useful for the development of national and regional programs and strategies of human capital development due to increase the level of satisfaction of material, spiritual and cultural needs of young people.

1. Introduction

High quality of life is one of the values of the welfare state, the achievement of which enhances the effect of perception of other democratic values of the nation and the motives of economic participation and development. Achieving high positions in the relevant international rankings not only contributes to a positive image of the country, but is also always directly related to the high competitiveness of the economy and opportunities for further human capital development. Thus, quality of life in various dimensions is considering in the key sustainable development goals set by the United Nations Development Program (UNDP, 2015). Numerous economic and social indicators and comprehensive indices have been developed in an effort to assess progress towards a decent quality of life. Today, the researchers relate to the quality of life assessment 'more than 150 composite welfare indicators. … There are over one hundred initiatives on the use of quality-of-life indicators in decision-making at the national and local levels' (IDSS, 2013, pp. 10–11).

At the same time, although the attention to assessing the quality of life remains very high, today the diversity of existing indices creates some difficulties in comparing the quality of life in different countries and in different groups of the population in current researches of human resources management. This problem is especially relevant for the age group of young people – the difference between their life values and perceptions of quality of life factors is significant compared to generations of parents, which has relevant manifestations in behaviour in the labour market (Chillakuri & Mahanandia, 2018; Gaidhani et al., 2019; Kirchmayer & Fratricová, 2020).

At the same time, ensuring a decent quality of life for the population, including young people, is impossible without the formation of a system of factors for its assessment, which would take into account current needs and the availability of opportunities to meet them.

Thus, the aim of our work is the development of methodological principles for assessing the quality of life of young people based on the identification and analysis of indicators of comfort of life of individuals, as well as testing the developed methodology based on sociological research.

The article is organized as follows: Section I reviews the literature on the quality of life and peculiarities of their consideration in the assessments of the quality of life of young people; Section II explains the methodology and the data set; Section III presents the empirical results; and Section IV draws the author's conclusions.

2. Literature review

Today, quality of life (QOL), as well as well-being, does not have generally accepted official definitions. At least, they are not used in global analytical practice and scientific literature in this direction; a wide variety of appropriate approaches and assessment indicators ay serve as the evidence of this.

Some authors, e.g. (Power, 2020), generally build their own research based on the idea that the distinction between 'economic values' and 'social values' such as 'quality of life' is a misleading and dangerous distinction. In this case, Power T., following the works of Wingo Jr, L., (Wingo, 1973; Wingo & Evans, 2013), proposes to interpret

the concept of 'quality of life' as 'the quality of social and physical (both human-made and natural) environment in which people pursue the gratification of their wants and needs' (Power, 2020, p.3).

The basis of modern research on the quality of life in the EU is an analytical report resulting from the work of one of the EU commissions – the Commission on the Measurement of Economic Performance and Social Progress, named after its key experts Stiglitz-Sen-Fitoussi Commission. This article (Stiglitz et al., 2009) identifies the key indicators of quality of life and the concept that is characteristic of EU statistics: quality of life is a broader concept than economic production and living standards. It includes the full range of factors that influences what we value in living, reaching beyond its material side. The same position is continued in modern research by EU experts; and the key dimensions of quality of life are: Material living conditions; Productive or other main activity; Health; Education; Leisure and social interactions; Economic security and personal safety; Governance and basic rights; Natural and living environment; Overall experience of life (Eurostat, 2017, p.8).

In OECD countries, a similar approach is taken to estimating QOL as a Better Life Index. The components of this indicator are very close to those used by Eurostat. Better Life Index is based on assessing the quality of life by the following dimensions: Housing; Income; Jobs; Community; Education; Environment; Civic engagement; Health; Life Satisfaction; Safety; Work-Life Balance (OECD, 2020).

As we can see, the components of these indices are almost identical with small differences in relation to the partial indicators of well-being, attributed to the corresponding block of QOL indicators.

Other similar indices that have gained the highest recognition in the world, such as the Quality of Life Index developed by the Economic Intelligence Unit, the International Living Quality of Life Index by International Living Magazine, the Canadian Index of Well-being developed by scientists at the University of Vancouver, have similar indicators of assessment. All of them are based on the recognition that the material components of well-being are a necessary but insufficient condition for ensuring the quality of life. In addition, it is necessary to assess the subjective perception of acceptability and availability of the components of the human environment that determine well-being, and QOL indices in any of their interpretations are formalized indicators of the achieved level of well-being in objective and subjective sense.

In this regard, it is especially important to properly build monitoring procedures and to involve respondents of relevant target groups as much as possible (Koronakos et al., 2019; Šanda & Křupka, 2018).

As for possible differences in the approaches of different researchers, e.g. (Afanasiev & Kudrov, 2019; D'Silva & Samah, 2018; Prakash & Garg, 2019), they are understandable due to the dynamism and differences of the basic concept underlying the assessment (well-being). The admissibility of such differences can most clearly be illustrated by one of the theses identified in the Canadian Index of Child and Youth Well-being report: 'Different individuals, cultures, communities and age groups have different concepts and experiences of well-being. They have different goals and values. All citizens, including children, have the right to define what well-being means to

them, their community and their society. No single index or approach can do this. However, well-being includes some common ideas' (UNICEF, 2019, p.10).

At the same time, in the context of our study, it is especially important that Canadian scientists, conducting their research under the auspices of UNICEF, offer a separate well-being index for the age group of children and youth (Canadian Index of Child and Youth Well-being). This approach best illustrates the importance of meeting needs and taking into account their differences in different age groups, especially children and young people. However, only one of the components of the index (Are We Free to Play? Are We Protected? Are We Learning? Are We Healthy? Are We Connected to our Environment?) Applies only to children. Others (Are We Happy and Respected? Do We Belong? Are We Secure? Are We Participating? Are We Protected? Are We Learning? Are We Healthy? Are We Connected to our Environment?) (UNICEF, 2019) is suitable for both children and for young people, and in general assesses the subjective feeling of satisfaction and accessibility of needs of both material content and higher levels.

