Journal of Happiness Studies (2024) 25:93
https://doi.org/10.1007/s10902-024-00778-z

RESEARCH PAPER

Inequalities and Social Capital as Factors of Subjective Well-Being: Case Study from Western Province, Zambia

Martin Schlossarek[1] · **Jaromír Harmáček**[1] · **Aneta Seidlová**[2,3] · **Lenka Suchá**[2]

Accepted: 5 June 2024

Abstract
Understanding well-being's complexities, including its subjective and context-dependent nature, is crucial for informing policy decisions and development interventions aimed at enhancing quality of life and reducing poverty. Unfortunately, subjective well-being (SWB) research, particularly in the context of Global South, has received relatively less attention, despite its fundamental importance in the field of human development. This research aims to contribute to the discussion on SWB by examining its association with diverse forms of inequalities and deprivations. Specifically, we investigate the impact of these deprivations, both at the societal and intra-household levels, on SWB among the rural population of the Western Province in Zambia. The study underscores low levels of SWB in the surveyed area. It reveals the impact of intra-household inequalities, demonstrating that the presence of a more educated individual in the household positively affects well-being. On the other hand, having responsibilities related to decision-making power within households diminishes SWB, probably due to related stress and anxiety. As expected, limited access to resources in the household also negatively affects SWB. Our main finding in the realm of societal inequalities revolves around the assertion that fostering social capital through active participation in formal or informal groups significantly enhances SWB. Empowering individuals through education and knowledge sharing, and promoting inclusivity and diversity in social interactions are key strategies that policymakers can adopt to enhance SWB in the Muoyo-Mukukutu area and similar regions.

Keywords Subjective well-being · Intra-household inequalities · Deprivations · Social capital · Human development

✉ Martin Schlossarek
martin.schlossarek@upol.cz

[1] Department of Development and Environmental Studies, Palacký University Olomouc, 17. Listopadu 12, 771 46 Olomouc, Czech Republic

[2] Global Change Research Institute of the Czech Academy of Sciences, Bělidla 986/4a, 603 00 Brno, Czech Republic

[3] Department of Social Geography and Regional Development, Faculty of Science, Charles University, Albertov 6, 12843 Prague, Czech Republic

Published online: 02 September 2024

1 Introduction

"*Understanding and improving well-being requires a sound evidence base that can inform policymakers and citizens alike where, when, and for whom life is getting better*" (OECD, 2013:3). This quote from the introduction to OECD's "Guidelines for measuring subjective well-being" illustrates the increasing importance of well-being among policymakers. There is a substantive body of literature identifying common factors of well-being. A growing strand of well-being research also recognizes subjective and contextual dimensions (Conceição & Bandura, 2008; Diener et al., 2018) by acknowledging that meaning and perceptions of the good life can vary across individuals and societies, and in a particular socio-cultural context.

The basic distinction relating to our study is whether well-being is best measured through *objective* measures (i.e. directly observed and commonly accepted indicators of welfare) or through *subjective* perceptions of individuals (Conceição & Bandura, 2008). In this paper, we focus on *subjective* well-being (SWB), i.e. how individuals feel about their own well-being. While SWB has been studied extensively in the Global North, the factors influencing SWB in the Global South (and specifically in Sub-Saharan Africa) have received a comparatively lower share of attention (Addai et al., 2014; Diener et al., 2018). This is unfortunate, given the recognized importance of SWB in human development (Ketu, 2023; Kulkarni et al., 2023), and its subsequent relevance for any policy and development intervention striving to reduce poverty and improve the quality of life (Beauchamp et al., 2018; Gough et al., 2007).

We respond to this gap by expanding recent research on factors influential to SWB on the micro-level in different contexts of the Global South (e.g., Huang et al., 2024; Pontarollo et al., 2020; Shams, 2014) through a case study of Western province, Zambia. We do so by (1) complex conceptualisation of SWB factors, (2) highlighting the links between SWB and different forms of inequality and deprivation at the household and community levels, and by (3) contributing to the existing empirical evidence on SWB specifically for Zambia.

To our knowledge, SWB in Zambia has been addressed in two studies so far (Holder et al., 2016; Phiri & Abebe, 2016). Holder et al. (2016) assessed how religiousness and spirituality influence SWB among children and adolescents. They found spirituality to be a strong predictor of higher life satisfaction among children. Phiri and Abebe (2016) conducted a qualitative case study of poverty in the Eastern Province of Zambia, with SWB forming only a part of the addressed dimension. Their findings highlight important contextual and relational factors influencing well-being. However, both studies have addressed only some aspects of well-being in children and adolescents.

Our paper examines the factors of SWB among inhabitants ($N=411$) from rural areas of Zambia's Western Province (Mongu district). We are particularly interested in linking SWB with different forms of inequality and related deprivation. Inequality has become a prominent concern in the fields of economics and development, evident from the growing body of academic studies and literature addressing this issue (see, e.g., Atkinson, 2015; Milanovic, 2016; Scheidel, 2017; Wilkinson & Pickett, 2018; Wienk et al., 2022). The increased significance of inequality has also been recognisedby the UN's Target 10.1 of

the Sustainable Development Goals,[1] making within-country inequality goals part of the global development policy agenda for the first time.

We adopt a broader approach to inequality by focusing on its multiple dimensions (i.e., not only income or assets inequality). Moreover, we also work with intra-household inequalities which are often neglected in empirical studies (Chiappori & Meghir, 2015) due to the lack of data at the individual level. Therefore, we aim to address the main research question of whether and how intra-household inequalities (deprivations) and inequalities in social capital (varying social networks) relate to SWB.

The rest of the paper is organized as follows. In the next section, we conceptualize potential determinants of SWB, drawing upon insights from the existing literature. Following this, we describe the data, variables and methods used to explain SWB in our analysis. In the results section, we summarize the main findings, followed by a discussion of their implications, including potential policy recommendations. Finally, the concluding section offers a summary of our findings and suggests avenues for future research.

2 Theoretical Framework

2.1 Conceptualization of Subjective Well-Being

There are various concepts of well-being. The main difference lies in the concepts building on subjective versus objective approaches. Subjective indicators of well-being are based on a person's own experiences and evaluations. Measures of subjective well-being include a person's assessment of their life, feelings or emotional states, and sense of meaning and purpose in life (see OECD, 2013; Clark et al., 2018). The objective indicators for well-being attempt to reflect measurable characteristics of the phenomenon that are independent of people's evaluations. However, the construction of all indicators, including those measuring objective well-being, is influenced by the subjectivity of their creators, who make various normative decisions (such as which dimensions to include, and what weights to assign).

In fact, the objective and subjective approaches to measuring well-being are interrelated. The most notable indicator of objective well-being, the Human Development Index, builds on the capability approach. From its perspective, well-being is about capabilities to achieve things and way of life people have a reason to value (Sen, 1993). To put it differently, this conceptualization of objective well-being includes the various capabilities and their functions that result, among other things, in subjective well-being (Clark, 2005;). Conversely, when respondents are asked about subjective well-being (for example, life satisfaction), they are likely to consider factors such as their living standard or health, i.e., traditional dimensions of objective well-being. This is reflected by White (2010:162), who argues that "well-being emerges in the interplay of 'objective'—that is, externally observable and independently verifiable aspects of people's circumstances, and their 'subjective' perceptions and assessments of these".

In this paper, we acknowledge the interconnectedness of subjective and objective-well being. Subjective evaluation usually includes one or more of the following three dimensions: (a) overall reflection on one's life and related achievements (life satisfaction);

[1] By 2030 progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.

(b) affect—feelings and emotions (happiness, sadness, anger); c) eudaimonia—evaluation of meaning and purpose in life. This study's dependent variable of SWB is measured through overall life satisfaction. Although eliciting life satisfaction may be impacted by reliability issues, it is an established approach to assessing well-being and predicting future life choices (Kahneman & Krueger, 2006). To account for the close relationship between subjective and objective well-being, we include traditional dimensions of objective well-being as independent variables.

2.2 Factors Influencing SWB

The existing body of research on SWB suggests that it is influenced by a combination of individual internal and external determinants. Diener et al., (2018:255) distinguish between three main groups of theories aiming to explain different levels of SWB: (1) biological and genetic traits theories, (2) cognitive explanations, and (3) satisfaction with achieving goals and needs. Overall, a large part of SWB or life satisfaction can be explained by the former two groups of determinants. Nonetheless, there are arguably important context-dependent root factors such as living standards, sense of freedom, and different forms of inequality, that explain variance in SWB levels across and within societies, mainly by affecting the satisfaction with achieving goals and needs (Conceição & Bandura, 2008; Cordero et al., 2021). Therefore, the paper focuses on exploration of the third determinant and its associated root factors.

