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ORIGINAL ARTICLE

Food insecurity, subjective well-being and the use of social networking services in Brazil between 2014 and 2018*

André Braz Golgher**

The great Brazilian recession was the most marked drop in economic activity in Brazil between the end of the Second World War and the Covid-19 pandemics. This economic crisis may have long lasting and non-anticipated negative consequences on Food Insecurity (FI) and on Subjective Well-Being (SWB). In addition, SWB is increasing linked to the use of Social Networking Services (SNS). The paper used data from World Value Survey (WVS) and logistic and ordered logistic models to empirically test a few hypotheses. The empirical results showed that: FI is negatively correlated with life satisfaction, but not with happiness; FI is unrelated to SNS use as still few people use them and the population groups that suffer from FI insecurity poorly overlap with the one that use SNS daily; SWB had positive relationships with SNS when the use was not very widespread; Associations between SWB and SNS use became negative as SNS use became more widespread.

Keywords: Food insecurity. Subjective well-being. Social networking services. Happiness. Life satisfaction.

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** Centro de Desenvolvimento e Planejamento Regional, Universidade Federal de Minas Gerais (Cedeplar/UFMG), Belo Horizonte-MG, Brazil (agolgher@gmail.com; https://orcid.org/0000-0001-5884-225X).

Introduction

Contrary to the world's overall trend, hunger increased in some middle-income countries in Latin America, especially those facing low economic growth and relying heavily on the international trade of primary commodities (FAO-UN, 2019). In particular, Food Insecurity (FI) decreased between 2004 and 2013 and increased between 2014 and 2018 in Brazil (Souza *et al.*, 2019).

These variations of FI followed in great part the Brazilian economic performance. Gross Domestic Product (GDP) in Brazil grew over 2 percent annually between 2001 and 2013 (Maia; Menezes, 2014). Nonetheless, this trend reversed due to the Great Brazilian Recession (GBR), which was the most marked drop in economic activity in Brazil between the end of the Second World War and the Covid-19 pandemics. Between 2014 and 2016, GDP changes were negative and around -4% yearly (Oreiro, 2017). Between 2017 and the outbreak of the Covid pandemics, GDP variations were slightly positive, indicating a slow and timid economic recovery.

Economic crisis, such as those associated with the GBR and the Covid-19 pandemics, challenges access to food and essential social services, potentially causing FI increases (FAO-UN, 2019). Besides, financial and food crisis most likely affect the same segments of the population, for instance, the poor and the vulnerable female-headed households. In such circumstances, households adopt coping strategies, reducing overall food intake and switching to cheaper and less preferred types of food, resulting in significant losses in household's quantity and quality of food (Ruel *et al.*, 2010).

Some authors estimated FI in Brazil for similar periods than the one analyzed here. For instance, Felker-Kantor and Wood (2012) and Souza *et al.* (2019) estimated FI in Brazil applying indicators related to Brazilian Household Food Insecurity Measurement Scale (EBIA). Felker-Kantor and Wood (2012) observed that households headed by women and those with young children and adolescents had higher levels of FI. Souza *et al.* (2019) concluded that despite the significant reduction of FI between 2004 and 2013, during the GBR, Brazil suffered from a great deterioration of food security. Moreover, the authors observed that households with lower *per capita* income, lower schooling levels and with more dwellers tended to be more food insecure. On the other hand, households with elderly individuals tended to be more food secure.

More recently, Neri (2022) used data from the Gallup World Poll (GWP) to analyze FI in Brazil. He used the following question "Have there been times in the past 12 months when you did not have enough money to buy the food you or your family needed?" He observed that the proportion of Brazilians who did not have enough money to feed themselves or their families properly rose from 17% in 2014 to 30% in 2019.

FI is highly correlated with indicators of human development, such as poverty, access to drinking water and sanitation services, child mortality and literacy rates (FAO-UN, 2019).

Moreover, economic crisis, such as the GBR, might not only challenge access to food, but may also affect Subjective Well-Being (SWB).

SWB is commonly measured using indicators related to life satisfaction and/or happiness. Questions such as "In general, are you satisfied or unsatisfied with your life?" access the individual's life satisfaction levels. Self-evaluated happiness is measured with questions similar to: "In general, you consider yourself a person who is very happy, quite happy, not very happy or not at all happy." These variables tend to be positively correlated, however, these measures differ in essence and significance (Haller; Hadler, 2006; Medvedev; Landhuis, 2018; Ng, 2015).

Following Ng (2015), happiness can be defined as a global evaluation of the individual's life quality according to cognitive or emotional aspects (Medvedev; Landhuis, 2018; Nemati; Maralani, 2016). It is greatly influenced by positive and close social relationships (Haller; Hadler, 2006) and by experimenting a purpose in life, personal growth, environmental mastery, autonomy, and positive self-esteem (Medvedev; Landhuis, 2018; Nemati; Maralani, 2016).

Life satisfaction is a measure more strongly resulting from the comparison between one' wishes and the present state of the individual's life. Hence, it is likely to be more affected by the objective-material conditions of life and by the perceived discrepancy between aspirations and expectations with actual achievements (Medvedev; Landhuis, 2018; Nemati; Maralani, 2016; Ng, 2015).