Recognition of the reciprocal relationship between conventional performance measures and QOL indicators (Uysal & Sirgy, 2019) leads to a constant interest in QOL research and related indicators of socio-economic development at different levels. Such studies constantly confirm the links with the performance of enterprises and industries (Černevičiūtė et al., 2019; Eslami et al., 2018), GDP and related indicators of well-being at the national level (Bilan et al., 2020; Kharazishvili et al., 2019; Malay, 2019; Mishchuk & Grishnova, 2015; Oliinyk et al., 2021) and the regional level (Čižo et al., 2020; Horská et al., 2019; Kiseláková et al., 2018; Mazzanti et al., 2020). Being the components of social security assessment system, these factors are in fact a prerequisite for achieving social security (Akimova et al., 2020; Mishchuk et al., 2020) and personal well-being, especially in terms of ageing (Wang et al., 2021). One of the dangerous consequences of dissatisfaction with the quality of life is the proven links with the formation of migration motives (Mishchuk et al., 2019; Piekutowska & Fiedorczuk, 2018; Škuflić et al., 2018; Todorov et al., 2018), which can be irreversible and result in significant demographic losses of the country.

For young people, the characteristics of Generation Z behaviour can have a significant impact on decision-making in different areas, and therefore require more detailed research, as identified by researchers in this field (Goh & Jie, 2019; Matraeva et al., 2019; Su et al., 2019). They are especially important for students, who are the most creative part of each country's human capital, as they have reaffirmed their desire to accumulate their intellectual capital, making their future social productivity potentially greatest. If a feeling of dissatisfaction with the quality of life is formed in this group, such consequences are very dangerous for the prospects of restoring of the country's intellectual capital (Mishchuk et al., 2019). Therefore, studies of the behaviour of this social group are often conducted in the context of quality of life satisfaction (Cuzdriorean et al., 2020; Grabowski et al., 2019; Tilga et al., 2019).

With the aim of our own research to develop and adapt existing methodological principles to assess the quality of life of young people, our research is based on the approach developed with the assistance of UNDP in Ukraine. According to it, the quality of life, similar to the previously analyzed approaches, is assessed by four

groups of factors (Economic environment; Socio-political environment; Social environment; Natural environment). In terms of content and composition of partial indicators, they are close to the most common approaches in Europe (Eurostat, 2017; OECD, 2020). Adapting them to the goals of our own research requires taking into account the peculiarities of the manifestation of needs and assessing their importance in the age group of young people, which we limit to the age of 17–25 years. At the same time, the target group of respondents is student youth, as well as university graduates who already have experience of economic activity, which may change their perception of QOL.

In the study, we ask the following research questions: How satisfied are young people with the quality of life – in general and in terms of partial indicators? What components of quality of life are most important?

3. Methodological approach

To answer the questions posed in the study, we will use the following methods:

- analogies, systematization and statistical groupings – to form a system of indicators for assessing the quality of life of young people;
- hypothetical, scientific induction and analogy – to develop assessment methods;
- questionnaires and system analysis – to establish the importance of various factors of quality of life of individuals and their satisfaction;
- analytical and comparison – to process survey results.

Thus, the central idea of our study is to adapt the existing methodological principles of quality of life assessment to the QOL assessment of young people. We consider the main existing methodological principle of quality of life assessment a methodology of the Institute of Demography and Social Research NAS, specially developed for Ukraine with the assistance of UNDP in Ukraine (IDSS, 2013).

Therefore, in order to substantiate the complex QOL indicator and select its components, we made comparisons of the following related indicators prevailing in current human capital management investigations:

- Human Development Index (HDI) (UNDP, 2019);
- Better Life Index (BLI) (OECD, 2019a, 2019b);
- The Economist Intelligence Unit's Quality-of-life Index (Economist, 2005);
- The Human Capital Index (HCI) (World Bank, 2019);
- The Global Human Capital Index (World Economic Forum, 2017);
- The Legatum Prosperity Index (Legatum Institute, 2019);
- The Canadian Index of Wellbeing (CIW, 2020);
- Regional Human Development Index (RHDI) (IDSS, 2012).

In addition to the above indicators, to clarify the composition of QOL indicators important for young people, we conducted a preliminary survey to analyze the

suitability of indicators used in the original methodology, and supplement them with other ones, important for young people in the target age group.

As a result of a series of comparisons, we obtained a system of factors and the corresponding QOL indicators (see Table 1).

Based on this list, a questionnaire was developed in which respondents were asked to assess: 1) the importance of the influence of factors on the comfort of life; 2) satisfaction with the conditions of quality of life.

The survey was conducted in September–December 2019. The target group, as already mentioned, is the age group of young people between 17 and 25, including students of three state universities in one of the regional centres of Ukraine (Rivne) and graduates who have experience of economic activity. Their perception of QOL is important to clarify the system of values and aspirations of young people, on the basis of which well-being programs of state and regional management of public relations should be developed.

The questionnaire was tested by surveying young people via e-mail and social networks, as well as by direct contacts. During the formation of the sample, a balanced share of respondents was ensured; these were young people who were just studying and those who were university graduates or combined work and study.

To form a representative sample, we considered the overall quantity of the target youth group – according to the data of State Statistical Service of Ukraine; the total number of youth aged 17–25 in the region is 138 465 people (SSSU, 2020). So, following the Cochran formula (Cochran, 1977), the sample size for this population group should be 383 people, with confidence level 0.95 and confidence interval 0.05.

As a result of the survey, answers were received from 392 respondents. The first processing of the questionnaires resulted in selection of 384 questionnaires suitable for further analysis. We conduct the analysis, considering the appropriate representativeness of the sample.

The methodology for determining QOL by the author's method includes the following steps:

1. Calculation of average scores of satisfaction of respondents in each of the selected QOL indicators:

$$a^i = \frac{\sum_{j=1}^{z} a_j^i}{z}, \tag{1}$$

where a^i is the estimate of satisfaction of the i-th QOL indicator;
$\sum_{j=1}^{z} a_j^i$ is the sum of estimates of the i-th indicator by all respondents; j stands for a respondent; z is a sample size.