Some of the most prominent root factors influencing SWB include basic dimensions of objective well-being such as financial and material conditions, education level, and health (Elgar et al., 2011; Howell & Howell, 2008; Ngamaba et al., 2020; Voukelatou et al., 2021). The relationship between income and SWB has been addressed by Mentzakis and Moro (2009), who found that increasing absolute income levels improves SWB, though only up to a certain threshold and less than relative income levels (more recently e.g. Reyes-García et al., 2016). Higher levels of education tend to enhance SWB indirectly through higher income and improved health. However, education also often raises aspirations that, when unmet, can negatively impact SWB (Kristoffersen, 2018). While the precise nature of the relationship between living standards, education, and health (and other socioeconomic factors such as age and sex) remains a subject of ongoing debate, these variables consistently emerge as some of the most influential predictors of SWB (e.g. Huang et al., 2024; Kulkarni et al., 2023; Nikolaev, 2018).

Satisfaction with achieving goals and needs is closely related to the matter of achieving aspirations (Ibrahim, 2011) either in one area of life (such as ideal education or job), or in life generally. The latter can be viewed as a complex of multiple aspirations relating to an imagined life (Copestake & Camfield, 2010). In this sense, well-being (or, alternatively, ill-being) could be a result of an aspiration gap, i.e., the difference between the current situation and unfulfiiled desires (Ray 2006), or aspiration failure, i.e., the lack of capability to achieve aspirations and resulting outcomes (Bernard et al., 2011). The aspiration gap can lead to feelings of diminished control or freedom in life. Conversely, it can be argued that a lack of control or freedom can contribute to an inability to fulfill personal desires, thereby perpetuating the aspiration gap.

Inequalities influence satisfaction with achieving goals and needs through two pathways. First, they influence individuals' aspirations. Second, inequalities inherently limit opportunities for those positioned unfavorably in the distribution, such as individuals with poor health, lack of education, or financial resources, thus fostering a sense of deprivation.

Generally, studies on subjective well-being confirm the importance of relative comparisons (and therefore distribution) as there is a consensus that on the national level, wealthier people manifest higher levels of happiness that those on the lower part of the income spectrum At the same time, economists still argue up to what extent increasing a country's average income makes people happier (see, e.g., Stevenson & Wolfers, 2012; Clark et al., 2018). Goff et al. (2018) investigated the relationship between subjective well-being inequality and the average reported level of well-being across over 160 countries, utilizing data from three international surveys, and consistently observed a negative correlation.

While different societies may be similar in terms of specific dimensions of inequality, such as health and income, the overall level of inequality can be amplified by the extent to which these particular dimensions of inequality overlap within a society (Syrovátka & Schlossarek, 2019). Moreover, this notion of overlapping inequality can be applied across various levels of measurement. Arguably, experiencing disadvantage across multiple levels—be it at the national, community, or household level—is more detrimental than facing it in just one or two of those contexts. Due to lack of data, inequality at the household level tends to be neglected (Chiappori & Meghir, 2015; Klasen & Lahoti, 2021). This is unfortunate, as, for example, Banda et al. (2017) have shown that gender inequality within Zambian households has negative implications for women's well-being.

This brings us to the importance of social dimensions of SWB. SWB is inherently social and relational: aspirations and the capability to achieve a good life are forged within socio-cultural norms and relations (Appadurai 2004; Ray, 2006; Leung et al., 2011). Social capital is an important determinant of poverty, SWB, and happiness Sarracino, 2010; Rojas, 2018, Kim et al., 2021). Especially in contexts where inequality is high and the provision of public services and assets is limited, social networks and kinship ties constitute a valuable resource (Elgar et al., 2011; Helliwell et al., 2020). Huang and Fang (2021) suggest (income) inequality may be mitigated by "neighborhood social capital". In the context of Zambia, studies have shown the importance of social capital in livelihood strategies and decision-making (Njuki et al., 2008; van Bastelaer & Leathers, 2006).

In the following section, we describe data collection, variables included in this study, our main hypotheses and data analysis.

3 Data and Methods

3.1 Data Collection

The survey was conducted in the area of Muoyo town and Mukukutu village south of the city of Mongu (Fig. 1). Muoyo was selected to represent a "typical" regional township with comparably good infrastructure, located close to the strategic M10 road, which is surrounded by a cluster of a larger number of settlements that are socio-economically and demographically similar to each other. Mukukutu represents a rural settlement with a high representation of small farmers, poor transport accessibility, and poor infrastructure, located on the edge of a floodplain that is extensively used for the cultivation of irrigation-intensive crops such as rice.

Within the Muoyo-Mukukutu region, defined by the above-mentioned municipalities, stratified sampling was carried out by dividing each of the two municipalities into four geographically defined areas. Next, quotas were set for the representation of age categories, sex, and household heads (versus ordinary household members) for data collection

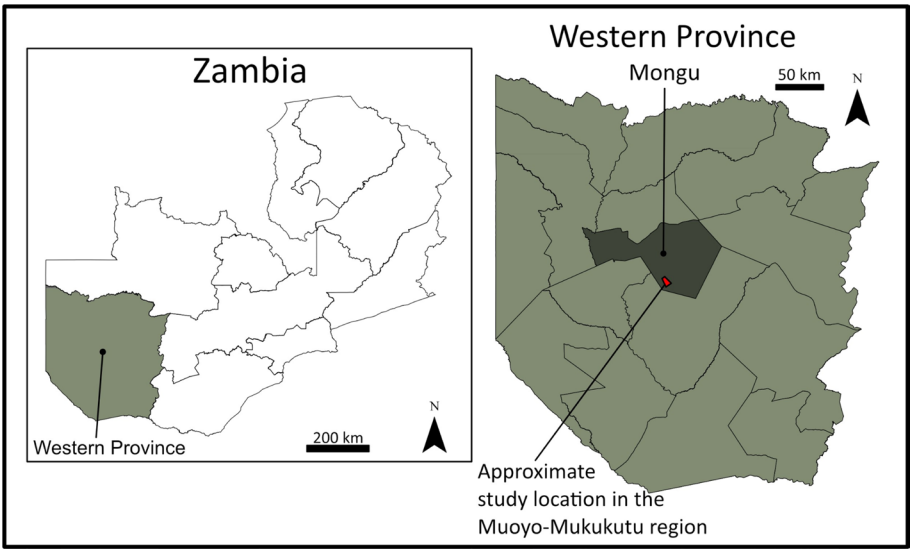

Fig. 1 Location of the survey area

purposes so that the structure of the resulting sample would roughly match available data or estimates of the actual socio-demographic structure of the region. The data enumerators were also given guidelines to construct a sample characterized by qualities similar to those derived from a stratified random sampling procedure. Following data collection, it was observed that all quotas were met except heads of households quota. The expected share of household heads for the Muoyo-Mukukutu area was lower than what we acquired. The discrepancy was probably caused by combination of sampling bias and multiple claims to headship (for more details about the discrepancy and related considerations, consult Schlossarek et al., 2024a, 2024b). Furthermore, certain groups within the population may have been underrepresented or excluded from the study. For example, individuals who were not available during the data collection period or who refused to participate could introduce another sampling bias.

The questionnaire pilot was followed by intensive training of the five data enumerators and then by the actual collection of the data, which took place from 18 to 28 July 2022.

The questionnaire covered a range of topics; notably SWB, human development indicators, various dimensions of social capital, questions covering intra-household inequalities, and the demographic characteristics of the respondents' households (however, we highlight that the unit of the subsequent analysis was the individual, not the household). The data collection resulted in a sample size of 411 respondents, 229 from Muoyo and 182 from Mukukutu. Raw data are available at Schlossarek et al., (2024a, 2024b).