The determinants of happiness and life satisfaction have been extensive studied in the past decades, and given that they have been lengthy discussed elsewhere I do not present details here. Many studies addressed the relationship between SWB and factors, such as income, social relationships, attitudes and beliefs towards self/others/life and the wider economic, social and political environment. For a general discussion of the determinants of well-being, see Blanchflower and Oswald (2004), Diener (1984), Dolan *et al.* (2008), and Helliwell (2006). Among the factors associated with happiness and life satisfaction, some were particularly significant in Brazil: marital status, employment status, health levels, importance given to the family, self-determination, religiosity, thick trust and self-evaluated financial situation (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021; Gori-Maia, 2013; Ribeiro, 2015).

A less studied topic is the relationship between FI and SWB. Frongillo *et al.* (2014) used the GWP of 2014 to examine how FI related to life satisfaction. They observed that FI was negative associated with SWB. As controls, they used variables, such as the individual's sex, age, education level and employment status, health levels, social and emotional support, and the household's income, infrastructure, and composition. Similarly, Smith and Wesselbaum (2023) used the GWP of 2014 and 2017 and also observed that FI was negatively associated with life satisfaction. However, they verified stronger associations in high-income countries compared to low-income countries and emphasized that their findings highlighted the negative consequences of relative material deprivation, especially

in settings where FI is less common and potentially more stigmatized. Elgar *et al.* (2021) used the GWP of 2014 and 2019 and empirically observed that: relative FI is associated with reduced life satisfaction even after absolute FI is controlled; associations were stronger where FI prevalence was lower, as also observed by Smith and Wesselbaum (2023). Salahodjaev and Mirziyoyeva (2021) and Kornher and Sakketa (2021) likewise used the GWP and observed negative associations between FI and life satisfaction.

A topic that is increasingly being linked to SWB is the use of Social Networking Services (SNS), such as Facebook, Instagram, and Twitter, which became remarkably present in our daily lives. The rapid popularizing of SNS dramatically transformed social interactions, with positive and negative effects on SWB (Bai *et al.*, 2021; Pang, 2018; Yang, 2020). On the one hand, several studies have shown that SNS use can forge stronger social connections, provide social support, promote social inclusion, increase civic involvement and lower stress levels, aspects with increasing effects on SWB (Bai *et al.*, 2021; Lin *et al.*, 2021; Pang, 2018; Yang, 2020). Moreover, the use of entertainment-motivated social media and image-based platforms can enhance self-disclosure and provide a sense of intimacy, reducing loneliness (Wu *et al.*, 2023). Nonetheless, on the other hand, those who use SNS frequently are more prone to develop addictive behaviors, anxiety, depression, boredom and loneliness, with negative impacts on SWB (Bai *et al.*, 2021). Moreover, the use of SNS may reduce self-esteem, exacerbate social comparisons, lower perceived social support and aggravate social isolation (Wu *et al.*, 2023; Yang, 2020), especially among passive users (Lin *et al.*, 2021).

Given the potential positive and negative effects of SNS use on SWB, different empirical studies in different settings reached distinct conclusions. Pang (2018) observed that the use of WeChat, which is similar to WhatsApp, by college overseas students had positive impacts on social integration and on bridging and bonding relationships, with positive influence on SWB. Wu *et al.*(2023) observed that social media use had a direct positive effect on SWB. However, they also verified that addiction suppressed the gains of social media use on SWB. Yang (2020) analyzed aspects of SNS use separating individuals who used them mostly to write, an active use, or to read, a passive use. They observed that active SNS use enhanced self-affirmation and concern about other's feedback, with an overall positive correlation with SWB. Differently, the passive SNS use had mechanisms that promoted vicarious satisfaction and feelings of relative deprivation: the first with positive effects on SWB and the second with negative influence. Ozimek and Bierhoff (2020) related the use of SNSs with lower self-esteem in part caused by upward comparisons, as SNS users frequently emphasize positive traits and experiences. A potential outcome of lower self-esteem was the enhancement of depressive symptoms, especially among passive users. Lin *et al.* (2021) analyzed the association between passive SNS use and SWB for young adults through the indirect effects caused by the mediating role of self-concept clarity, that is, by the extent the individual's self-beliefs are clearly defined, internally consistent and stable. They observed that passive SNS use was negatively associated with self-concept clarity, with

negative effects on SWB levels. Bai *et al.* (2021) observed a negative association between the use of mobile social media and SWB due to direct effects and because of indirect effects caused by boredom proneness.

After this brief introduction, I propose three working hypotheses, all based on the general concern addressed in the paper that is how FI levels are associated with SWB and how the use of SNS are related to both.

Many authors observed the negative association between FI and life satisfaction (Elgar *et al.*, 2021; Frongillo *et al.*, 2014; Kornher; Sakketa, 2021; Salahodjaev; Mirziyoyeva, 2021; Smith; Wesselbaum, 2023). Nevertheless, SWB is also commonly measured by happiness levels. Life satisfaction and happiness differ in essence and significance. Happiness can be defined as a global evaluation of the individual's life quality according to cognitive or emotional aspects. Life satisfaction is likely to be more affected by the objective-material conditions of life (Haller; Hadler, 2006; Medvedev; Landhuis, 2018; Nemati; Maralani, 2016; Ng, 2015). Thus, I proposed that: (H1) FI negatively correlates with SWB in general, but is more associated with life satisfaction than with happiness.