1. Determining the average estimates of the importance of the impact of each indicator on the respondent' QOL:

Table 1. System of indicators for assessing the quality of life of young people.

Indicators		Symbols	Quality of Life indicators (according to existing assessment methods)								Assessment of the quality of life of an individual (author's method)
			Human Development Index	Better Life Index	The Economist Intelligence Unit's quality-of-life index	The Human Capital Index	The Global Human Capital Index	The Legatum Prosperity Index	The Canadian Index of Wellbeing	Regional Human Development Index	
Economic environment	size and stability of financial income (salary, scholarship, money from parents, etc.)	E_1	+	+	+				+	+	+
	sufficiency of funds for food, clothing and utilities	E_2	+	+				+	+	+	+
	sufficiency of funds for the purchase of durable goods, educational and cultural services	E_3						+	+	+	+
	own housing	E_4	+	+				+	+	+	+
	financial savings	E_5		+							+
	personal automobile	E_6									+
	employment (paid)	E_7	+	+	+			+	+	+	+
	sanitary and hygienic working / learning conditions	E_8			+		+	+	+	+	+
Socio-political environment	activities in public / political / religious / charitable organizations	SP_1			+			+	+		+
	availability and quality of services of supermarkets, shops, consumer services	SP_2						+			+
	political rights	SP_3		+	+			+	+		+
	political, incl. military situation in the country	SP_4			+			+	+		+
	accessibility and comfort of public transport	SP_5		+				+	+	+	+
	crime rate in the residential area	SP_6		+	+				+	+	+
Social environment	family relationships	S_1		+							+
	access to health care facilities, quality of medical services	S_2		+	+			+	+	+	+
	opportunities for education	S_3	+	+		+	+	+	+	+	+
	attending cultural, leisure, cultural and entertainment events	S_4		+					+		+
	health condition	S_5	+		+	+		+	+	+	+
	opportunities to travel	S_6								+	+

(continued)

Table 1. Continued.

Indicators	Symbols	Quality of Life indicators (according to existing assessment methods)								
		Human Development Index	Better Life Index	The Economist Intelligence Unit's quality-of-life index	The Human Capital Index	The Global Human Capital Index	The Legatum Prosperity Index	The Canadian Index of Wellbeing	Regional Human Development Index	Assessment of the quality of life of an individual (author's method)
availability and use of time for self-care, physical activity	S_7		+				+			+
relationships with colleagues / classmates	S_8						+			+
lack of habits that are harmful to health	S_9						+	+	+	+
no stressful situations	S_{10}							+	+	+
job satisfaction (in case of paid employment)	S_{11}					+				+
possibility to use mobile communications and the Internet	S_{12}						+	+		+
accommodation conditions	S_{13}		+				+		+	+
Natural environment — ecology (clean air, no garbage on the streets, access to recreational areas)	N_1		+				+	+		+
climatic conditions in the region of residence	N_2			+						+
quality of drinking water and food	N_3		+					+		+

Source: Developed by the authors.

$$b^i = \frac{\sum_{j=1}^{z} b_j^i}{z},$$ (2)

where b^i is the estimate of the importance of the i-th indicator in assessing the quality of life;

$\sum_{j=1}^{z} b_j^i$ is the sum of assessments of the importance of the i-th indicator in assessing the quality of life of all respondents.

1. Calculation of the specific weight of each indicator in a particular block for the calculation of partial indices (for each of the four blocks in this study):

$$V_n^i = \frac{b^{i(n)}}{\sum_{i=1}^{y} b^{i(n)}},$$ (3)

where V_n^i is the specific weight of the i-th indicator in n-th block;

$b^{i(n)}$ is the estimate of the importance of the i-th indicator in assessing the quality of life of the n-th block;n is a block; $\sum_{i=1}^{y} b^{i(n)}$ is the sum of estimates of the importance of the indicators of the n-th block;y is the number of indicators in block.

1. Definition of partial indices of quality of life:

$$I_n = \sum_{i=1}^{y} V_n^i \times a_n^i,$$ (4)

where I_n is the partial indices of quality of life (of the n-th block).

1. Calculation of the specific weight of each indicator in the integrated quality of life index:

$$V^i = \frac{b^i}{\sum_{i=1}^{m} b^i},$$ (5)

where $\sum_{i=1}^{m} b^i$ is the sum of estimates of the importance of all m indicators analyzed (in this study $m = 30$).

1. Determination of the specific weight of each partial index:

$$V_n = \frac{b_n}{\sum_{n=1}^{k} b_n},$$ (6)

where V_n is the specific weight of each partial index (of n-th block) in the integrated quality of life index;

k is the number of blocks (in this study $k=4$).b_n is the average importance of the n-th block:$b_n = \dfrac{\sum_{i=1}^{y}\sum_{j=1}^{z} b_j^{i(n)}}{\sum_{i=1}^{30}\sum_{j=1}^{z} b_j^{i}}$;(7)$\sum_{n=1}^{k} b_n$ is the sum of the average importance of each of the blocks.

1. Calculation of the integrated quality of life of an individual:

$$I_{ind} = \sum_{i=1}^{4} I_n \times V_n \qquad (8)$$

4. Conducting research and results

Based on the data obtained by sociological survey, the integrated index of quality of life of young people in general and with differentiation by sex and economic activity of individuals was calculated. Partial indices of material well-being, quality of socio-political life, quality of social well-being and quality of environment for youth are determined (see Table 2).

The most important indicators of young people's well-being are the factors of the social environment. Economic and environmental factors have approximately the same effect. Socio-political factors have the least influence. Due to material well-being and quality of socio-political life, satisfaction with the life of employed youth is slightly higher (by 3%). Instead, unemployed respondents are more satisfied with social comfort. Men rated their quality of life higher than women. The integrated index of quality of life of the interviewed youth (mainly in Rivne) is 3,438 points out of 5 maximum. Young people consider family relationships and health to be the most important indicators that characterize the quality of life, whereas participation in charity and community work, as well as the availability of their own car, is regarded as the least important (see Figure 1).