3.2 Variables Used in the Analysis

The aim of the survey was to identify the factors that influence the SWB of the respondents. This was measured using a question in which respondents rated their satisfaction with life on a scale of 1 (worst possible life) to 10 (best possible life). Specifically, we used the

Table 1 Variables used in the model explaining the respondents' SWB

Variable	Variable characteristics	Expected link to SWB
SWB	Measures respondents' satisfaction with their present life on a scale of 1 (worst possible life) to 10 (best possible life)	–
Sex	Two categories: male (1) and female (0)	Positive/ negative
Age	Age of the respondent on the day of their last birthday	Positive/ negative
Living_standard	An asset-based indicator of the standard of living, ranging on a scale of 0–100 (0—the lowest standard of living, 100—the highest standard of living).[a]	Positive
Health	Position of the respondent to the statement "My health is excellent" on a scale of 1–5 (1—strong disagreement, 5—strong agreement)	Positive
Education	The highest level of educational system attended by the respondent (no education—1, primary school—2, lower secondary school—3, upper secondary school—4, university—5)	Positive
Freedom	Question: "… are you satisfied … with your freedom to choose what you do with your life?" 1—yes, 0—no	Positive
Depriv_educ	Two categories: 1—someone in the household has a higher education than the respondent. 0—nobody in the household has a higher education than the respondent	Positive/ negative
Depriv_living	Two categories: 1—the respondent claims that another household member eats better than him/her or owns a phone while the respondent does not. 0—all other cases	Negative
Depriv_power	The variable works with a hypothetical "crop dispute" scenario. The most influential person in the household wants to start growing a new crop, but the respondent disagrees. The respondent could choose out of five options: we will definitely grow it (2), we will grow it (1), I am not sure (0), we will not grow it (−1), we will definitely not grow it (−2)	Positive/ negative
Group_member	Three categories: 2—the respondent is in a leadership position in at least one formally or informally organized group (e.g., savings group, farming group, women's group, etc.). 1—the respondent is an ordinary member of at least one group. 0—no membership	Positive
No_friends	Two categories: 1—the respondent claims that he/she has no "close friend". 0—he/she has at least one	Negative
Friend_car	The respondent was asked if he/she had a friend outside the family or household who could lend him/her a car for half a day (if needed). For those who answered that they probably or definitely did, this variable takes the value of 1. For the others, the variable takes the value of 0	Positive/ negative
Villhead_knows	Two categories: 1—the respondent is personally known by (his/her) village headman. 0—the opposite is true	Positive
Gov_knows	Two categories: 1—the respondent personally knows (at least one) government extension officer. 0—the opposite is true	Positive

[a]The individual items were weighted during aggregation using weights generated by the Multiple Correspondence Analysis method, and then the results were linearly rescaled to a 0–100 scale (we used the same methodology as Němečková et al., 2020). The items were as follows: in the house, there are 1. improved floors, 2. improved walls, 3. an improved roof, 4. an improved toilet; the house has 1. an improved resource for cooking, 2. an improved source of drinking water, 3. water installed, 4. electricity installed; in the household there is or someone owns a working 1. radio, 2. refrigerator, 3. television, 4. mobile phone, 5. bicycle; no one in the household has suffered from a lack of adequate nutrition in the past year. Initially, some other items (e.g., computer ownership, car ownership) were also included in the list. Since no one owned them or the number of owners was close to zero, these items were removed. The "improved" items are defined based on the same taxonomy as used, for example, in the DHS survey (Zambia Statistics Agency et al., 2019)

question measuring evaluation of present life in the Gallup World Poll (Helliwell et al., 2023). A list and description of all variables included in the regression model are given in Table 1.

Explanatory variables include two variables measuring demographic characteristics. These are *sex* and *age*. Other three variables (*living_standard*, *health*, *education*) summarise the three basic dimensions of human development (HD) as reported, for example, in the Human Development Index (UNDP, 2022). To assess the relationship between well-being and aspiration gap, we include a variable addressing respondents' perceived freedom (freedom) to choose what to do with their lives.

Another set of three variables operationalizes various deprivations of the respondent within their households in the areas of education (*depriv_educ*), access to resources (*depriv_living*), and decision-making (*depriv_power*). Next, we list variables approximating the respondent's social capital. Specifically, they focus on the following dimensions: informal relations (*no_friends*), formal relations (*group_member*), the existence of contacts that can arrange a valued service for the respondent (*friend_car*), and contacts to the government representatives (*villhead_knows*, *gov_knows*).

3.3 Research Hypotheses

While the overarching goal of the paper is to identify factors influencing the SWB of the respondents, our hypotheses are focused on the examination of intra-household inequalities and the role of social capital in communities as factors associated with the respondents' SWB. The first set of hypotheses relates to intra-household deprivations. We address not only the respondent's education but also the household's highest-achieved education. When the respondent's educational attainment is comparatively lower, it can have a dual effect: a positive spill-over effect of knowledge and good leadership, thereby augmenting the respondent's well-being, or conversely, an aspiration gap, leading to a detriment in the respondent's well-being.

Similarly, a parallel dichotomy can be discerned in the case of power inequalities within a household. A decision-making role within the household can undoubtedly fulfil an individual's aspirations. On the other hand, it can also precipitate feelings of pressure and stress. Lastly, we hypothesise that limited access to household resources relative to other household members inevitably leads to a diminishment in the well-being of the individual subjected to this disparity. This hypothesis underscores the adverse consequences of intra-household resource imbalances and highlights the significance of material resource allocation in shaping individual welfare.

The second set of hypotheses consists of four assumptions which focus on the interplay between social capital and SWB. Firstly, we assume that membership in organized groups improves social capital and fosters societal inclusivity, consequently leading to an increased level of SWB. Secondly, we hypothesize that an absence of friendships exhibits a negative relationship with SWB. Thirdly, when hypothesizing about knowing people who can facilitate valued services for the respondent, a notable dichotomy emerges. These networks can serve as a substitute for limited resources, potentially mitigating the adverse repercussions of resource constraints and thereby increasing the respondent's well-being. On the other hand, direct interaction with individuals who occupy clearly superior socio-economic positions relative to the respondent may intensify the sense of deprivation stemming from socio-economic disparities. This can diminish the respondent´s SWB. Lastly, we hypothesize that close relationships with statutory and customary government

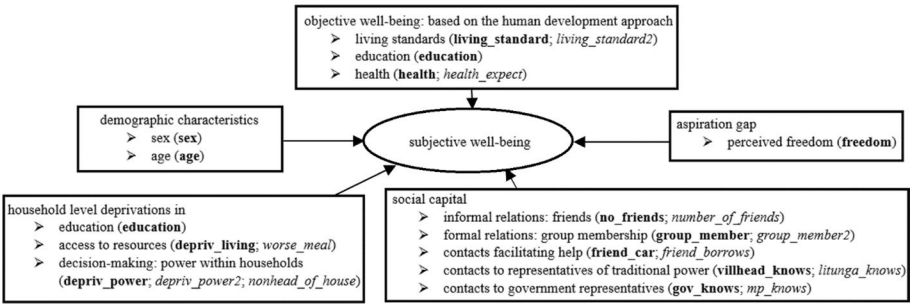

Fig. 2 Visualisation of the analytical approach. *Note*: variables used for the concepts operationalization are in the parentheses. Highlighted in bold are variables used in the main regression models (see Table 3 below). Variables in italics are used in the sensitivity analysis presented in the Appendix

representatives exhibit positive correlations with SWB. This association can be channelled through heightened perceptions of security, increased social prestige leading to an enhanced societal standing, and greater inclusion and influence within the community. Figure 2 shows the analytical approach used to test our hypotheses.[2]

3.4 Methods of Analysis

We begin our quantitative analysis by conducting a thorough examination of descriptive statistics. Next, we explore bilateral relationships between our explanatory variables and SWB. Depending on the characteristics of the explanatory variables, we analyze the relationship either by comparing means of subjective-wellbeing (categorical variables with two categories), Goodman and Kruskal's gamma (ordinary variables with more than two categories), and Pearson correlation coefficient (quantitative variables). For comparisons of means, we report *p*-values of two-tailed Welch's t-tests (unequal variances t-tests); for Goodman and Kruskal's gammas and Pearson correlation coefficients, we report p-values indicating whether they are significantly different from zero.

The key part of the research is based on regression analysis which is used to assess how our explanatory variables are associated with SWB while controlling for possible confounders. Our dependent variable, SWB (or life satisfaction), is measured on a discrete scale going from 1 (worst possible life) to 10 (best possible life). With regard to the nature of our dependent variable, we use the Poisson regression technique which is often used to model discrete count variables.

