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HAPPINESS AND HAPPINESS INEQUALITY IN AZERBAIJAN: RESULTS WITH SINGLE-ITEM AND MULTIPLE-ITEM CONSTRUCTS

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ABSTRACT. This paper compares the performance of the single-item (a 1-10 scale) and multiple-item constructs (Satisfaction With Life Scale (SWLS), 5-item and 7-item life domain scales) employed to measure happiness and happiness inequality based on the same survey data. Using a cross-sectional dataset of 2208 respondents from Azerbaijan, the study examines the reliability and validity of each scale. Further, it discusses the scales' predicted happiness and happiness inequality indicators within the aggregate sample and sub-samples of specific socio-demographic groups. The research results confirm the reliability and validity of multiple-item constructs. In fact, there is a strong positive correlation between all the examined constructs of happiness. Interestingly, the mean happiness predicted by the single-item, SWLS, 5-item, and 7-item life domain scales does not vary much. The mean happiness percentage of the highest score in each construct varies within [50.8%; 62.1%] for the aggregate sample. SWLS's happiness prediction is lower than that of others by 7-11 percentage points, followed by the 5-item life domain scale and the single-item scale. The happiness prediction difference between the single-item construct and the 7-item life domain scale is negligible. In terms of predicting happiness inequality, the 7-item life domain scale displays the least dispersion as per both standard deviation and coefficient of variation indicators. Conversely, the single-item construct yields the largest variability. Research findings are consistent regardless of age groups, gender identity, educational attainment level, marital status, employment status, and residential area. The overall recommendation is to use a multiple-item life domains scale to measure happiness and happiness inequality in a society, as it offers a broader perspective for using happiness research findings in improving public policy efficiency.

JEL Classification: J17, J18

Keywords: happiness, happiness inequality, life satisfaction, single-item construct, multiple-item construct, public policy.

Introduction

The happiness of individuals and society has been at the forefront of research over the last decades. According to the Utilitarian philosophy, the aim of public policy should be to enhance happiness (Veenhoven, 2004). While Veenhoven (2004) considers happiness as a useful public policy goal indicator, Oishi and Diener (2014) further claim that the ultimate goal of a public policy should be to increase the well-being of people. Their justification is straightforward: “an ideal society is a society in which citizens are happy, feel satisfied, and find their lives meaningful” (Oishi and Diener, 2014). Multiple studies discuss incorporating happiness in public policy (Aknin and Whillians, 2020; Rojas, 2020; Stutzer, 2020; Aliyev, 2021; Maruti, 2021; Lee, 2022). Some of them emphasize the differences in the perception of happiness considering the social behaviour patterns (Lubian, 2020). Some factors of satisfaction with life and subjective perception of happiness have been proven to lead to large-scale changes in society, e.g., enforcing migration, especially of highly skilled workers looking for more attractive work and living conditions (Oliinyk et al., 2022). Already, there are attempts to search for alternative indicators for measuring progress (the so-called “Beyond GDP movement”). Even Shrotryia and Singh (2020) tried to present a theoretical perspective of the “why happiness movement” to move beyond GDP. From this perspective, measuring inequality should also be re-considered. For example, one useful approach is based on the social justice concept and related estimates of income inequality (Mishchuk et al., 2018). Can “happiness inequality” substitute the notion of “income inequality”? Kollamparambil (2020) reveals that South Africa experienced a decrease in happiness inequality despite an increase in income inequality. This intriguing fact makes exploring happiness and happiness inequality in societies more important. The appropriateness of the selected indicator to measure welfare is essential, as is the methodology of the measurement scale. Otherwise, the results could mislead policymakers. When “why happiness movement” is considered in public policy, measuring happiness and happiness inequality increases in utmost importance. These estimates become more aligned with the sustainable economic growth and human development aims (Androniceanu et al., 2021).

From this perspective, methodological aspects of measuring happiness and happiness inequality are crucial for using the findings in the public policy decision-making process. Studies use single-item or multiple-item measurement scales to measure happiness. Since Cantril’s (1965), Self-Anchoring Scale (or Cantril’s ladder), a single-item measure of life satisfaction has become more popular. International surveys such as Gallup World Poll (GWP, see Diener and Tay, 2015), the World Values Survey (WVS, Inglehart et al., 2014; Haerpfer et al., 2020), European Quality of Life Survey (EQLS), the European Social Survey (ESS), among others, measure an individual’s life satisfaction with a single question, very similar to Cantril’s ladder. An individual’s response to the question “*All things considered, how satisfied are you with your life as a whole these days?*” is measured on a 0-10 or 1-10 scale. 0 or 1 denotes the lowest and 10 indicates the highest satisfaction score. Sometimes, a survey measures life satisfaction with a single question but logically differently than others. For example, the Russian Longitudinal Monitoring Survey asks, “*To what extent are you satisfied with your life in general at the present time?*” according to a 1-5 scale, while 1 indicates being fully satisfied and 5 indicates being not satisfied at all.

On the contrary, multiple-item measures of life satisfaction refer to the multiple questions to draw a score. Examples are the Satisfaction with Life Scale (SWLS, Diener et al., 1985), Positive and Negative Affect Schedule (PANAS-SF, Watson, Clark and Tellegem, 1988), the Oxford Happiness Questionnaire (OHQ, Hills and Argyle, 2002), the Personal Well-being Index (PWI, Cummins et al., 2003), the World Health Organization Quality of Life

(WHOQOL, World Health Organization, 2004), and the Riverside Life Satisfaction Scale (RLSS, Margolis et al., 2019), among others.

A widely used and commonly accepted measure of happiness inequality is the standard deviation (Veenhoven, 1990; Bennett and Nikolaev, 2017; Niimi, 2018; Yang, Liu and Zhang, 2019; Kollamparambil, 2020; Isaeva and Salahodjaev, 2021). While comparing single-item constructs of life satisfaction to multiple-item constructs, the former is believed to be more susceptible to measurement error (Bowling, 2005) and less predictive of validity (Diamantopoulos et al., 2012). Diener (2009) argues that single-item scales can not cover all aspects of subjective well-being and “do not offer a finely differentiated view of a person’s subjective well-being”. Subjective well-being has multiple components that are disregarded in a single-item scale usage (Diener, 2009). On the contrary, a single-item scale is preferred due to its simplicity and ease of administration (Jovanović and Lazić, 2018) and high response rates (Diener, Inglehart and Tay, 2013), which is confirmed to have moderate reliability and validity (Diener, 2009).