Most economic indicators, including the size and stability of cash income, adequacy of funds for the purchase of food, durable goods and housing and communal services were in the middle of the ranking, indicating the social orientation of modern youth, whose main values are family and health. The greatest satisfaction is with the indicators of the social sphere: relationships in the family and with colleagues, the absence of bad habits, the ability to use the Internet and communication. Young people are least satisfied with the political situation in the country, the crime rate and the opportunity to buy their own car.

5. Discussions

As researchers, governments, various NGOs and foundations have attempted to assess the well-being of populations for centuries, there are currently a huge number of methods of satisfaction with the quality of life or life satisfaction assessment related to various aspects of human life and development of society. In recent years, research focused on the features of the use of digital technologies by young people, the effects

Table 2. The results of assessing the quality of life of young people.

Groups of factors	Indicators (symbols – see Table 1)	Assessment of quality of life by gender		Assessment of quality of life by economic activity		Weighing coefficients in blocks	Total weighing coefficients	Average assessment of quality of life
		male	female	employed youth	unemployed youth			
Economic environment	E_1	3,333	3,351	3,436	3,250	0,132	0,0350	3,347
	E_2	3,444	3,579	3,513	3,583	0,134	0,0354	3,547
	E_3	3,111	3,070	3,026	3,139	0,127	0,0337	3,080
	E_4	3,222	3,316	3,385	3,194	0,128	0,0339	3,293
	E_5	3,111	3,070	3,256	2,889	0,118	0,0311	3,080
	E_6	2,222	2,404	2,513	2,194	0,096	0,0255	2,360
	E_7	2,889	3,140	3,667	2,444	0,134	0,0355	3,080
	E_8	3,556	3,789	3,769	3,694	0,130	0,0343	3,733
	I_E*	3,142	3,246	3,352	3,079	1	0,2511	3,221
Socio-political environment	SP_1	3,389	3,298	3,359	3,278	0,134	0,0248	3,320
	SP_2	4,056	3,737	3,692	3,944	0,171	0,0318	3,813
	SP_3	2,778	3,228	2,974	3,278	0,164	0,0304	3,120
	SP_4	1,944	2,368	2,231	2,306	0,190	0,0353	2,267
	SP_5	3,278	3,123	3,256	3,056	0,170	0,0317	3,160
	SP_6	3,167	3,316	3,154	3,417	0,171	0,0318	3,280
	I_{SP}*	3,071	3,158	3,086	3,193	1	0,2352	3,137
Social environment	S_1	4,222	4,439	4,410	4,361	0,084	0,0380	4,387
	S_2	3,389	3,088	3,205	3,111	0,079	0,0358	3,160
	S_3	4,111	4,316	4,077	4,472	0,080	0,0363	4,267
	S_4	3,333	3,544	3,487	3,500	0,066	0,0299	3,493
	S_5	4,167	3,860	3,897	3,972	0,084	0,0380	3,933
	S_6	2,722	2,842	2,718	2,917	0,071	0,0321	2,813
	S_7	4,000	3,825	3,692	4,056	0,073	0,0330	3,867
	S_8	4,222	4,298	4,205	4,361	0,074	0,0334	4,280
	S_9	4,222	4,579	4,410	4,583	0,078	0,0350	4,493
	S_{10}	3,500	3,000	3,103	3,139	0,076	0,0341	3,120
	S_{11}	3,500	3,364	3,763	3,000	0,078	0,0354	3,397
	S_{12}	4,500	4,386	4,385	4,444	0,079	0,0355	4,413
	S_{13}	4,222	3,982	3,923	4,167	0,077	0,0347	4,0400
	I_S*	3,871	3,823	3,807	3,866	1	0,2637	3,835
Natural environment	N_1	3,222	2,965	3,231	2,806	0,345	0,0341	3,027
	N_2	4,278	3,772	3,872	3,917	0,281	0,0277	3,893
	N_3	3,944	3,614	3,667	3,722	0,374	0,0369	3,693
	I_N*	3,789	3,434	3,574	3,460	1	0,250	3,519
I_{QL}*		3,479	3,425	3,465	3,408	x	1	3,438

*I_E – Index of material well-being (by components of the economic environment); I_{SP} – Index of quality of socio-political life; I_S – Social Well-being Index; I_N – Environmental Quality Index; I_{QL} – Integral index of quality of life of an individual.
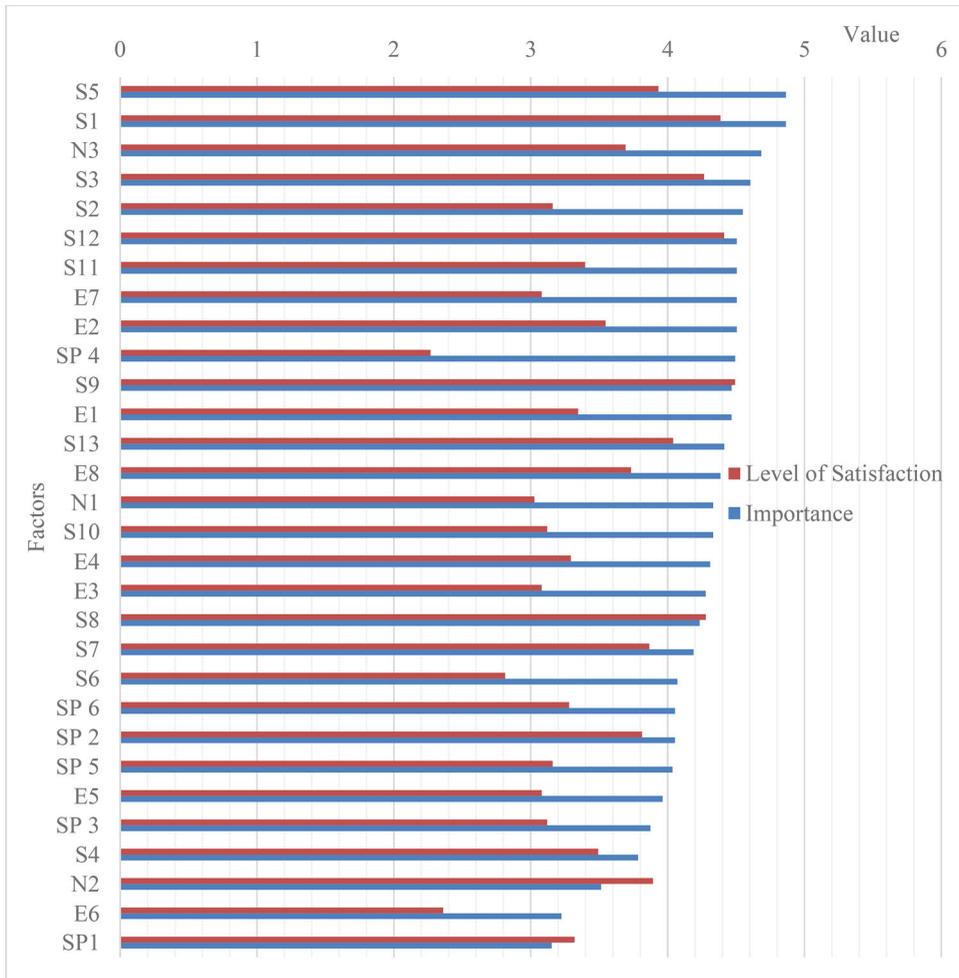*Source: Developed by the authors.*