We perform four regression models. In the first model, we use basic demographic and human development variables, among which we also include freedom of choice. In the second model, we add variables measuring intra-households inequalities (deprivations). Then, we replace deprivations variables by social capital variables in the third model. The fourth model is the final one and it includes all explanatory variables of our interest, i.e. variables

[2] The analytical approach shown in Fig. 2 can be also understood as our ex-post model. It is quite similar to our original (or ex-ante) considerations. Initially, the idea was to employ additional demographic factors (e.g. language) which turned out to be impossible (for example, almost all people shared the same language). Moreover, we intended to focus more on factors related to farming, land tenure, and personal attitudes (e.g., risk aversion) of the respondents. After a careful assessment of the collected data and relationship among variables, we concluded that these ideas are better suited for a separate research analysis.

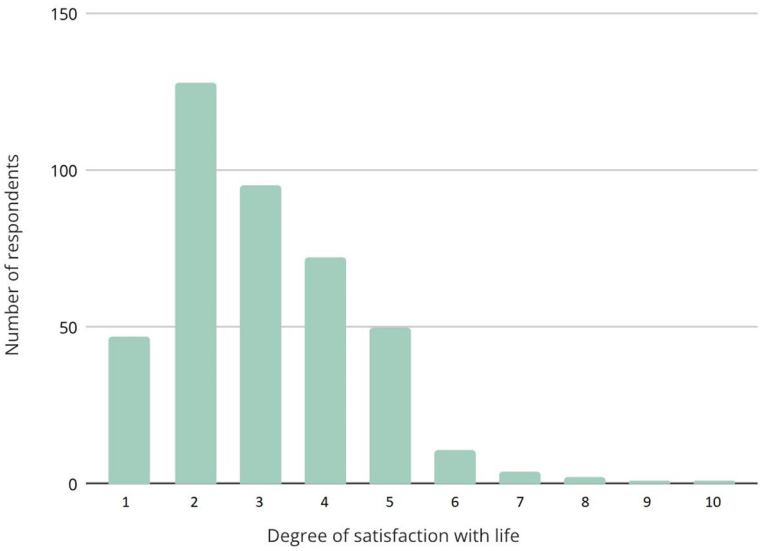

Fig. 3 Subjective well-being of respondents

capturing basic demographics, human development development (including freedom of choice), intra-household inequalities (deprivations), and social capital. All calculations are performed using statistical software Stata (StataCorp, 2017).

4 Results

We first look at the summary statistics of our dependent variable. The respondents' SWB is generally low, with the average score rising just above 3 (3.05) on a scale of 1 (lowest) to 10 (highest), with only one of the 411 respondents choosing the highest score. In contrast, 47 respondents chose the lowest score. As seen in Fig. 3, the answers of most respondents range from 1 to 5.

Descriptive statistics of all variables are presented in Table 2. In the last column of the table, we present bilateral associations of our explanatory variables with SWB. It can also be seen from Table 2 that some variables have more missing data points, which lowers the number of observations entering the bilateral analyses (Table 2), as well as the main regression models (Table 3 below).

We identify statistically significant bilateral associations, with a significance level of at least 10%, between SWB and the following variables: *health*, *education*, *freedom*, *depriv_living*, *depriv_power*, *group_member*, and *friend_car*. As expected, *health*, *education*, *freedom*, *depriv_living*, and *group_member* are positively associated with SWB. *Depriv_power* exhibits a positive relationship, and *friend_car* demonstrates a negative relationship. The remaining associations are statistically insignificant.

For the key part of the research, we construct four regression models as specified earlier to estimate the effects of our explanatory variables on the dependent variable (SWB).

Table 2 Variables—descriptive statistics and bilateral associations with SWB

Quantitative variables

Variable	Mean	Median	SD	Min	Max	*N*	Correlation (r)
SWB	3.05	3	1.48	1	10	411	–
Age	41.95	40	13.85	18	81	411	corr = 0.02 *p* = 0.67
Living_standard	19.68	12.63	19.07	0	100	407	corr = 0.01 *p* = 0.76

Categorical variables with two categories

Variable	Relative frequencies	Average SW for (1)	Average SW for (0)	*N*	Welch's t-test (*p*-value)
Sex	43.1% males (1) 56.9% females (0)	3.11	3.00	411	*p* = 0.45
Freedom	63.6% yes (1) 37.4% no (0)	3.28	2.66	409	*p* = 0.00***
Depriv_educ	42.0% somebody has higher education (1) 58.0% nobody has higher education (0)	3.12	3.04	388	*p* = 0.58
Depriv_living	11.7% somebody eats better or someone has phone while respondent not (1) 88.3% other cases (0)	2.67	3.10	411	*p* = 0.07*
No_friends	9.9% no friends (1) 90.1% at least one friend (0)	2.98	3.05	404	*p* = 0.76
Friend_car	27.8% will get it definitely or probably (1) 72.2% not sure or not get it (0)	2.71	3.18	410	*p* = 0.00***
Villhead_knows	36.7% village headman personally knows respondent (1) 63.3% the opposite is true (0)	3.01	3.11	409	*p* = 0.53
Gov_knows	23.4% some extension government officer personally knows respondent (1) 76.6% the opposite is true (0)	3.00	3.19	410	*p* = 0.34

Ordinary variables with three and more categories

Name of variable	Relativefrequencies	*N*	Goodman and Kruskal's gammas
Health	3.1% (1, strongly disagree), 18.9% (2), 24.74% (3), 28.1% (4), 25.3% (5, strongly agree)	392	Gamma = 0.20 ASE = 0.05**
Education	10.7% (1, no education), 28.3% (2), 29.8% (3), 26.1% (4), 5.1% (5, college or university)	410	Gamma = 0.24 ASE = 0.04**
Depriv_power	54.0% (+2, the respondent´s opinion definitely does not prevail), 22.4% (-1), 14.9% (0), 4.7% (1), 4.0% (-2, the respondent´s opinion definitely prevails)	322	Gamma = 0.16 ASE = 0.07*
Group_member	11.5% leader of at least one group (2), 13.5% ordinary member of at least one group (1), 75.1% non-members (0)	409	Gamma = 0.22 ASE = 0.07*

Table 2 (continued)

*Result is statistically significant at the 10% significance level

**Result is statistically significant at the 5% significance level

***Result is statistically significant at the 1% significance level

Table 3 presents the results of all models and it also shows that the coefficients and significance are stable across the models.[3]

It can be seen in the table that Model 2 and Model 4 have significantly lower numbers of observations. This is a consequence of using the *depriv_power* variable in these two models. However, the lower number of observations itself does not affect the results of the regression models—the findings remain the same also in cases when this variable is excluded[4] or replaced with an alternative variable of a similar meaning.[5]

Table 3 also shows that of the fourteen variables included in the final model (Model 4), ten are statistically significant at least at the 10% significance level (*all else being equal*—that is, controlling for all the other variables in the regression analysis). Regarding the basic demographic characteristics, *sex* is significant, indicating that men tend to express higher satisfaction levels than women. In contrast, *age* has no proven effects.

All three dimensions of human development (*living_standard*, *health*, *education*) are statistically significant (living standard and education at the 1% significance level, health at the 10% significance level) in the expected direction. Better living standards, improved health, and higher education all exert a positive influence on SWB. Similarly, we observe the anticipated relationship with freedom of choice: a higher degree of *freedom* corresponds to increased SWB (5% significance level).

Deprivation within the household pertaining to access to resources (*depriv_living*) reduces SWB (the result is significant at the 10% significance level). The model reveals a positive effect of educational deprivation (*depriv_educ*, significant at the 1% significance level). This suggests that when an individual within the household possesses higher

[3] Additionally, Model 4 underwent a sensitivity analysis within the framework outlined as follows: In every step, one variable from Model 4 was excluded and replaced with an alternative variable (provided its existence) that measured the same underlying concept (while all other variables in the model remain unchanged). This process was repeated until no further alternative variables were available. The outcomes of this process are detailed in the appendix. The model exhibited a high degree of stability throughout the procedure.

[4] When Model 2 is repeated without the *depriv_power* variable, 366 observations enter the estimation, providing results with the same coefficients' signs with even higher statistical significance. The same is true when the *depriv_power* variable is replaced with a similar variable capturing power deprivation within households (*I_am_head_household*). In this case, estimations are based on 365 observations, providing the same signs and a higher statistical significance (the substituting variable itself is, however, statistically insignificant).