A recent national-level social survey conducted by ASERC (2021) in Azerbaijan measures an individual’s satisfaction simultaneously using a single-item, SWLS and life domain (5 and 7-item) scales. The dataset ($n = 2208$) gives a great chance to compare the performance of each construct to predict average happiness and happiness inequality. We explore each scale’s internal consistency, construct validity, and overall performance in the whole sample and disaggregated samples for the reliability of scales and the findings. Disaggregated sub-samples classify respondents by age, gender, marital status, educational attainment, employment status, and living in urban/rural areas.

From this perspective, the questions that need to be clarified are:

Q1: *How much one-item and multiple-item scales are reliable and valid constructs of happiness for different socio-demographic groups of the population?*

Q2: *How much different are one-item and multiple-item constructs to predict happiness and happiness inequality while also considering different socio-demographic groups of the population?*

Q3: *Which happiness construct is better to be used in public policy?*

The analysis with aggregate data and sub-samples of specific socio-demographic groups confirms the reliability and validity of multiple-item life satisfaction constructs and significant correlation between the constructs in all cases. Results display the SWLS to report lower happiness compared to the remaining constructs. Predicted happiness by the single-item construct and multiple-item life domain scales are close to each other. However, the 7-item life domain scale results in more accurate happiness prediction, while the one-item scale has the largest variability for aggregate and disaggregated samples. The research further discusses the constructs from the perspective of usage in public policy and recommends life domain scales.

1. Measuring happiness and happiness inequality

Acknowledging that “happiness”, “life satisfaction”, and “well-being” are different from a psychological perspective, following Dockery (2005) and Gandelman (2016), we will consider these as the synonym notions.

A vast majority of studies exploring happiness inequality have used a single-item measure of life satisfaction. Among others, Kalmijn and Arends (2010), Dutta and Foster (2013), Niimi (2015, 2018), Yang et al. (2019) and Hashem (2018) refer to the measure of “*how much happy the respondent is (from being very unhappy to very happy)*”. On the contrary, the majority take the statement “*how much satisfied the respondent is with his/her life*” on a 1-4 (Graafland and Lous, 2019), a 1-5 (Wang, Cheng and Smyth, 2019; Isaeva and Salahodjaev,

 INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

2021), a 0-10 (Veenhoven, 1990; Becchetti, Massari and Naticchioni, 2014; Goff, Helliwell and Mayraz, 2016, 2018) or a 1-10 (Ott, 2005, Ovaska and Takashima, 2010; Delhey and Kohler, 2011; Goff, Helliwell and Mayraz, 2016, 2018; Bernett and Nikolaev, 2017; Amendola, Dell'anno and Parisi, 2019; Ledić and Rubil, 2019; Maya and Kumar, 2019; Akaeda, 2020; Kollamparambil, 2020, Lakshmanasamy, 2020; Lakshmanasamy and Maya, 2020). Gandelman and Porzecanski (2013) and Gandelman (2016) also use a 0-10 scale while the asked question is slightly different: “...on which step of the ladder/mountain do you feel you personally stand at the present time?”. Among the users of multi-item scales, Kang, Lee and Song (2020) use a multi-item life domain (health, finance, relationship with friends and relatives, family life and social life) scale. Each scored on a 0-10 basis.

Of course, using many scales in a single survey is not easy. Medvedev and Landhuis (2018) employ the OHQ, the World Health Organization Quality of Life Questionnaire, the SWLS, and the Positive and Negative Affect Scale among a specific group of students ($n = 180$). However, a large-scale population survey might limit the number of questions. Meanwhile, public policy-oriented happiness research might also include satisfaction judgements with specific life domains. Global surveys such as World Values Surveys (WVS7, see Haerpfer et al. (2020)) have a single-item construct to measure happiness (Q46, using a 4-point Likert scale) and satisfaction with life (Q49, using a 1-10 ladder). WVS7 also includes questions to measure an individual's satisfaction with specific life domains. However, there is no homogeneous measure of satisfaction judgements of various life domains.

From this perspective, ASERC (2021) constitutes a rich happiness cross-sectional dataset of individuals in Azerbaijan, representing various socio-demographic groups of the population. Hence, the survey measures life satisfaction by using the following constructs:

- The single-item scale (“**LS 1-item**”) is measured on a 1-10 ladder, while 1 means the least and 10 represents the highest level of satisfaction with life.
- The SWLS approach contains five statements measured in 7-point Likert scale (see Diener et al., 1985):
 - (SWLS1) *In most ways, my life is close to my ideal,*
 - (SWLS2) *the conditions of my life are excellent,*
 - (SWLS3) *I am satisfied with my life,*
 - (SWLS4) *so far, I have gotten the important things I want in life,*
 - (SWLS5) *if I could live my life over, I would change almost nothing.*

A response to each statement could be "totally disagree (1)", "disagree (2)", "slightly disagree (3)", "neutral (4)", "slightly agree (5)", "agree (6)", and "totally agree (7)".

- Life domain scales using a 1-10 ladder to measure satisfaction judgements with seven life domains:
 - (LS1) *subjective healthiness,*
 - (LS2) *financial situation,*
 - (LS3) *relationship with friends and relatives,*
 - (LS4) *family life,*
 - (LS5) *social life (workplace, school, etc.),*
 - (LS6) *perceived personal safety,*
 - (LS7) *perceived freedom of deciding own life.*

While the first five domains borrowed from Kang et al. (2020), given six domains also appears in PWI (see the International Wellbeing Group, 2013). The last one is added as an optional domain, specific to eastern culture and Muslim dominated society.

There are four constructs of life satisfaction comparatively assessed in current research. Besides the single-item and SWLS scales, we build two more constructs based on satisfaction judgements with specific life domains, including:

- *The first five domains - “LS 5-item”* (in line with Kang et al. (2020)),
- *All seven domains - “LS 7-item”*.

The single-item construct gets a value between 1 and 10. The scoring of SWLS is explained in Pavot and Diener (2009, p.114), which ranges between 7 (the least satisfied) and 35 (the most satisfied). Following Kang et al. (2020), we find the arithmetic mean of satisfaction judgements with specific life domains, which ranges between 1 (the least satisfied) and 10 (the most satisfied).

The widely used measure of happiness inequality is standard deviation if the scale presents a cardinal variable. Finding arithmetic mean in the life domain scales (LS 5-item and LS 7-item) automatically produces a cardinal variable. One-item and SWLS scale results have an ordering feature. However, following selected previous studies (Clark, Flèche and Senik, 2014; Becchetti et al., 2014; Niimi, 2015, 2018a; Kollamparambil, 2020; Isaeva and Salahodjaev, 2021), we could treat life satisfaction as a cardinal variable and use the standard deviation to measure happiness inequality. Following Bérenger and Silber (2021), we also use the coefficient of variation (CV) as the measure of variability (or inequality) in the happiness of various socio-demographic groups.