Figure 1. Importance of youth quality of life factors and level of satisfaction with them (ranked by importance).
Source: Developed by the authors

of social media on the mental health of adolescents, the study of whether digital media are improving or harming psychological well-being, the effects of the arts on health and quality of life, the role of family relationships in shaping the level of well-being etc.

Among the current researches directly related to the sphere of human capital management, the closest to the identified criteria of well-being for Ukrainian youth were the results of a study carried out by British scientists (Frijters et al., 2020), according to which higher well-being scores are reported by individuals who: 1) are in employment; 2) have good health; 3) are partnered; 4) have higher income; are either young, or older (i.e. not in their mid-life crisis). However, in contrast to the results of our research, the authors attempt to quantify the Effect on Wellbeing based on a selection of key findings from the literature on Life Satisfaction. Differentiated results of the study by age groups of respondents, which could be used to compare the commitment to certain

elements of the quality of life of young people in Ukraine and in countries with higher levels of economic development, are not publicly presented.

In another study (Jebb et al., 2020), the authors examined four important predictors of subjective well-being and how their associations changed: marriage, employment, prosociality, and life meaning. These predictors were typically associated with higher subjective well-being over the life span in every world region. At the same time, employment had larger effects that peaked around the age of 50 years. These findings are in line with our research, as we can conclude that the importance of S_{11} and E_1 factors are high, but not the most crucial.

Similar results of our research conducted in Ukraine with indicators of living standards in other countries are confirmed by the study of authors who examined differences in three measures of subjective well-being over the life span, using representative cross-sections from 166 nations (more than 1.7 million respondents). Globally, and in the individual regions of the world, we found only very small differences in life satisfaction and negative affect (Jebb et al., 2020). For most people on Earth, higher subjective well-being has been associated with good health and longevity, better social relationships, work performance and creativity (Diener et al., 2018).

The results of our study had been obtained before the restrictive measures were introduced in Ukraine due to the coronavirus disease 2019. Therefore, the vast majority of potential items to estimate quality of life, in our list are those that have mainly physical (material) manifestation. However, the ongoing pandemic caused by the coronavirus disease 2019 (COVID-19) virus has severely affected people's perception of quality of life. A global pandemic caused by the novel coronavirus resulted in restrictions to daily living for the population of all age groups, including social distancing and closure of city and provincial recreation facilities, national parks and playgrounds. These preemptive measures impacted physical activity behaviour and well-being of citizens (Lesser & Nienhuis, 2020). The changes in society that have taken place over the last year have led to a decrease in activity and an increase in the level of sensitivity of the population, in particular young people, to stressful situations. As a result of research (Kivi et al., 2021), there was found a substantial increase in the search intensity for boredom in Europe and the US. The authors also found a significant increase in searches for loneliness, worry and sadness, while searches for stress, suicide and divorce on the contrary fell. The results suggest that people's mental health may have been severely affected by the pandemic and lockdown. Therefore, we see it appropriate to further expand the list of the Social environment block with items that will detail the confidence of respondents in their safety today and in the future. To do this, in our further researches, we intend to use the discussion from the international well-being summit in Kyoto, Japan (August 2019), where nine such additions were proposed and highlight why a more global view of wellbeing is needed. Overall, the new items reflect a richer view of well-being than life satisfaction alone and include hedonic and eudaimonic faces of wellbeing, social well-being, the role of culture, community, nature, and governance (Lambert et al., 2020).

Focusing in further studies on the mental attitudes (incl. mental health) of young people to assess the quality of their own lives, we also consider it appropriate to use (Baik et al., 2019) the responses to the question: What can be done to improve youth

well-being? Students interviewed by the authors of this study made diverse recommendations that fell into seven categories: academic teachers and teaching practices; student services and support; environment, culture and communication; course design; program administration; assessment; and student societal activities.

The technique of The Riverside Life Satisfaction Scale focusing on the development of a new measure of life satisfaction (Margolis et al., 2019) will also be useful in this case. In particular, in our and other works in this direction, there can be used the Satisfaction With Life Scale, which has been the dominant measure of life satisfaction since its creation more than 30 years ago and improved by the authors under the direction of other scientists (Diener et al., 1985). The authors (Margolis et al., 2019) attempted to develop an improved measure that includes indirect indicators of life satisfaction (e.g. wishing to change one's life) to increase the bandwidth of the measure and account for acquiescence bias. In today's environment of heightened uncertainty about even the nearest future and limited social contacts, individual satisfaction with the quality of life will increasingly depend on mental factors related to the value orientations and the nature of expectations for the future of a particular individual.