[5] When Model 4 is performed without the *depriv_power* variable, 358 observations go into the model. Results remain essentially unchanged, with three minor exceptions: (i) *depriv_living* is now narrowly insignificant (was marginally significant), (ii) *group_member* is now narrowly insignificant (was marginally significant), (iii) *no_friends* is now marginally significant (was narrowly insignificant). If the *depriv_power* variable is replaced in Model 4 with a similar variable capturing power deprivation within households (*I_am_head_household*), estimations are based on 357 observations and the results remain unchanged, with the following minor exceptions: (i) *health* is now significant at 5% level (was significant at 10%), (ii) *depriv_living* is now narrowly insignificant (was marginally significant), (iii) *group_member* is now narrowly insignificant (was marginally significant), (iv) *no_friends* is now marginally significant (was narrowly insignificant). The substituting variable itself is statistically insignificant.

Table 3 The results of the regression analysis for the life_quality variable (SWB)

Name of variable	Model 1	Model 2	Model 3	Model 4
Sex	0.779 (0.046)*	0.098 (0.052)*	0.098 (0.047)**	0.116 (0.052)**
Age	0.001 (0.002)	0.000 (0.001)	0.001 (0.002)	0.001 (0.002)
Living_standard	0.007 (0.001)***	0.008 (0.001)***	0.008 (0.001)***	0.008 (0.001)***
Health	0.050 (0.020)**	0.055 (0.024)**	0.044 (0.021)**	0.044 (0.025)*
Education	0.053 (0.022)**	0.097 (0.025)***	0.042 (0.022)*	0.091 (0.024)***
Freedom	0.117 (0.050)**	0.117 (0.057)**	0.134 (0.051)***	0.119 (0.058)**
Depriv_educ		0.127 (0.055)**		0.152 (0.055)***
Depriv_living		−0.149 (0.082)*		−0.131 (0.079)*
Depriv_power		0.048 (0.023)**		0.042 (0.022)*
Group_member			0.048 (0.032)	0.063 (0.037)*
No_friends			−0.145 (0.076)*	−0.116 (0.086)
Friend_car			−0.247 (0.053)***	−0.197 (0.060)***
Villhead_knows			−0.028 (0.048)	−0.051 (0.060)
Gov_knows			−0.004 (0.057)	0.021 (0.066)
_Const	0.476 (0.126)***	0.234 (0.156)*	0.563 (0.124)***	0.328 (0.149)**
Observations	385	282	377	278

Robust standard errors are reported in parentheses

*Result is statistically significant at the 10% significance level

**Result is statistically significant at the 5% significance level

***Result is statistically significant at the 1% significance level

educational attainment than the respondent, there is an increase in the respondent's SWB, holding all other variables constant. Being not involved in pivotal decisions within the household (*depriv_power*) has a positive effect on SWB in the model (10% significance level).

Social capital built through membership in different formal or informal groups *(group_membership)* positively affects SWB (10% significance level). Knowing people with the capacity to facilitate valued services for the respondent (*friend_car*) have a negative effect on SWB (the result is valid at the 1% significance level). Variable *no_friends* has an expected relation with SWB; however, the result is narrowly insignificant ($p = 0.176$). Close relationships with statutory (*gov_knows*) and customary (*villhead_knows*) government representatives have no proven effects.

5 Discussion

SWB is generally very low in the study area of microregion Muyo-Mukukutu, Western Province of Zambia. In the World Happiness Report 2023 (Helliwell et al., 2023), the most recent score of Zambia at national level is 3.98, which positions the country among the ten least satisfied countries where life satisfaction is reported (the data are available for 137 countries). In the area we surveyed, the score is just 3.05. A similar trend can be seen with freedom of choice: while in the surveyed area only 64% of people are satisfied with the degree of freedom they have, the Zambian national proportion is 79% (Helliwell et al.,

2023). This can be possibly related to the generally lower living standards in the region compared to the rest of the country.[6]

Our model indicates that women have lower SWB even when controlled for other factors. The comparatively lower level of SWB for women may be explained by persistent gender-related norms resulting in disadvantages in terms of access to land, resources or alternative livelihood sources in rural Zambia (Shipekesa & Jayne 2012; Evans, 2018). In our model, age is not significantly associated with SWB. Although the exact relationship between age and SWB is still widely debated (e.g., Biermann et al., 2022), most studies find either a U-shaped or linear effect of age on SWB (Blanchflower, 2021; López Ulloa et al., 2013). The insignificance of age in this case study may have several possible explanations, for example the limited sample size, or unaccounted contextual factors that may influence the impact of age on SWB.

As expected, we observe a positive relationship between objective development indicators and SWB. The basic three dimensions of human development—standard of living, health, and education—are among key determinants of SWB in our study. These results concur with previous research on SWB (Elgar et al., 2011; Howell & Howell, 2008; Kulkarni et al., 2023) and possibly confirm the validity and relevance of standard indices such as the Human Development Index or Multidimensional Poverty Index.

Concerning intra-household inequalities, our hypotheses encompass both positive and negative associations for education and power deprivation. Additionally, we argue that disparities in access to household resources exhibit a negative correlation with SWB. Our results confirm the hypotheses across all three dimensions under examination. Firstly, while it could be assumed that having a lower educational level evokes feelings of deprivation, our study shows the exact opposite. A more educated individual in the household seems to create a positive spillover effect, benefiting other members rather than causing feelings of deprivation. Indeed, better education has been linked to increased SWB through higher income and overall livelihood opportunities (see Kristoffersen, 2018 for a review), which may positively affect the household as a whole.

Secondly, individuals with limited influence over decision-making within the household manifested high-levels of SWB. This is in contrast to findings of Srivastava et al. (2021a). One plausible explanation lies in the reduced sense of pressure and stress that might be associated with decision-making and lower level of responsibility for the well-being of other household members.[7] Consequently, we can argue that the focus should potentially shift from "power deprivation" to highlighting the deprivation stemming from an overwhelming sense of responsibility. The responsibility deprivation logic may also partially explain our results concerning the educational attainment of different household members, as the expectations and pressures related to providing for the household may rise with an individual's education.

[6] We compared household possession shares, including items such as radios, refrigerators, bicycles, and others, within our sample against the data from the national DHS survey (Zambia Statistics Agency et al. 2019). Our findings indicate that all possession shares within our sample are consistently lower than those reported on a nationwide scale.

[7] We note that when we measured influence over decision-making within the household by simply asking respondents whether they were a head of household (assuming that head of household has bigger influence), the statistically significant effect disappeared (see the appendix). This is not surprising since we assume, in line with findings of Srivastava et al. (2021b), that some of the heads of households are just nominal rather than functional heads of households.

Thirdly, and as anticipated, restricted access to household resources exhibits a detrimental impact on SWB. When other individuals within a household are perceived as being materially better off, it leads to feelings of relative deprivation for the less affluent member. Additionally, it evokes a perception of inequity or disadvantage (Bolt & Bird, 2003). These results are in line with previous research addressing the role of intra-household resource distribution and decision-making (e.g., Bárcena-Martín et al., 2020). Interestingly, the results point to the complex (and possibly indirect) effects and mechanisms behind the different overlapping dimensions of inequality discussed in the first part of this paper. Our results show that while deprivation in terms of educational attainment seems to create positive spillovers and enhance paritcipants' SWB, perceived material deprivation negatively affects SWB.

With regard to the social capital and relational aspects, we introduced earlier several hypotheses covering five dimensions in total. We confirm that group membership increases people's SWB. This can be attributed to factors such as a heightened sense of belongingness, augmented social support networks, enhanced interpersonal relationships, a shared sense of purpose and objectives with fellow group members (Elgar et al., 2011; Helliwell et al., 2020; Moose, 2010; Rojas, 2018; Sarraccino, 2010). However, we did not find a statistically significant relationship between the absence of friendships and SWB, which is not in accordance with previous research findings (Helliwell & Putnam, 2004; Leung et al., 2011).

We identify a somewhat surprising relationship between networks providing the capacity to facilitate valued services for the respondent and SWB. It seems that deprivation caused by direct interaction with individuals who occupy clearly superior socio-economic positions relative to the respondent outweighs the positive effect of substituting limited resources by having somebody who is able to provide help when needed.