To make the comparison across socio-demographic groups more insightful, we also transform individual happiness scores to percentages. More precisely, in cases of the single-item measure and satisfaction with life domains, 10 is considered as 100%, and all individual values are transformed accordingly. In the case of SWLS, 100% equals 35, and all values within the 7-35 range are converted to a percentage. Such transformation also strengthens the argument of being a cardinal variable while calculating happiness inequality. All construct reliability and validity operations have used initial (not percentages) responses.

2. Data and analytical framework

The research data is obtained from ASERC (2021), a national-level social survey conducted online by an independent agency in Azerbaijan. The sample frame covers all adult populations who actively use Facebook or Instagram. Online data collection limits access to the elderly group, people are living in rural areas with limited internet access, impoverished households who may not afford to purchase smartphones, and people with less knowledge regarding the purpose and usage of a survey. In the survey, 100 AZN (nearly USD 60) award nominations were announced for one participant who agreed to attend the lottery (so shares at least one info to be connected) to nudge respondents to complete the survey. Overall, ethical issues were considered along the survey and privacy of personal information was maintained. All respondents are allowed to skip any question they refuse to answer.

Due to Covid-19 related challenges, online data collection techniques are employed. Data collection had happened from September 10 to November 6 of 2021 among 2208 adults. Survey's Google Forms version was shared in social media (primarily Facebook, Messenger, Instagram and WhatsApp) reached more than 100 thousand people through paid advertisements. Overall, around 5000 people clicked the link and reviewed the self-administrated questionnaire, while 2235 submitted responses were recorded. After completion of the data cleaning process, 2008 observation left.

The analytical framework contains two stages. At the first stage, we explore the reliability and validity of constructs by employing Cronbach's alpha (Cronbach, 1951) and Factor Analysis following the Kaiser rule (Kaiser, 1960). We adopt the Principal Component Analysis as an extraction method. The second stage compares the single-item and multiple-item constructs to measure happiness and happiness inequality. The comparison not limited to the

INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

aggregate sample, also includes results from sub-samples of the following socio-demographic categories:

- Age groups ("Age 17-34"; "Age 35-49"; "Age 50-64"; and "Age 65-80"). The mean age in the aggregate sample is 34.6. Disaggregated samples structure by population age groups is as follows:
 - "Age 17-34": 56.9%
 - "Age 35-49": 27.7%
 - "Age 50-64": 11.3%
 - "Age 65 -80": 2.7%
 - Missing values: 1.4%
- Gender identity ("Male" and "Female"). 44.7% of respondents are males, and 54.2% are females. 1.1% or 24 participants have not reported their gender identity.
- Highest educational attainment level ("Pre-bachelor"; "Bachelor"; "Post-bachelor"). "Pre-bachelor" covers respondents (28.5%) with no university education (completed compulsory comprehensive public schools and/or vocational schools) while respondents belonging to the "Post-bachelor" category (25.0%) are at least master degree holders. Respondents with only a bachelor's degree contain 45.7%. 17 respondents (0.8%) have not reported their highest educational attainment level.
- Marital status ("Married" and "Unmarried"). Note that 50.9% of respondents are married while 48.5% are unmarried. "Unmarried" also contains widowed and divorced respondents. The missing values appear in 13 observations or 0.6% of all cases.
- Employment status ("Employed", "Unemployed" and "Not in the labor force"). "Employed" includes employers (or entrepreneurs), employees and self-employed respondents. Being "Unemployed" represents a respondent's self-evaluation (presents himself/herself as unemployed) which can be different from the official definition. "Not in the labor force" contains students, housekeepers, and retired individuals. In the sample, 60.8% are employed while 18% are unemployed, 20.5% are not in the labor force. There is no information about the employment status of 15 respondents (0.7%).
- Residential area ("Capital", "Regions", "Urban", "Urban-type settlement", and "Rural"). "Capital" includes the respondents residing in Baku city or Absheron-Khizi region (around Baku), while "Regions" covers all remaining respondents. The remaining categories represent the differences due to urbanization. Distribution by residential area is as follows:
 - 62% live in Baku city or Absheron-Khizi region, while 36.4% live in regions. Thirty-seven respondents (1.6%) have not reported their current residing area.
 - 62.8% live in urban areas while 10.1% in urban-type settlements and 25% in rural areas. Observations with missing values include 47 respondents or 2.1% of the sample.

We explore the internal consistency of multiple-item constructs and apply factor analysis for each aforementioned socio-demographic category. Simultaneously, mean, standard deviation and coefficient of variation for each construct are calculated and used in the comparison.

3. One-item vs multiple-item constructs

3.1. An analysis with the aggregate sample

3.1.1. Construct reliability

The results confirm internal consistency and construct validity for all multi-item scales regarding the aggregate sample. Cronbach's alpha is 0.852 for SWLS, 0.735 for life domain scale with 5-item (hereafter "LS 5-item"), and 0.780 for life domain scale with 7-item (hereafter "LS 7-item"). The principal component analysis yields one component solution for all scales. The eigenvalue is 3.164, 2.487 and 3.059, while the per cent of variance explained is 63.3%, 49.7% and 43.7%, respectively. This result means one component solution explains the relationship between items reasonably good. Factor loadings and communalities are also satisfactory (see Table 1).

Table 1. Factor analysis results for the whole sample

	SWLS			LS 5-item		LS 7-item	
	FL	Com.		FL	Com.	FL	Com.
SWLS1	0.858	0.735	LS1	0.701	0.492	0.673	0.453
SWLS2	0.653	0.427	LS2	0.777	0.604	0.704	0.496
SWLS3	0.838	0.703	LS3	0.672	0.452	0.640	0.410
SWLS4	0.754	0.568	LS4	0.640	0.410	0.625	0.390
SWLS5	0.855	0.732	LS5	0.728	0.529	0.732	0.537
			LS6			0.614	0.377
			LS7			0.630	0.397

Note: "FL" and "Com." denote factor loadings and communalities.

Based on factor analysis outcomes, the construct is reliable life satisfaction measures. The next question is how the constructs are correlated with each other.

3.1.2. Correlations between constructs

Results confirm significant bivariate correlations between items within multi-item constructs (available upon request). Table 2 displays bivariate correlation coefficients of life satisfaction scores from various constructs.