With further researches in this direction, we will be able to more fully reflect the term of subjective well-being, which is synonymous with positive mental health (Ruggeri et al., 2020). The World Health Organization (WHO),) (2001) defines positive mental health as 'a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community'. Thus, such components of general life satisfaction are, at the same time, an important factor in forming a feeling of high QOL, and can be continued in further research in this direction.

6. Conclusions

Improving the quality of life of the population is one of the main tasks of every state in the field of human capital management in the process of international integration. Achieving world standards in this area is possible only with constant analysis of the quality of life, identification of problem areas and active public policy in the development and implementation of specific management decisions on clearly defined aspects.

To assess the quality of life of young people who have needs that are too different from other age groups, we propose to adapt existing approaches and use subjective assessments of certain groups of factors. Similar to the UNDP quality of life assessment recommendations tested in Ukraine by the main research institution (IDSS, 2013), we also use the new factors of the Economic environment to assess QOL; Socio-political environment; Social environment; Natural environment. But they are significantly supplemented by us, taking into account the approaches of other research institutions. The initial approbation of the system of factors in the pilot group of young people allowed forming a system of 30 factors relevant to the subjective perception of QOL. Our assessment based on the author's methodology allows us to analyze QOL both in terms of satisfaction of needs and their relevance.

The proper theoretical and applied ability of our proposed approach is confirmed by the compliance of the obtained results with the current processes of

transformation of life values of young people taking place in society. In many surveys on the life values of young people, we can find similar results to our results. As in our study, other researchers who also studied the values of 'millennials' confirmed the lower interest of this population in political processes: 'More than older Americans, millennials resist identifying with political parties' (Bloomberg, 2015); the high importance of family values, which is sometimes manifested in long cohabitation with parents, later marriages and postponement of childbirth (Bloomberg, 2015; Pew Research Centre, 2019); high value of education (Pew Research Centre, 2019), higher than other generations of social responsibility, especially for the environment (Galup, 2019). Although the material needs of young people are quite visible, their importance is mostly inferior to social. At the same time, critical assessments of the level of satisfaction of many needs require their constant monitoring and consideration in the development of national and regional programs and strategies of human capital development due to improve the living standards of young people.

Further research of the authors will be aimed at expanding the methodology by involving objective indicators, adapting the proposed methodology to assess the quality of life of other categories of the population and forming a system of social policy measures at different levels.

Disclosure statement

ORCID

Manuela Tvaronavičienė 🄳 http://orcid.org/0000-0002-9667-3730
Nataliia Mazur 🄳 http://orcid.org/0000-0001-8673-5873
Halyna Mishchuk 🄳 http://orcid.org/0000-0003-4520-3189
Yuriy Bilan 🄳 http://orcid.org/0000-0003-0268-009X

References

Afanasiev, M., & Kudrov, A. (2019). Integrated indicator of the living quality conditions. *Montenegrin Journal of Economics*, *15*(3), 7–21. https://doi.org/10.14254/1800-5845/2019.15-3.1

Akimova, L. M., Litvinova, I. F., Ilchenko, H. O., Pomaza-Ponomarenko, A. L., & Yemets, O. I. (2020). The negative impact of corruption on the economic security of states. *International Journal of Management*, *11*(5), 1058–1071. https://doi.org/10.34218/IJM.11.5.2020.097

Baik, C., Larcombe, W., & Brooker, A. (2019). How universities can enhance student mental well-being: The student perspective. *Higher Education Research & Development*, *38*(4), 674–687.

Bilan, Y., Mishchuk, H., Samoliuk, N., & Yurchyk, H. (2020). Impact of income distribution on social and economic well-being of the state. *Sustainability*, *12*(1), 429. https://doi.org/10.3390/su12010429

Bloomberg. (2015). *Bloomberg View's graphic profile of millennials*. https://www.bloomberg.com/view/interactives/2015-millennials/

Černevičiūtė, J., Strazdas, R., Kregždaitė, R., & Tvaronavičienė, M. (2019). Cultural and creative industries for sustainable postindustrial regional development: The case of Lithuania. *Journal of International Studies*, *12*(2), 285–298. https://doi.org/10.14254/2071-8330.2019/12-2/18

Chillakuri, B., & Mahanandia, R. (2018). Generation Z entering the workforce: the need for sustainable strategies in maximizing their talent. *Human Resource Management International Digest*, (4), 34–38. 26 https://doi.org/10.1108/HRMID-01-2018-0006

CIW. (2020). *Canadian index of wellbeing. Domains and indicators*. https://uwaterloo.ca/canadian-index-wellbeing/what-we-do/domains-and-indicators

Čižo, E., Lavrinenko, O., & Ignatjeva, S. (2020). Analysis of the relationship between financial development and economic growth in the EU countries. *Insights into Regional Development*, *2*(3), 645–660. https://doi.org/10.9770/IRD.2020.2.3(3)

Cochran, W. G. (1977). *Sampling techniques*. 3rd ed. John Wiley & Sons.

Cuzdriorean, D. D., Fekete, S., & Vladu, A. B. (2020). Identifying the promoters of students' sustainable behaviour: An empirical study. *The Amfiteatru Economic Journal*, *22*(54), 432–432.

D'Silva, J. L., & Samah, A. A. (2018). Holistic well-being of Japanese retirees in Malaysia. *Journal of International Studies*, *11*(3), 95–103. https://doi.org/10.14254/2071-8330.2018/11-3/8

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Oishi, S., & Tay, L. (2018). Advances in subjective well-being research. *Nature Human Behaviour*, *2*(4), 253–260. https://doi.org/10.1038/s41562-018-0307-6

Economist. (2005). The economist intelligence unit's quality-of-life index. https://www.economist.com/media/pdf/QUALITY_OF_LIFE.pdf

Eslami, S., Khalifah, Z., Mardani, A., & Streimikiene, D. (2018). Impact of non-economic factors on residents' support for sustainable tourism development in Langkawi Island. *Economics & Sociology*, *11*(4), 181–197. https://doi.org/10.14254/2071-789X.2018/11-4/12

Eurostat. (2017). *Final report of the expert group on quality of life indicators*. Publications Office of the European Union.