In terms of formal social relationships, the model indicates no effect of having close relations with statutory (*gov_knows*) and customary (*villhead_knows*) government representatives. Several factors may account for this outcome, including resource limitations and inequality, insufficient political influence, corruption or low trustworthiness of these representatives (see for example Córdova & Layton, 2016; Jovanović, 2016; Tay et al., 2014). The impact of 'knowing someone' depends on the quality and nature of these relationships. When there is low trust or the relationships lack quality, it may lead to a diminished belief in the ability of leaders to enhance the well-being of the respondents (see also Addai et al., 2014). Consequently, having connections with statutory or customary representatives does not automatically translate into direct benefits in terms of one's well-being. Although this finding is somewhat surprising, particularly in light of previous research that examined various facets of social capital and trust, a recent study by Glatz and Schwerdtfeger (2022) suggests that the causal relationship between SWB, social capital, and trust may be more intricate.

Finally, we would like to note a few limitations of this study. Although we believe that the Muoyo-Mukukutu area is not considerably different (in terms of relations between SWB and factors that determine it) from other rural areas of Zambia (and other countries of Sub-Saharan Africa on a similar level of socio-economic development), the results presented in this paper are applicable primarily for the surveyed area. Our results may be subject to influences such as local habits, traditions, or environmental nuances not fully recognized by researchers. We also acknowledge that (potential) presence of sample bias within our dataset poses an inherent risk of unexpected influences on our study outcomes.

We note that the study's cross-sectional design limits the ability to establish causal relationships between variables. Naturally, such a design fails to capture the dynamic

nature of phenomena over time. This temporal limitation restricts us from discerning how variables evolve or interact longitudinally, potentially overlooking important developmental trajectories or fluctuations. In general, cross-sectional studies suffer from compromised validity and generalizability of findings, particularly when investigating complex phenomena such as subjective well-being. A longitudinal study would provide more robust evidence of the relationships between factors analysed in the study and subjective well-being.

6 Conclusion and Recommendations

This paper investigates multiple factors that impact SWB within the Muoyo-Mukukutu region of the Western Province in Zambia. Drawing upon existing well-being literature, our conceptual framework encompasses numerous determinants of SWB, with a specific emphasis on exploring the associations between SWB and various types of inequalities and associated deprivations, notably those pertaining to intra-household dynamics and social capital.

The results highlight the importance of addressing regional disparities in terms of HD and SWB and directing resources and initiatives to uplift disadvantaged areas such as Muoyo-Mukukutu. Our results also confirm the significance of HD dimensions (standard of living, health, and education) in shaping SWB. To this end, our findings support the current trend in development policy aiming at general improvevement of HD, reduction of gender inequalities in all spheres of HD, and other factors that are causing lower SWB among women.

Furthermore, our results suggest that encouraging more educated family members to impart their knowledge and skills to others can amplify the positive spillover effect of education and further contribute to SWB. Concurrently, policies can facilitate opportunities for lifelong learning and skill development within households. Such initiatives can have stronger effects in disadvantaged communities with low levels of education among *all* household members. Our findings support the idea that where resources are *extremely* constrained, focusing on the education of a single household member can be a viable strategy for improving SWB. However, this may reinforce the disadvantaged positions of members already facing various forms of discrimination.

Moreover, acknowledging that restricted decision-making power within households can contribute to improved well-being, policymakers may need to reassess strategies to ensure that empowerment efforts do not inadvertently overwhelm individuals with excessive responsibilities. Empowerment initiatives should target and focus on those people with *very* limited decision-making power within the household. Our result support placing greater emphasis on creating a better environment for sharing and alleviating responsibilities within households that is increasingly becoming a more integral part of empowerment initiatives. Additionally, these interventions can enable household members to make informed decisions regarding fair resource allocation, thereby enhancing SWB, particularly of those with limited access to household resources. Sharing responsibilities and resources may eventually help to reduce or alleviate discriminatory practices such as limited access to land for women.

Finally, policymakers should focus on equitable access to resources and services so that individuals do not feel overly reliant on informal contacts. One effective policy to address this issue could involve continuing and more targeted support of community groups. For instance, the awareness about the benefits of group membership might

be strengthened through clearly articulated benefits for objective and subjective wellbeing hence encouraging individuals to actively seek opportunities to join or establish such groups. However, most importantly, group membership opportunities should be inclusive and accessible to all segments of the population, especially to marginalized and vulnerable groups. We note that to prevent the potential failure of the groups, the promotion of the group establishment and membership should be done in a culturally sensitive manner.

We invite other researchers to delve deeper into the subject of intra-household inequalities. Further investigation is needed to analyze the complex mechanisms behind "power deprivation" and deprivation stemming from an overwhelming sense of responsibility within the household. Since the "head of household" variable did not show a statistically significant effect on SWB, it would be valuable to conduct a more comprehensive examination of the roles and responsibilities assumed by individuals within households. Furthermore, it is important to investigate how power deprivation, roles and responsibilities of household heads, and the distribution of educational benefits within household interact.

Appendix

Appendix: Sensitivity analysis of Model 4

We carried out a sensitivity analysis of Model 4: we performed the model ten times, and each time, one variable from the original model was replaced by an alternative variable (provided its existence) that measured the same underlying concept, while all other variables in the model remain unchanged. The results of the alternative variables are presented in the last column of the table below. The Model 4 exhibited a high degree of stability throughout the sensitivity testing, i.e., results of all other variables remained stable in each of the alternative models.

Original variable	Original variable result	Altern. model to Model 4	Alternative variable	Description	Alternative variable result
Living_standard	0.008 (0.001)***	Model 4.1	Living_ standard2	An asset-based indicator of the standard of living, ranging on a scale of 0–100 (0—the lowest standard of living, 100—the highest standard of living. In this indicator, we used equal weight for every item	0.008 (0.001)***

Original variable	Original variable result	Altern. model to Model 4	Alternative variable	Description	Alternative variable result
Health	0.044 (0.025)*	Model 4.2	Health_expect	Position of the respondent to the statement "I expect my health to get worse." On a scale of 1–5 (1—strong agreement, 5—strong disagreement)	0.030 (0.024)
Depriv_living	− 0.124 (0.079)*	Model 4.3	Worse_meal	Two categories: 1—the respondent claims that another household member eats better than him/her. 0—all other cases	-0.125 (0.085)
Depriv_power	0.042 (0.022)*	Model 4.4	Depriv_power2	The variable works with a hypothetical "crop dispute" scenario. The respondent wants to start growing a new crop, but the most influential person in the household disagrees. The respondent could choose out of five options: we will definitely grow it (− 2), we will grow it (− 1), I am not sure (0), we will not grow it (1), we will definitely not grow it (2)	0–035 (0.020)*

Original variable	Original variable result	Altern. model to Model 4	Alternative variable	Description	Alternative variable result
		Model 4.5	Nonhead_of_house	Two categories: 1—the respondent claims he/she is the head of household. 0—he/she is not the head of household	0.035 (0.048)
Group_member	0.063 (0.037)*	Model 4.6	Group_member2	Two categories: 1—the respondent is a member of at least one group. 0—no membership	0.100 (0.054)*
No_friends	−0.116 (0.086)	Model 4.7	Number_of_friends	The respondent answers the question: "How many close friends do you have these days?" As this variable does not measure "deprivation" (unlike no_friends), the expected link to SWB is opposite to the original variable	0.034 (0.022)
Friend_car	−0.197 (0.060)***	Model 4.8	Friend_borrows	The respondent was asked if he/she had a friend outside the family or household who could lend him/her a small amount of money. For those who answered that they probably or definitely did, this variable takes the value of 1. For the others, the variable takes the value of 0	−0.016 (0.017)

Original variable	Original variable result	Altern. model to Model 4	Alternative variable	Description	Alternative variable result
Villhead_knows	−0.051 (0.060)	Model 4.9	Litunga_knows	Two categories: 1—the respondent is personally known by litunga, i.e. chief of Lozi people who dominate in the area. 0—the opposite is true	0.086 (0.098)
Gov_knows	0.021 (0.066)	Model 4.10	Mp_knows	Two categories: 1—the respondent personally knows (at least one) member of parliament. 0—the opposite is true	0.071 (0.122)

Robust standard errors are reported in parentheses.

*Result is statistically significant at the 10% significance level.

**Result is statistically significant at the 5% significance level.

***Result is statistically significant at the 1% significance level.

Acknowledgements We extend our gratitude to Štěpán Bubák and Munalula Munalula Kingstone for their contributions to the organization and execution of data collection. Additionally, we express our profound appreciation to Lenka Dušková and Zuzana Harmáčková for their erudite insights, which facilitated the refinement of our questionnaire.