Table 2. Correlation between life satisfaction constructs

	SWLS	LS 1-item	LS 5-item	LS 7-item
SWLS	1	0.601**	0.636**	0.617**
LS 1-item	0.601**	1	0.716**	0.741**
LS 5-item	0.636**	0.716**	1	0.954**
LS 7-item	0.617**	0.741**	0.954**	1

** Correlation is significant at the 0.01 level (2-tailed)

All correlation coefficients are positive and statistically significant at 1%, evidence to consider the constructs reliable to measure an individual's happiness. The size of the coefficients is also large enough, all greater than 0.6, which enables us to consider the existence of a "strong" bivariate association. SWLS's correlation coefficient with one-item and life-domain based scales is almost stable, changes within [0.601; 0.636]. On the contrary, the

INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

correlation of the single-item scale is stronger with life domain scales which increases further with the inclusion of two more life domain items. A very strong positive association between 5-item and 7-item life domain scales is expected as the former is within the latter. However, such a strong association also confirms the significance of the remaining two items in happiness research.

3.1.3. Happiness and happiness inequality

Predicting aggregate happiness could be a valuable indicator for public policy officials to have an idea about the population's welfare. From this perspective, an important question is how one-item and multi-item constructs perform differently to predict average happiness in society? Table 3 tabulates key findings to compare happiness and happiness inequality obtained from different constructs. The table also presents each scale's "percentage values" to compare the performance of different constructs. Standard deviation and coefficient of variation (CV) scores quantify the happiness inequality prediction of each construct.

Table 3. Descriptive statistics of happiness indicators in the aggregate sample

	N	Minimum	Maximum	Mean	Std. Deviation	CV
SWLS	2208	5	35	17.77	6.981	0.393
SWLS%	2208	14.28%	100%	50.76%	19.95%	0.393
SWLS1	2208	1	7	3.53	1.810	0.513
SWLS2	2208	1	7	2.94	1.756	0.597
SWLS3	2208	1	7	3.12	1.712	0.549
SWLS4	2208	1	7	4.05	1.745	0.431
SWLS5	2208	1	7	4.13	1.784	0.432
LS 1-item	2199	1	10	6.15	2.278	0.370
LS 1-item%	2199	10%	100%	61.55%	22.78%	0.370
LS 5-item	2176	1	10	5.80	1.853	0.319
LS 5-item%	2176	10%	100%	57.99%	18.53%	0.320
LS 7-item	2176	1	10	6.21	1.739	0.280
LS 7-item%	2176	10%	100%	62.09%	17.40%	0.280
LS1	2176	1	10	6.73	2.366	0.352
LS2	2176	1	10	4.44	2.165	0.488
LS3	2176	1	10	5.46	2.725	0.499
LS4	2176	1	10	6.59	3.101	0.471
LS5	2176	1	10	5.78	2.833	0.490
LS6	2176	1	10	7.58	2.541	0.335
LS7	2176	1	10	6.89	2.719	0.395

Note: Observation number (N) differences are due to missing values in the dataset.

SWLS's average happiness score is 17.77 of 35, which equals nearly 51% - less than the score of remaining constructs: the single-item (6.15 of 10 or 61.55%), 5-item (5.8 of 10 or 58%) and 7-item (6.21 of 10 or 62.1%). Mean scores in percentage enable to make a comparison. SWLS and life domain scales result in not much difference mean happiness prediction with the maximum range of 11 percentage points. SWLS's prediction is 7-11 percentage points less than the remaining constructs. On the contrary, the prediction of the single-item scale is very close to multiple-item life domain scales' outcomes, just around 0.5 percentage points less than the mean score of the 7-item scale.

If we look through the items of SWLS, the least score belongs to "(SWLS2) *the conditions of my life are excellent*". Regarding items of life domain scales, the item with the

least mean score is not surprising: **(LS2)** *satisfaction with the financial situation*. These two facts clarify why happiness research should be integrated into public policy implementation. Maintaining better life standards is and should be a primary goal of public policy and the responsibility of the government to have a “happier society”.

Regarding happiness inequality, standard deviation and CV supports each other. The single-item scale produces the greatest variability or inequality indicator, followed by SWLS. Again, life domain scales outperform the 1-item scale and SWLS. The least variability belongs to the 7-item life domain scale - 17.4%.

Therefore, measuring happiness and happiness inequality could be different due to the employed construct. SWLS could underestimate the mean happiness in a society with a greater dispersion. On the contrary, the single-item scale measures the mean happiness very close to multiple-item life domain scales with large variability, even more than SWLS.

Analysis with the aggregate sample identifies multiple-item life domain scales more accurate measure of life satisfaction in the case of Azerbaijan. Remarkably, the 7-item scale outperforms the remaining ones with relatively lower dispersion. Note that the predicted mean life satisfaction score is not much different than the scores from a 1-item (a 1-10 scale) measure of WWS3 and WWS6 (Haerpfer et al., 2021). The mean life satisfaction score for Azerbaijan is recorded as 5.39 (or 53.9%) and 6.74 (67.4%) in WWS3 (1997) and WWS6 (2011).

Nevertheless, a better comparison requires a comprehensive analysis with disaggregated samples. The question is whether the construct reliability and performance of one-item and multiple-item scales varies in the samples of specific socio-demographic groups. The next section responds to this issue.

3.2. An analysis with disaggregated samples

The aggregate sample has been decomposed by age groups, gender identity, highest educational attainment level, marital status, employment status and residential area. The aforementioned socio-demographic categories cover known primary sources of heterogeneity in the sample frame. Therefore, exploring reliability and comparing the performance of the single-item and multiple-item constructs could provide stronger scientific evidence on corresponding discourse.

3.2.1. Construct reliability

Results confirm the existence of internal consistency for all aforementioned socio-demographic groups (*available upon request*). Cronbach's alpha values are always greater than 0.7. Internal consistency is higher in the SWLS scale followed by 7-item and 5-item life domain scales. Noteworthy to mention that the 5-item scale used in Kang et al. (2020), adding the two items mentioned above, strengthens the internal consistency of the new construct (7-item scale).

Following Kaiser's rule (Kaiser, 1960), principal component analysis yields a one-factor solution for all given socio-demographic categories except for “Age 65-80”. In the case of the corresponding age group, the analysis identifies a one-factor solution for SWLS and 5-item life domain scale and a two-factor solution for “LS 7-item”. However, it should be noted that the number of respondents to this age group is only 57 and the eigenvalue of the second component is just over one. Therefore, we could consider “LS 7-item” scale as a one-factor solution for “Age 65-80”.