Frijters, P., Clark, A. E., Krekel, C., & Layard, R. (2020). A happy choice: Wellbeing as the goal of government. *Behavioural Public Policy*, *4*(2), 126–165. https://doi.org/10.1017/bpp.2019.39

Gaidhani, S., Arora, L., & Sharma, B. K. (2019). Understanding the attitude of generation Z towards workplace. *International Journal of Management, Technology and Engineering*, *9*, 2804–2812.

Galup. (2019). *Millennials worry about the environment – Should your company?* https://www.gallup.com/workplace/257786/millennials-worry-environment-company.aspx

Goh, E., & Jie, F. (2019). To waste or not to waste: Exploring motivational factors of Generation Z hospitality employees towards food wastage in the hospitality industry. *International Journal of Hospitality Management*, *80*, 126–135. https://doi.org/10.1016/j.ijhm.2019.02.005

Grabowski, M., Kovaleva, A., Wiśniewska, S., & Szydło, R. (2019). Comparative analysis of students' quality of life in Poland and Russia. *International Journal for Quality Research*, *13*(1), 145–156. https://doi.org/10.24874/IJQR13.01-09

Horská, E., Moroz, S., Poláková, Z., Nagyová, Ľ., & Paska, I. (2019). Evaluation of interaction between chosen indicators of development of regions in Ukraine. *Equilibrium*, *14*(2), 341–357. https://doi.org/10.24136/eq.2019.016

IDSS. (2012). Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine. *Methods for measurement of regional human development*. https://idss.org.ua/ukr_index/irlr_2014_en

IDSS. (2013). Institute for demography and social studies of the national academy of sciences of Ukraine. *Measuring quality of life in Ukraine*, Analytical Report, E. Libanova, O. Gladun et al. – K.: 2013. https://idss.org.ua/monografii/UNDP_QL_2013_eng.pdf

Jebb, A. T., Morrison, M., Tay, L., & Diener, E. (2020). Subjective well-being around the world: Trends and predictors across the life span. *Psychological Science*, *31*(3), 293–305. https://doi.org/10.1177/0956797619898826

Kalyayev, A., Efimov, G., Motornyy, V., Dzianyy, R., & Akimova, L. (2019). Global security governance: Conceptual approaches and practical imperatives. In Education *excellence and innovation management* through *vision* 2020, 4484–4495.

Kharazishvili, Y., Grishnova, O., & Kamińska, B. (2019). Standards of living in Ukraine, Georgia, and Poland: identification and strategic planning. *Virtual Economics*, *2* (2), 7–36. https://doi.org/10.34021/ve.2019.02.02(1)

Kirchmayer, Z., Fratricová, J. (2020). What motivates generation Z at work? Insights into motivation drivers of business students in Slovakia. *Proceedings of the innovation management and education excellence through vision*, 6019–6030.

Kiseláková, D., Šofranková, B., Čabinová, V., & Onuferová, E. (2018). Competitiveness and sustainable growth analysis of the EU countries with the use of Global Indexes' methodology. *Entrepreneurship and Sustainability Issues*, *5*(3), 581–599. https://doi.org/10.9770/jesi.2018.5.3(13)

Kivi, M., Hansson, I., & Bjälkebring, P. (2021). Up and about: Older adults' well-being during the COVID-19 pandemic in a Swedish Longitudinal Study. *The Journals of Gerontology: Series B*, *76*(2), e4–e9. https://doi.org/10.1093/geronb/gbaa084

Koronakos, G., Smirlis, Y., Sotiros, D., & Despotis, D. K. (2019). Assessment of OECD Better Life Index by incorporating public opinion. *Socio-Economic Planning Sciences*, *70*, 100699.

Lambert, L., Lomas, T., van de Weijer, M. P., Passmore, H. A., Joshanloo, M., Harter, J., Ishikawa, Y., Lai, A., Kitagawa, T., Chen, D., Kawakami, T., Miyata, H., & Diener, E. (2020). Towards a greater global understanding of wellbeing: A proposal for a more inclusive measure. *International Journal of Wellbeing*, *10*(2), 1–18. https://doi.org/10.5502/ijw.v10i2.1037

Legatum Institute. (2019). *Legatum Prosperity Index: The 13th edition of the Legatum Prosperity Index*. https://li.com/reports/2019-legatum-prosperity-index/

Lesser, I. A., & Nienhuis, C. P. (2020). The impact of COVID-19 on physical activity behavior and well-being of Canadians. *International Journal of Environmental Research and Public Health*, *17*(11), 3899. https://doi.org/10.3390/ijerph17113899

Malay, O. E. (2019). Do Beyond GDP indicators initiated by powerful stakeholders have a transformative potential? *Ecological Economics*, *162*, 100–107. https://doi.org/10.1016/j.ecolecon.2019.04.023

Margolis, S., Schwitzgebel, E., Ozer, D. J., & Lyubomirsky, S. (2019). A new measure of life satisfaction: The Riverside Life Satisfaction Scale. *Journal of Personality Assessment*, *101*(6), 621–630. https://doi.org/10.1080/00223891.2018.1464457

Matraeva, L., Vasiutina, E., Belyak, A., Solodukha, P., Bondarchuk, N., & Efimova, M. (2019). Economic model of generation Z behavior. *Academic Journal of Interdisciplinary Studies*, *8*(3), 123–123. https://doi.org/10.36941/ajis-2019-0011

Mazzanti, M., Mazzarano, M., Pronti, A., & Quatrosi, M. (2020). Fiscal policies, public investments and wellbeing: mapping the evolution of the EU. *Insights into Regional Development*, *2*(4), 725–749. https://doi.org/10.9770/IRD.2020.2.4(1)