Author Contributions Conceptualization: Schlossarek, Harmáček, Seidlová, Suchá; Methodology: Schlossarek, Harmáček; Validation: Schlossarek, Harmáček; Investigation: Schlossarek, Harmáček; Formal analysis: Harmáček, Schlossarek; Writing—original draft: Schlossarek, Seidlová, Harmáček, Suchá; Writing—review and editing: Schlossarek, Suchá, Seidlová, Harmáček; Project administration: Schlossarek; Funding acquisition: Suchá.

Funding Open access publishing supported by the National Technical Library in Prague. The research received funding from the Technology Agency of the Czech Republic, grant no. TL05000162—The role of participatory social-ecological research in strengthening international development cooperation (Coop-4Wellbeing). We acknowledge support from AdAgriF—advanced methods of greenhouse gases emission reduction and sequestration in agriculture and forest landscape for climate change mitigation (CZ.02.01.01/00/22_008/0004635). The authors have no relevant financial or non-financial interests to disclose.

References

Addai, I., Opoku-Agyeman, C., & Amanfu, S. K. (2014). Exploring predictors of subjective well-being in Ghana: A micro-level study. *Journal of Happiness Studies, 15*(4), 869–890. https://doi.org/10.1007/s10902-013-9454-7

Atkinson, A. B. (2015). *Inequality: What can be done?* Harvard University Press.

Banda, P. C., Odimegwu, C. O., Ntoimo, L. F. C., & Muchiri, E. (2017). Women at risk: Gender inequality and maternal health. *Women and Health, 57*(4), 405–429. https://doi.org/10.1080/03630242.2016.1170092

Bárcena-Martín, E., Blázquez, M., & Moro-Egido, A. I. (2020). Intra-household arrangements: How important are they in terms of male-female subjective well-being? *Journal of Economic Psychology, 80*, 102290. https://doi.org/10.1016/j.joep.2020.102290

Beauchamp, E., Woodhouse, E., Clements, T., & Milner-Gulland, E. (2018). "Living a good life": Conceptualizations of well-being in a conservation context in Cambodia. *Ecology and Society, 23*(2), 28. https://doi.org/10.5751/ES-10049-230228

Bernard, T., Dercon, S., & Seyoum Taffesse, A. (2011). Beyond fatalism—An empirical exploration of self-efficacy and aspirations failure in Ethiopia. University of Oxford, Centre for Studies on African Economies, Oxford, UK Working Paper #CSAE WPS/2011-03.

Biermann, P., Bitzer, J., & Gören, E. (2022). The relationship between age and subjective well-being: Estimating within and between effects simultaneously. *The Journal of the Economics of Ageing*. https://doi.org/10.1016/j.jeoa.2021.100366

Blanchflower, D. G. (2021). Is happiness U-shaped everywhere? Age and subjective well-being in 145 countries. *Journal of Population Economics, 34*, 575–624. https://doi.org/10.1007/s00148-020-00797-z

Bolt, V. J., & Bird, K. (2003). The intrahousehold disadvantages framework: A framework for the analysis of intra-household difference and inequality. *Chronic Poverty Research Centre Working* Paper No. 32. https://doi.org/10.2139/ssrn.1754431

Chiappori, P. A., & Meghir, C. (2015). Chapter 16—Intrahousehold inequality. In A. B. Atkinson & F. Bourguignon (Eds.), *Handbook of income distribution* (Vol. 2, pp. 1369–1418). Elsevier. https://doi.org/10.1016/B978-0-444-59429-7.00017-

Clark, A., Flèche, S., Layard, R., Powdthavee, N., & Ward, G. (2018). *The origins of happiness: The science of well-being over the life course*. Princeton University Press.

Clark, D. A. (2005). Sen's capability approach and the many spaces of human well-being. *The Journal of Development Studies, 41*(8), 1339–1368. https://doi.org/10.1080/00220380500186853

Conceição, P., & Bandura, R. (2008). Measuring subjective wellbeing: A summary review of the literature. *United Nations Development Programme Working Paper*.

Copestake, J., & Camfield, L. (2010). Measuring multidimensional aspiration gaps: A means to understanding cultural aspects of poverty. *Development Policy Review, 28*(5), 617–633. https://doi.org/10.1111/j.1467-7679.2010.00501.x

Cordero, J. M., Polo, C., & Salinas-Jiménez, J. (2021). Subjective well-being and heterogeneous contexts: A cross-national study using semi-nonparametric frontier methods. *Journal of Happiness Studies, 22*(2), 867–886. https://doi.org/10.1007/s10902-020-00255-3

Córdova, A., & Layton, M. (2016). When is "delivering the goods" not good enough? How economic disparities in Latin American neighborhoods shape citizen trust in local government. *World Politics, 68*(1), 74–110. https://doi.org/10.1017/S0043887115000441

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

Elgar, F. J., Davis, C. G., Wohl, M. J., Trites, S. J., Zelenski, J. M., & Martin, M. S. (2011). Social capital, health and life satisfaction in 50 countries. *Health and Place, 17*(5), 1044–1053. https://doi.org/10.1016/j.healthplace.2011.06.010

Evans, A. (2018). Cities as catalysts of gendered social change? Reflections from Zambia. *Annals of the American Association of Geographers, 108*(4), 1096–1114. https://doi.org/10.1080/24694452.2017.1417820

Glatz, C., & Schwerdtfeger, A. (2022). Disentangling the causal structure between social trust, institutional trust, and subjective well-being. *Social Indicators Research, 163*, 1323–1348. https://doi.org/10.1007/s11205-022-02914-9

Goff, L., Helliwell, J. F., & Mayraz, G. (2018). The welfare costs of well-being inequality. *Economic Inquiry, 56*(4), 2177–2194. https://doi.org/10.1111/ecin.12582

Gough, I., & McGregor, J. A. (Eds.). (2007). *Wellbeing in developing countries: from theory to research*. Cambridge University Press.

Helliwell, J. F., Layard, R., Sachs, J. D., Aknin, L. B., De Neve, J.-E., & Wang, S. (Eds.). (2023). *World happiness report 2023* (11th ed.). Sustainable Development Solutions Network.

Helliwell, J. F., Layard, R., Sachs, J., & De Neve, J.-E. (Eds.). (2020). *World happiness report 2020*. Sustainable Development Solutions Network.

Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society B: Biological Sciences, 359*(1449), 1435–1446. https://doi.org/10.1098/rstb.2004.1522

Holder, M. D., Coleman, B., Krupa, T., & Krupa, E. (2016). Well-being's relation to religiosity and spirituality in children and adolescents in Zambia. *Journal of Happiness Studies, 17*(3), 1235–1253. https://doi.org/10.1007/s10902-015-9640-x

Howell, R. T., & Howell, C. J. (2008). The relation of economic status to subjective well-being in developing countries: A meta-analysis. *Psychological Bulletin, 134*(4), 536–560. https://doi.org/10.1037/0033-2909.134.4.536

Huang, J., & Fang, Y. (2021). Income inequality, neighbourhood social capital and subjective well-being in China: Exploration of a moderating effect. *International Journal of Environmental Research and Public Health, 18*(13), 13. https://doi.org/10.3390/ijerph18136799

Huang, W., Su, S., & Sun, X. (2024). Social cognition, socioeconomic status and subjective well-being of Chinese migrant workers. *Scientific Reports, 14*, 6550. https://doi.org/10.1038/s41598-024-56710-1

Ibrahim, S. (2011). Poverty, aspirations and well-being: afraid to aspire and unable to reach a better life—voices from Egypt. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1747798

Jovanović, V. (2016). Trust and subjective well-being: The case of Serbia. *Personality and Individual Differences, 98*, 284–288. https://doi.org/10.1016/j.paid.2016.04.061

Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives, 20*(1), 3–24. https://doi.org/10.1257/089533006776526030

Ketu, I. (2023). Infrastructure development and subjective well-being in Africa: Linkages and pathways. *Global Social Welfare*. https://doi.org/10.1007/s40609-023-00322-6

Kim, A. C. H., Ryu, J., Lee, C., Kim, K. M., & Heo, J. (2021). Sport participation and happiness among older adults: A mediating role of social capital. *Journal of Happiness Studies, 22*(4), 1623–1641. https://doi.org/10.1007/s10902-020-00288-8

Klasen, S., & Lahoti, R. (2021). How serious is the neglect of intra-household inequality in multidimensional poverty and inequality analyses? Evidence from India. *Review of Income and Wealth, 67*(3), 705–731. https://doi.org/10.1111/roiw.12491