Results primarily display enough satisfactory factor loadings for all sub-samples (*available upon request*). Therefore, SWLS and life domain constructs of happiness are also reliable for specific socio-demographic categories. In line with the single-item scale, SWLS, 5-

item, and 7-item life domain scales can be used to measure happiness and happiness inequality in a society.

3.2.2. Correlations between constructs

Bivariate correlation between the constructs presents some valuable practical insights. Regardless of the socio-economic category considered, results (*available upon request*) identify a statistically significant positive correlation between all pairs of the constructs ($p < 0.01$). There are no substantial differences in the magnitude of correlation coefficients by a socio-demographic group.

SWLS's correlation with remaining constructs is around 0.6, primarily within [0.6; 0.7]. In magnitude, SWLS less correlated with other constructs than the bivariate correlation between the remaining three scales. Correlation between the single-item and life domain constructs (5-item and 7-item) is relatively strong, mainly changing within [0.70; 0.75]. The strongest bivariate correlation exists between 5-item and 7-item life domain scales, ranging from 0.947 to 0.962. This is plausible as the former is the first five items of the latter. However, such a very strong correlation also strengthens the need to include added two items to the constructed life domain scale.

3.2.3. Happiness and happiness inequality

To strengthen the findings from the comparison of constructs in the case of the whole sample, Table 4-7 shares valuable information obtained from the analysis with disaggregated samples. A key finding from analysis with the aggregate sample mostly confirmed: SWLS predicts "lower happiness" compared to remaining constructs followed by a 5-item life domain scale. Happiness measures by the single-item and 7-item life domain scales is close to each other. Mostly 7-item scale presents "the highest happiness" while the single-item measure takes this role for 6 out of 19 socio-demographic categories.

However, the comparison would be incomplete without considering dispersion within the constructs. Note that used variability indicators are standard deviation and coefficient of variation (CV), presented in Table 4-7 Annex. As the most used measure of dispersion or happiness inequality, standard deviation scores of each construct present enough evidence to compare the accuracy of happiness predictions for each socio-demographic group. The standard deviation of happiness prediction in percentage makes the comparison possible. The exciting finding is that the single-item construct yields the greatest variability followed by SWLS in all cases. Though happiness prediction of "LS 1-item" is close to life domain scales, its variability is even higher than SWLS, making its prediction less accurate. Instead, the 7-item life domain scale maintains its performance as a "better measure" with the least dispersion. Taking CV as a reference measure further strengthens the result. Although SWLS and the single-item constructs of happiness interchangeable shares the dominance in "variability ranking", the 7-item life domain scale still preserves its position to have the least dispersion according to CV values. Overall, there is consistency on happiness inequality measurement, indifferent to the aforementioned socio-demographic categories.

To review further the reliability of happiness predictions, a comparison between complimentary socio-demographic groups can be a useful reference. Happiness by population age groups partially displays "a U-shaped curve" (Table 4). Mean happiness is higher among youth (age 17-34), diminishes at middle age (age 35-49) group and turns up towards the older age groups. However, the range is not so large.

Regarding male-female happiness difference, SWLS and 1-item constructs identify females as happier while life domain scales result in the opposite (Table 5). However, the gender happiness gap is always around 2-3 percentage points, which would mean no significant difference. Note that this is a mean group difference without controlling for the effects of potential covariates. On the contrary, all constructs display increasing happiness towards higher educational attainment levels. The range is also quite close: 6.5% in SWLS, 5.1% on the 1-item scale, 5.9% on the 5-item scale, and 4.9% on the 7-item scale. Existing literature also supports a positive return to education.

The constructs commonly agree on greater happiness of married people than unmarried ones in Azerbaijan. However, the range is very tight – just 0.5 percentage points on the 1-item scale and a maximum of 2 percentage points on the 7-item scale. This result can be misleading without considering any other factors. However, it supports the consistency of various happiness measurement scales.

Regarding categorization due to employment status, happiness predictions of the single-item and multiple-item constructs are in the same direction. All scales identify employed people as “the happiest” and unemployed individuals to be the least satisfied with life. Life satisfaction of students, homemakers and retired people are closer to the employed group. The happiness difference between employed people and those not in the labor force is only 0.1-2.5 percentage points. On the contrary, unemployed people are substantially less satisfied with life (10.6-12.8 percentage points) compared to employed individuals, on average. Current literature contains enough evidence about unemployed people being less happy than employed ones (Aliyev, 2021).

The single-item and multiple-item constructs of life satisfaction also yield the same conclusion about comparing residential area-related happiness. More precisely, individuals living in the capital area (Baku city or Absheron-Khizi region) is slightly (0.7-2.3 percentage point) more satisfied with life than those living in the remaining territory of the country. Consistency of constructs remains when urban-rural happiness comparison is considered. All constructs represent slightly more happiness in urban areas. Surprisingly, happiness in rural areas is more than the same indicator in urban-type settlements. However, the gaps are negligible.

4. Discussion and concluding remarks

There has been a substantial increase in happiness and inequality related studies in the literature. Re-considering that changing happiness in a society should be reviewed as a “success” indicator of public policy as its ultimate goal (Oishi and Diener, 2014). Recent studies on perspectives of using happiness in public policy decision-making processes (see Aknin and Whillians (2020), Rojas (2020), Stutzer (2020), Aliyev (2021), Maruti (2021), and Lee (2022), among others) requires further attention to measuring happiness and happiness inequality. In this context, a comparison of one-item and multiple-item constructs of happiness in a single survey could substantially contribute to public policy discourse in happiness research. A recent national survey in Azerbaijan (ASERC, 2021) simultaneously measures the life satisfaction of individuals with a single-item (on a 1-10 scale) and multiple-item constructs (SWLS, 5-item and 7-item life domain scales). Transformation to percentage makes the comparison possible and practically useful.

Overall, reliability check and factor analysis confirm the validity of SWLS and multiple-item life domain constructs to measure happiness and happiness inequality for all given socio-demographic groups. There is a consistency in happiness and happiness inequality predictions for different population groups. In the case of Azerbaijan, SWLS’s happiness prediction is

lower than the remaining constructs, followed by the 5-item life domain scale and the single-item construct. Research identifies the 7-item life domain scale as more accurate with its higher prediction and lowest dispersion. Though the single-item construct's happiness prediction is close to the 7-item scale, its dispersion is even greater than SWLS. Adding new items to the 5-item scale by Kang et al. (2020) increases the scale's precision and predicted happiness and decreases the gap with the single-item scale.