Mishchuk, H., Bilan, S., Yurchyk, H., Akimova, L., & Navickas, M. (2020). Impact of the shadow economy on social safety: The experience of Ukraine. *Economics and Sociology*, *13*(2), 284–298. https://doi.org/10.14254/2071-789X.2020/13-2/19

Mishchuk, H., & Grishnova, O. (2015). Empirical study of the comfort of living and working environment – Ukraine and Europe: Comparative assessment. *Journal of International Studies*, *8* (1), 67–80. https://doi.org/10.14254/2071-8330.2015/8-1/6

Mishchuk, H., Roshchyk, I., Sułkowska, J., & Vojtovič, S. (2019). Prospects of assessing the impact of external student migration on restoring the country's intellectual potential (Case Study of Ukraine). *Economics & Sociology*, *12*(3), 209–219. https://doi.org/10.14254/2071-789X.2019/12-3/14

OECD. (2019a). *Better life index: Definitions and metadata*. https://wwwa.oecd.org/statistics/OECD-Better-Life-Index-definitions-2019.pdf

OECD. (2019b). *Better life index*. http://www.oecdbetterlifeindex.org/#/11111111111

OECD. (2020). Executive summary. In *How's Life? 2020: Measuring Well-being.*, OECD Publishing. https://doi.org/10.1787/ea714361-en

Oliinyk, O., Bilan, Y., Mishchuk, H., Akimov, O., & Vasa, L. (2021). The impact of migration of highly skilled workers on the country's competitiveness and economic growth. *Montenegrin Journal of Economics*, *17*(3), 7–19. https://doi.org/10.14254/1800-5845/2021.17-3.1

Pew Research Centre. (2019). *Millennial life: How young adulthood today compares with prior generations.* https://www.pewsocialtrends.org/essay/millennial-life-how-young-adulthood-today-compares-with-prior-generations/

Piekutowska, A., & Fiedorczuk, M. (2018). Immigration from the CIS countries to Russia in the context of the economic crisis in the Russian Federation. *Oeconomia Copernicana*, *9*(4), 677–694. https://doi.org/10.24136/oc.2018.033

Power, T. M. (2020). *The economic value of the quality of life*. Routledge.

Prakash, R., & Garg, P. (2019). Comparative assessment of HDI with Composite Development Index (CDI). *Insights into Regional Development*, *1*(1), 58–76. https://doi.org/10.9770/ird.2019.1.1(5)

Ruggeri, K., Garcia-Garzon, E., Maguire, Á., Matz, S., & Huppert, F. A. (2020). Well-being is more than happiness and life satisfaction: a multidimensional analysis of 21 countries. *Health and Quality of Life Outcomes*, *18*(1), 1–16. https://doi.org/10.1186/s12955-020-01423-y

Šanda, M., & Křupka, J. (2018). Quality of life evaluation as decision support in public administration for innovation and regions development. *Administratie SI Management Public*, *30*, 51–66. https://doi.org/10.24818/amp/2018.30-04

Škuflić, L., Krpan, M., & Žmuk, B. (2018). Migration and the economic crisis in the European Union member states: Cluster analysis. *Entrepreneurship and Sustainability Issues*, *6*(2), 979–1000. https://doi.org/10.9770/jesi.2018.6.2(34)

SSSU. (2020). State Statistics Service of Ukraine. *Resident population of Ukraine by sex and age on January 1, 2020.* http://www.ukrstat.gov.ua/

Stiglitz, J. E., Sen, A., & &Fitoussi, J.-P. (2009). *Report of the Commission on the measurement of economic performance et social progress*. Commission on the Measurement of Economic Performance and Social Progress.

Su, C. H. J., Tsai, C. H. K., Chen, M. H., & Lv, W. Q. (2019). US sustainable food market generation Z consumer segments. *Sustainability*, *11*(13), 3607.

Tilga, H., Hein, V., Koka, A., & Hagger, M. S. (2019). How physical education teachers' interpersonal behaviour is related to students' health-related quality of life. *Scandinavian Journal of Educational Research*, *64*(5), 1–16.

Todorov, G. N., Kalinina, A. V., & Rybakova, A. I. (2018). Impact of labour migration on entrepreneurship ecosystem: case of Eurasian Economic Union. *Entrepreneurship and Sustainability Issues*, *5*(4), 992–1007. https://doi.org/10.9770/jesi.2018.5.4(20)

UNDP. (2015). *Sustainable Development Goals.* http://www.undp.org/content/undp/en/home/sustainable-development-goals.html

UNDP. (2019). *Human Development Index (HDI).* Human Development reports. http://hdr.undp.org/en/content/human-development-index-hdi

UNICEF. (2019). *The Canadian Index of Child and Youth Well-being 2019 Baseline Report*. UNICEF Canada.

Uysal, M., & Sirgy, M. J. (2019). Quality-of-life indicators as performance measures. *Annals of Tourism Research*, *76*, 291–300. https://doi.org/10.1016/j.annals.2018.12.016

Wang, C., Zhang, B., Oláh, J., & Hasan, M. (2021). factors influencing the quality of life of empty nesters: Empirical evidence from Southwest China. *Sustainability*, *13*(5), 2662. https://doi.org/10.3390/su13052662

Wingo, L. Jr, & Evans, A. (2013). *Public economics and the quality of life*. Routledge.

Wingo, L. (1973). The quality of life: Toward a microeconomic definition. *Urban Studies*, *10*(1), 3–18. https://doi.org/10.1080/00420987320080011

World Bank. (2019). *Human Capital Project. The Human Capital Index (HCI).* https://openknowledge.worldbank.org/bitstream/handle/10986/30498/33252.pdf?sequence=5&isAllowed=y

World Economic Forum. (2017). *The Global Human Capital Report 2017.* https://nonews.co/wp-content/uploads/2018/09/GHCR2017.pdf

World Health Organization (WHO). (2001). *The world health report 2001: mental health: new understanding, new hope*. World Health Organization.