Kristoffersen, I. (2018). Great expectations: Education and subjective wellbeing. *Journal of Economic Psychology, 66*, 64–78. https://doi.org/10.1016/j.joep.2018.04.005

Kulkarni, V. S., Kulkarni, V. S., Gaiha, R., & Imai, K. S. (2023). Changes in subjective well-being in India. *Social Indicators Resarch, 168*, 607–644. https://doi.org/10.1007/s11205-023-03115-8

Leung, A., Kier, C., Fung, T., Fung, L., & Sproule, R. (2011). Searching for happiness: The importance of social capital. *Journal of Happiness Studies, 12*, 443–462. https://doi.org/10.1007/s10902-010-9208-8

López Ulloa, B. F., Møller, V., & Sousa-Poza, A. (2013). How does subjective well-being evolve with age? A literature review. *Population Ageing, 6*, 227–246. https://doi.org/10.1007/s12062-013-9085-0

Mentzakis, E., & Moro, M. (2009). The poor, the rich and the happy: exploring the link between income and subjective well-being. *The Journal of Socio-Economics, 38*(1), 147–158. https://doi.org/10.1016/j.socec.2008.07.010

Milanovic, B. (2016). *Global Inequality: A new approach for the age of globalization*. Harvard University Press.

Zambia Statistics Agency, Ministry of Health (MOH) Zambia, and ICF. (2019). *Zambia Demographic and Health Survey 2018*. Lusaka, Zambia, and Rockville, Maryland, USA: Zambia Statistics Agency, Ministry of Health, and ICF.

Mosse, D. (2010). A relational approach to durable poverty, inequality and power. *The Journal of Development Studies, 46*(7), 1156–1178. https://doi.org/10.1080/00220388.2010.487095

Němečková, T., Harmáček, J., & Schlossarek, M. (2020). Measuring the middle class in Africa—income versus assets approach. *Afrika Spectrum, 55*(1), 3–32. https://doi.org/10.1177/0002039720916087

Ngamaba, K. H., Armitage, C., Panagioti, M., & Hodkinson, A. (2020). How closely related are financial satisfaction and subjective well-being? Systematic review and meta-analysis. *Journal of Behavioral and Experimental Economics, 85*, 101522. https://doi.org/10.1016/j.socec.2020.101522

Nikolaev, B. (2018). Does higher education increase hedonic and eudaimonic happiness? *Journal of Happiness Studies, 19*, 483–504. https://doi.org/10.1007/s10902-016-9833-y

Njuki, J., Mapila, M., Zingore, S., & Delve, R. (2008). The dynamics of social capital in influencing use of soil management options in the chinyanja triangle of southern Africa. *Ecology and Society*. https://doi.org/10.5751/ES-02539-130209

OECD. (2013). OECD guidelines on measuring subjective well-being. *OECD*. https://doi.org/10.1787/9789264191655-en

Phiri, D. T., & Abebe, T. (2016). Suffering and thriving: Children's perspectives and interpretations of poverty and well-being in rural Zambia. *Childhood, 23*(3), 378–393. https://doi.org/10.1177/0907568216637654

Pontarollo, N., Orellana, M., & Segovia, J. (2020). The determinants of subjective well-being in a developing country: The ecuadorian case. *Journal of Happiness Studies, 21*(8), 3007–3035. https://doi.org/10.1007/s10902-019-00211-w

Ray, D. (2006). Aspirations, poverty and economic change. In A. Banerjee, R. Bénabou, & D. Mookherjee (Eds.), *Understanding Poverty*. London: Oxford University Press.

Reyes-García, V., Babigumira, R., Pyhälä, A., Wunder, S., Zorondo-Rodríguez, F., & Angelsen, A. (2016). Subjective wellbeing and income: Empirical patterns in the rural developing world. *Journal of Happiness Studies, 17*(2), 773–791. https://doi.org/10.1007/s10902-014-9608-2

Rojas, M. (2018). Happiness in Latin America has social foundations. In Helliwell, J. F., Layard, R., & Sachs, J. (Eds.), *World happiness report 2018*, (pp. 115–145).

Sarracino, F. (2010). Social capital and subjective well-being trends: Comparing 11 western European countries. *The Journal of Socio-Economics, 39*(4), 482–517. https://doi.org/10.1016/j.socec.2009.10.010

Scheidel, W. (2017). *The great leveler: violence and the history of inequality from the Stone Age to the twenty-first century*. Princeton University Press.

Schlossarek, M., Harmáček, J., Dušková, L., & Suchá, L. (2024). *Dataset on subjective and objective well-being from the Muoyo-Mukukutu area in Zambia's western province*, Mendeley Data, V2. https://doi.org/10.17632/xkg94kmcjs.1

Schlossarek, M., Harmáček, J., Dušková, L., & Suchá, L. (2024b). Household-level data on well-being, inequalities, and social capital in Western Province, Zambia. *Data in Brief*. https://doi.org/10.1016/j.dib.2024.110504

Sen, A. (1993). Capability and Well-being. In A. Sen & M. Nussbaum (Eds.), *The quality of life* (pp. 30–53). Oxford University Press.

Shams, K. (2014). Determinants of subjective well-being and poverty in rural Pakistan: A micro-level study. *Social Indicators Research, 119*(3), 1755–1773. https://doi.org/10.1007/s11205-013-0571-9

Shipekesa, A. M., & Jayne, T. S. (Eds.). (2012). Gender control and labour input: Who controls the proceeds from staple crop production among Zambian farmers? *IAPRI Working paper*. Indaba Agricultural Policy Research Institute, Lusaka, Zambia. https://doi.org/10.22004/ag.econ.140904

Srivastava, S., Chauhan, S., Muhammad, T., Simon, D. J., Kumar, P., Patel, R., & Singh, S. K. (2021a). Older adults' psychological and subjective well-being as a function of household decision making role: Evidence from cross-sectional survey in India. *Clinical Epidemiology and Global Health, 10*, 100676. https://doi.org/10.1016/j.cegh.2020.100676

Srivastava, S., Singh, S. K., Kumar, M., et al. (2021b). Distinguishing between household headship with and without power and its association with subjective well-being among older adults: An analytical cross-sectional study in India. *BMC Geriatrics, 21*, 304. https://doi.org/10.1186/s12877-021-02256-0

StataCorp. (2017). *Stata Statistical Software: Release 15*; StataCorp LLC: College Station.

Stevenson, B., & Wolfers, J. (2012). Subjective well-being and income: Is there any evidence of satiation? *American Economic Review, 103*(3), 598–604. https://doi.org/10.1257/aer.103.3.598

Syrovátka, M., & Schlossarek, M. (2019). Measuring development with inequality: How (should) aggregate indicators of development account for inequality? *Ecological Economics, 164*, 106320. https://doi.org/10.1016/j.ecolecon.2019.04.032

Tay, L., Herian, M. N., & Diener, E. (2014). Detrimental effects of corruption and subjective well-being: Whether, how, and when. *Social Psychological and Personality Science, 5*(7), 751–759. https://doi.org/10.1177/1948550614528544

UNDP (United Nations Development Programme). (2022). *Human development report 2021–22: Uncertain times, unsettled lives: Shaping our future in a transforming world*. Communications Development Incorporated.

van Bastelaer, T., & Leathers, H. (2006). Trust in lending: Social capital and joint liability seed loans in southern Zambia. *World Development, 34*(10), 1788–1807. https://doi.org/10.1016/j.worlddev.2006.02.007

Voukelatou, V., Gabrielli, L., Miliou, I., Cresci, S., Sharma, R., Tesconi, M., & Pappalardo, L. (2021). Measuring objective and subjective well-being: Dimensions and data sources. *International Journal of Data Science and Analytics, 11*(4), 279–309. https://doi.org/10.1007/s41060-020-00224-2

White, S. C. (2010). Analysing wellbeing: A framework for development practice. *Development in Practice, 20*(2), 158–172. https://doi.org/10.1080/09614520903564199

Wienk, M. N. A., Buttrick, N. R., & Oishi, S. (2022). The social psychology of economic inequality, redistribution, and subjective well-being. *European Review of Social Psychology, 33*(1), 45–80. https://doi.org/10.1080/10463283.2021.1955458

Wilkinson, R., & Pickett, K. (2018). *The inner level: How more equal societies reduce stress, restore sanity and improve everyone's well-being*. Allen Lane.