Table 8 reviews all happiness predictions by the single-item and multiple-item constructs. The results are consistent for given socio-demographic groups as well. SWLS's happiness prediction is $\mp 2.9\%$ around the mean (50.6%) of the predictions for the aforementioned socio-demographic groups. Simultaneously, the mean happiness prediction by the single-item construct, 5-item and 7-item life domain scales are 61% ($\mp 2.4\%$), 57.3% ($\mp 2.8\%$) and 61.4% ($\mp 2.4\%$), respectively. Note that the mean of predictions by each socio-demographic category is very close to the happiness prediction from the whole sample. Unemployed individuals who are substantially less happy than others are the exception. The employed–unemployed happiness gap is 10 percentage points against the latter group.

The difference in happiness predictions by the single-item and multiple-item constructs is informative. SWLS's prediction is under the happiness prediction of the remaining constructs for all aforementioned socio-economic categories. However, the “almost equality” of the differences for each corresponding socio-demographic group is very attractive (see Table 8 Annex). Despite some exceptions observed, the differences are mainly within a tight range.

The differences between predictions of the single-item construct and multiple-item life domain scales carry valuable information. If the life domain scale contains only five items, the single-item scale's prediction is consistently higher within a [2.1%; 7.7%] range. Adding “*perceived personal safety*” and “*perceived freedom of deciding own life*” to the life domain scale changes the situation, increases predicted happiness for all groups, and fills the gap with the single-item construct. The mean predictions of single-item and 7-item life domain constructs are almost equal. However, as mentioned earlier, adding the two items, the happiness of different socio-demographic groups increases unproportionally (last column in Table 8). The predicted happiness difference between the 5-item and 7-item life domain scales ranges within [-5.9%; -3%] against the former scale. Happiness return is the biggest for unemployed people: 5.9%.

Research findings identify the 7-item life domain scale as the better construct to measure happiness and happiness inequality. The performance of the single-item construct is also very close to the 7-item life domain scale. However, even though the mean happiness prediction of both constructs slightly differs, the single-item scale presents a larger dispersion in all cases.

The discourse that happiness research could be used in public policy planning also requires reviewing the life satisfaction constructs differently. A question like “... how satisfied/happy are you...” represents a respondent's overall evaluation. Measuring an individual's life satisfaction on a Cantril's ladder (Cantril, 1965) or a Likert scale is less informative from a public policy perspective. Instead, life domain scales contain items within the public policy targets.

Public opinion about life domains and each item's loading to life satisfaction could extend the perspective of happiness research usage in public policy. For example, the analysis (see Table 4-7) shows that the item taking the lowest mean value for all groups is “LS2: satisfaction with the financial situation”. On the contrary, people report higher satisfaction in terms of perceived personal safety (LS7). Both positive and negative judgements should be feedback for public policy officials.

In this context, the availability of individual subjective judgement data globally can improve the practical usage of happiness-focused empirical studies. Including a set of life

domains in an international survey, such as the new wave of WWS or EVS, can enhance the volume of public policy-focused happiness research.

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INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

Annex

Table 4. Happiness and happiness inequality by population age groups

	Age 17-34			Age 35-49			Age 50-64			Age 65-80		
	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV
SWLS	18.0	6.88	0.38	16.9	6.94	0.41	18.2	7.2	0.40	19.7	7.91	0.40
SWLS%	51.4%	19.7%	0.38	48.2%	19.8%	0.41	52.0%	20.5%	0.39	56.2%	22.6%	0.40
SWLS1	3.54	1.78	0.50	3.39	1.82	0.54	3.66	1.91	0.52	3.89	1.94	0.50
SWLS2	2.86	1.72	0.60	2.89	1.73	0.60	3.28	1.84	0.56	3.74	1.94	0.52
SWLS3	3.20	1.69	0.53	2.90	1.71	0.59	3.12	1.77	0.57	3.54	1.86	0.53
SWLS4	4.16	1.73	0.42	3.79	1.77	0.47	4.12	1.73	0.42	4.32	1.85	0.43
SWLS5	4.24	1.75	0.41	3.92	1.81	0.46	4.02	1.84	0.46	4.18	1.86	0.44
LS 1-item	6.31	2.19	0.35	5.94	2.39	0.40	5.87	2.35	0.40	6.37	2.39	0.38
LS 1-item%	63.1%	21.9%	0.35	59.4%	23.9%	0.40	58.7%	23.5%	0.40	63.8%	23.9%	0.37
LS 5-item	6.0	1.78	0.30	5.49	1.92	0.35	5.61	1.88	0.34	5.57	1.95	0.35
LS 5-item%	60.0%	17.8%	0.30	54.9%	19.3%	0.35	56.1%	18.8%	0.34	55.7%	19.5%	0.35
LS 7-item	6.35	1.68	0.26	5.97	1.82	0.30	6.14	1.77	0.29	6.09	1.83	0.30
LS 7-item%	63.5%	16.8%	0.26	59.7%	18.2%	0.30	61.4%	17.7%	0.29	60.9%	18.3%	0.30
LS1	7.16	2.15	0.30	6.31	2.52	0.40	5.79	2.44	0.42	5.98	2.67	0.45
LS2	4.71	2.12	0.45	4.00	2.13	0.53	4.18	2.18	0.52	4.35	2.24	0.51
LS3	5.54	2.69	0.49	5.13	2.76	0.54	5.85	2.72	0.46	5.98	2.73	0.46
LS4	6.70	3.05	0.46	6.38	3.22	0.50	6.63	3.15	0.48	6.0	2.93	0.49
LS5	5.90	2.78	0.47	5.65	2.89	0.51	5.59	2.29	0.41	5.66	3.01	0.53
LS6	7.57	2.52	0.33	7.56	2.54	0.34	7.72	2.62	0.34	7.56	2.77	0.37
LS7	6.87	2.73	0.40	6.79	2.74	0.40	7.23	2.62	0.36	7.19	2.56	0.36

Table 5. Happiness and happiness inequality by gender identity and educational attainment

	Gender identity						Highest educational attainment level								
	Male			Female			Pre-bachelor			Bachelor			Post-bachelor		
	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV
SWLS	17.0	7.2	0.42	18.4	6.74	0.37	16.5	7.04	0.43	17.9	6.84	0.38	18.8	6.88	0.37
SWLS%	48.5%	20.6%	0.42	52.7%	19.3%	0.37	47.2%	20.1%	0.43	51.3%	19.6%	0.38	53.7%	19.7%	0.37
SWLS1	3.38	1.85	0.55	3.66	1.77	0.48	3.24	1.81	0.56	3.59	1.79	0.50	3.75	1.79	0.48
SWLS2	2.85	1.77	0.62	3.02	1.74	0.58	2.94	1.82	0.62	2.89	1.69	0.58	3.0	1.76	0.59
SWLS3	2.97	1.72	0.58	3.24	1.70	0.52	2.90	1.73	0.60	3.13	1.69	0.54	3.33	1.71	0.51
SWLS4	3.78	1.76	0.47	4.28	1.69	0.39	3.61	1.77	0.49	4.12	1.73	0.42	4.42	1.64	0.37
SWLS5	4.0	1.84	0.46	4.24	1.73	0.41	3.84	1.87	0.49	4.20	1.76	0.42	4.31	1.68	0.39
LS 1-item	6.09	2.22	0.36	6.22	2.32	0.37	5.81	2.41	0.41	6.27	2.28	0.36	6.32	2.07	0.33
LS 1-item%	60.9%	22.2%	0.36	62.2%	23.2%	0.37	58.1%	24.1%	0.41	62.7%	22.7%	0.36	63.2%	20.7%	0.33
LS 5-item	5.91	1.81	0.31	5.72	1.88	0.33	5.41	1.92	0.35	5.94	1.84	0.31	6.0	1.73	0.29
LS 5-item%	59.1%	18.1%	0.31	57.2%	18.8%	0.33	54.1%	19.2%	0.35	59.4%	18.4%	0.31	60.0%	17.3%	0.29
LS 7-item	6.37	1.71	0.27	6.09	1.75	0.29	5.88	1.82	0.31	6.33	1.73	0.27	6.37	1.61	0.25
LS 7-item%	63.7%	17.1%	0.27	60.9%	17.5%	0.29	58.8%	18.2%	0.31	63.3%	17.3%	0.27	63.7%	16.2%	0.25
LS1	6.71	2.41	0.36	6.76	2.32	0.34	6.26	2.60	0.42	6.91	2.26	0.33	6.93	2.19	0.32
LS2	4.28	2.14	0.50	4.57	2.18	0.48	3.84	2.24	0.58	4.55	2.08	0.46	4.91	2.08	0.42
LS3	5.73	2.68	0.47	5.24	2.74	0.52	5.24	2.82	0.54	5.53	2.74	0.50	5.59	2.58	0.46
LS4	7.27	2.86	0.39	6.05	3.17	0.52	6.48	3.16	0.49	6.71	3.06	0.46	6.49	3.09	0.48
LS5	5.55	2.79	0.50	5.97	2.85	0.48	5.22	2.95	0.57	5.98	2.77	0.46	6.07	2.72	0.45
LS6	7.66	2.62	0.34	7.53	2.46	0.33	7.42	2.81	0.38	7.65	2.43	0.32	7.63	2.40	0.31
LS7	7.34	2.51	0.34	6.53	2.82	0.43	6.68	2.92	0.44	6.97	2.67	0.38	6.99	2.57	0.37

INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

Table 6. Happiness and happiness inequality by marital and employment status

	Marital status						Employment status								
	Married			Unmarried			Employed			Unemployed			Not in the labor force		
	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV
SWLS	18.2	7.12	0.39	17.3	6.79	0.39	18.4	6.79	0.37	14.7	6.61	0.45	18.4	7.13	0.39
SWLS%	51.9%	20.4%	0.39	49.5%	19.4%	0.39	52.7%	19.4%	0.37	42.0%	18.9%	0.45	52.6%	20.4%	0.39
SWLS1	3.66	1.86	0.51	3.41	1.75	0.51	3.69	1.79	0.49	2.88	1.72	0.60	3.64	1.84	0.51
SWLS2	3.08	1.77	0.57	2.79	1.72	0.62	2.98	1.73	0.58	2.66	1.76	0.66	3.07	1.8	0.59
SWLS3	3.14	1.76	0.56	3.1	1.66	0.54	3.24	1.69	0.52	2.46	1.57	0.64	3.31	1.76	0.53
SWLS4	4.11	1.74	0.42	3.99	1.75	0.44	4.23	1.69	0.40	3.31	1.77	0.53	4.15	1.71	0.41
SWLS5	4.19	1.78	0.42	4.05	1.78	0.44	4.3	1.71	0.40	3.4	1.86	0.55	4.22	1.76	0.42
LS 1-item	6.18	2.34	0.38	6.13	2.21	0.36	6.34	2.14	0.34	5.41	2.57	0.48	6.25	2.29	0.37
LS 1-item%	61.8%	23.4%	0.38	61.3%	22.1%	0.36	63.4%	21.4%	0.34	54.1%	25.7%	0.48	62.5%	22.9%	0.37
LS 5-item	5.91	1.82	0.31	5.68	1.89	0.33	6.07	1.73	0.29	4.79	1.89	0.39	5.89	1.88	0.32
LS 5-item%	59.1%	18.2%	0.31	56.8%	18.9%	0.33	60.7%	17.3%	0.29	47.9%	18.9%	0.39	58.9%	18.8%	0.32
LS 7-item	6.31	1.73	0.27	6.11	1.74	0.28	6.46	1.64	0.25	5.38	1.8	0.33	6.19	1.75	0.28
LS 7-item%	63.1%	17.3%	0.27	61.1%	17.4%	0.28	64.6%	16.4%	0.25	53.8%	18.0%	0.33	61.9%	17.5%	0.28
LS1	6.48	2.47	0.38	6.99	2.21	0.32	6.86	2.29	0.33	6.24	2.56	0.41	6.76	2.34	0.35
LS2	4.33	2.15	0.50	4.55	2.17	0.48	4.7	2.06	0.44	3.4	2.04	0.60	4.59	2.3	0.50
LS3	5.33	2.72	0.51	5.38	2.73	0.51	5.71	2.67	0.47	4.6	2.76	0.60	5.46	2.73	0.50
LS4	7.51	2.66	0.35	5.61	3.23	0.58	6.8	3.02	0.44	5.62	3.34	0.59	6.8	2.97	0.44
LS5	5.72	2.86	0.50	5.85	2.8	0.48	6.27	2.65	0.42	4.08	2.74	0.67	5.83	2.87	0.49
LS6	7.71	2.52	0.33	7.45	2.54	0.34	7.72	2.44	0.32	7.31	2.78	0.38	7.38	2.58	0.35
LS7	6.87	2.7	0.39	6.91	2.74	0.40	7.16	2.56	0.36	6.42	3.01	0.47	6.49	2.81	0.43

INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

Table 7. Happiness and happiness inequality by residential area

	Capital vs regions						Urban vs rural								
	Capital			Regions			Urban			Urban-type settlement			Rural		
	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV	Mean	Std. Dev.	CV
SWLS	18	6.87	0.38	17.3	7.09	0.41	18	6.88	0.38	17.3	6.94	0.40	17.4	7.12	0.41
SWLS%	51.4%	19.6%	0.38	49.5%	20.3%	0.41	51.5%	19.7%	0.38	49.3%	19.8%	0.40	49.6%	20.4%	0.41
SWLS1	3.6	1.79	0.50	3.42	1.84	0.54	3.6	1.78	0.49	3.38	1.79	0.53	3.43	1.88	0.55
SWLS2	2.94	1.73	0.59	2.94	1.79	0.61	2.96	1.74	0.59	2.91	1.76	0.60	2.91	1.77	0.61
SWLS3	3.18	1.69	0.53	2.99	1.73	0.58	3.18	1.71	0.54	3.01	1.73	0.57	3	1.72	0.57
SWLS4	4.11	1.71	0.42	3.95	1.79	0.45	4.11	1.71	0.42	3.91	1.81	0.46	3.96	1.79	0.45
SWLS5	4.17	1.75	0.42	4.04	1.84	0.46	4.17	1.77	0.42	4.05	1.79	0.44	4.05	1.81	0.45
LS 1-item	6.23	2.27	0.36	6	2.29	0.38	6.28	2.24	0.36	5.86	2.41	0.41	5.94	2.28	0.38
LS 1-item%	62.3%	22.7%	0.36	60.0%	22.9%	0.38	62.8%	22.4%	0.36	58.6%	24.1%	0.41	59.4%	22.8%	0.38
LS 5-item	5.84	1.87	0.32	5.72	1.83	0.32	5.86	1.84	0.31	5.6	1.89	0.34	5.73	1.86	0.32
LS 5-item%	58.4%	18.7%	0.32	57.2%	18.3%	0.32	58.6%	18.4%	0.31	56.0%	18.9%	0.34	57.3%	18.6%	0.32
LS 7-item	6.23	1.75	0.28	6.16	1.73	0.28	6.27	1.71	0.27	5.96	1.84	0.31	6.15	1.77	0.29
LS 7-item%	62.3%	17.5%	0.28	61.6%	17.3%	0.28	62.7%	17.1%	0.27	59.6%	18.4%	0.31	61.5%	17.7%	0.29
LS1	6.84	2.32	0.34	6.54	2.44	0.37	6.83	2.34	0.34	6.62	2.45	0.37	6.51	2.4	0.37
LS2	4.6	2.17	0.47	4.15	2.11	0.51	4.57	2.18	0.48	4.27	2.1	0.49	4.18	2.1	0.50
LS3	5.43	2.77	0.51	5.49	2.64	0.48	5.48	2.73	0.50	5.02	2.69	0.54	5.55	2.72	0.49
LS4	6.5	3.11	0.48	6.71	3.08	0.46	6.53	3.10	0.47	6.52	3.08	0.47	6.73	3.11	0.46
LS5	5.82	2.77	0.48	5.71	2.92	0.51	5.86	2.79	0.48	5.57	2.94	0.53	5.68	2.86	0.50
LS6	7.46	2.52	0.34	7.78	2.54	0.33	7.6	2.48	0.33	7.2	2.72	0.38	7.72	2.56	0.33
LS7	6.96	2.69	0.39	6.78	2.77	0.41	7.03	2.67	0.38	6.55	2.88	0.44	6.71	2.75	0.41

INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

Table 8. A review of happiness predictions (in %): How different?

	SWLS	LS 1-item	LS 5-item	LS 7-item	<i>Differences</i>					
	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>a – b</i>	<i>a – c</i>	<i>a – d</i>	<i>b – c</i>	<i>b – d</i>	<i>c – d</i>
Whole sample	50.8	61.6	58.0	62.1	-10.8	-7.2	-11.3	3.6	-0.5	-4.1
Age groups										
Age 17-34	51.4	63.1	60.0	63.5	-11.7	-8.6	-12.1	3.1	-0.4	-3.5
Age 35-49	48.2	59.4	54.9	59.7	-11.2	-6.7	-11.5	4.5	-0.3	-4.8
Age 50-64	52.0	58.7	56.1	61.4	-6.7	-4.1	-9.4	2.6	-2.7	-5.3
Age 65-80	56.2	63.8	56.1	61.4	-7.6	0.1	-5.2	7.7	2.4	-5.3
Gender identity										
Male	48.5	60.9	59.1	63.7	-12.4	-10.6	-15.2	1.8	-2.8	-4.6
Female	52.7	62.2	57.2	60.9	-9.5	-4.5	-8.2	5.0	1.3	-3.7
Educational attainment										
Pre-bachelor	47.2	58.1	54.1	58.8	-10.9	-6.9	-11.6	4.0	-0.7	-4.7
Bachelor	51.3	62.7	59.4	63.3	-11.4	-8.1	-12.0	3.3	-0.6	-3.9
Post-bachelor	53.7	63.2	60.0	63.7	-9.5	-6.3	-10.0	3.2	-0.5	-3.7
Marital status										
Married	51.9	61.8	59.1	63.1	-9.9	-7.2	-11.2	2.7	-1.3	-4.0
Unmarried	49.5	61.3	56.8	61.1	-11.8	-7.3	-11.6	4.5	0.2	-4.3
Employment status										
Employed	52.7	63.4	60.7	64.6	-10.7	-8.0	-11.9	2.7	-1.2	-3.9
Unemployed	42.0	54.1	47.9	53.8	-12.1	-5.9	-11.8	6.2	0.3	-5.9
Not in labor force	52.6	62.5	58.9	61.9	-9.9	-6.3	-9.3	3.6	0.6	-3.0
Residential area										
Capital	51.4	62.3	58.4	62.3	-10.9	-7.0	-10.9	3.9	0.0	-3.9
Regions	49.5	60.0	57.2	61.6	-10.5	-7.7	-12.1	2.8	-1.6	-4.4
Urban	51.5	62.8	58.6	62.7	-11.3	-7.1	-11.2	4.2	0.1	-4.1
Urban like settlement	49.3	58.6	56.0	59.6	-9.3	-6.7	-10.3	2.6	-1.0	-3.6
Rural	49.6	59.4	57.3	61.5	-9.8	-7.7	-11.9	2.1	-2.1	-4.2
MEAN	50.6	61.0	57.3	61.5	-10.4	-6.7	-10.9	3.7	-0.5	-4.2
STANDARD DEV.	2.9	2.4	2.8	2.4	1.4	2.1	2.0	1.4	1.3	0.7