The rapid popularizing of SNS dramatically transformed social interactions (Bai *et al.*, 2021; Pang, 2018; Yang, 2020). Those who use SNS frequently are more prone to develop addictive behaviors, anxiety and depression, with negative impacts on SWB and, in addition, may exacerbate social comparisons and reduce self-esteem (Bai *et al.*, 2021; Wu *et al.*, 2023; Yang, 2020). Hence, I propose a second hypothesis: (H2) SNS use is unrelated to FI when few people use them, as there are little overlap between those who constantly used SNS in the recent past, those with higher SES, and persons who face FI, those with lower SES. However, SNS use increasingly relates to FI when the use became more widespread, as this overlap increases and the negative effects of the extensive use of SNS become more evident.

Similarly to H2, I propose a third hypothesis: (H3) SNS might be positively associated or unrelated to SWB when the use is not very widespread and the positive impacts of SNS overcome the negative ones. However, associations became negative when the use become more widespread and the negative effects of SNS use became more extensive. Similarly to H1, it is expected that this dynamics will particular touch life satisfaction and less strongly will affect happiness.

The paper is further divided into four sections. Section 2 describes the methodology. Section 3 presents the results. Section 4 discusses the results in greater depth. Last section concludes the paper.

Methodology

Databases

The World Value Survey (WVS) is a series of nationally representative surveys that inquire the population about their values, beliefs and attitudes regarding a myriad of topics,

such as stereotypes, religiosity, migration, culture and political interest. It also collects information on the respondents' demographics (see http://www.worldvaluessurvey.org/ for further details).

In order to test the above-mentioned hypotheses, I used the last two Brazilian WVS databases, those of 2014 and 2018, before and after the GBR, the two with data for FI, SWB and the use of SNS. The sample sizes are quite small, with 1486 and 1762 observations respectively, and this is one of the main limitations of this databases. Nonetheless, it is nationally representative, thus, in principle, it does not have selective bias.

Other international databases also include data for Brazil, for instance, the GWP that has been already extensively used to discuss topics of SWB and FI in Brazil (Neri, 2022; Souza *et al.*, 2019). I chose to use WVS, a database already used to address the determinants of SWB in Brazil (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021; Ribeiro, 2015), but, to the best of my knowledge, not yet used to discuss FI, SWB and SNS use in this country.

Variables of main interest

FI is commonly measured in Brazil using EBIA (Felker-Kantor; Wood, 2012; Souza *et al.*, 2019). This indicator can be estimated using other databases, for instance the Brazilian National Household Sample Survey (PNAD) and the Consumer Expenditure Survey (POF). Nonetheless, these databases do not have the required information for SWB or SNS. The variable measuring FI in WVS is rather different than EBIA and is similar to the one from GWP used in Neri (2022). The WVS has the following question: "In the past 12 months, how often did your family go without enough food?" The variable is classified as Never, Rarely, Sometimes and Frequently. The last two categories were not numerous and they were grouped to form a categorical variable with three categories. Moreover, for some analysis, a dummy was created for FI grouping the last three categories. Table 1 presents a synthesis of these variables and of all the others variables discussed in this section. The table indicates the variable type, dummy, categorical or continuous, and the categories of each variable.

WVS has one variable that intends to measure happiness and another that measures life satisfaction. Self-evaluated happiness is accessed with the answer to the following question: "In general, you consider yourself a person who is: not very happy, not at all happy, quite happy or very happy". The first two categories were grouped and a categorical variable with three categories was obtained. Life satisfaction is addressed by the question: "In general, are you satisfied or unsatisfied with your life?" Possible answers range from 1 (for very unsatisfied) to 10 (for totally satisfied). Some categories were grouped, as they were not numerous and the final variable has 7 categories. Notice that this variable is considered a categorical/continuous variable in Table 1. This is so because it was considered a categorical variable in the econometric models and a (pseud) continuous variable in the descriptive subsection. It should be emphasized that these last two variables are analyzed separately in the econometric models in order to test the hypotheses H1 and H3 of the paper.

Concerning the use of different types of media, initially, I created dummies for the daily use of different information sources. Then, I used Principal Components Analysis (PCA) to group them in two groups: traditional media (newspaper and TV news) and SNS (mobile and internet). Based on the theoretical and empirical findings, the first variable is a categorical variable with three categories and the second is a dummy.

TABLE 1
A synthesis of the variables used in the econometric models

Variable	Categories
Variables of main interest	
Food insecurity (categorical)	1 – Never; 2 – Rarely; 3 – Sometimes/Frequently
Food insecurity (*dummy*)	0 – Never; 1 – Rarely/Sometimes/Frequently
Happiness (categorical)	1 – Not very happy or not at all happy; 2 – Quite happy; 3 – Very happy
Life satisfaction (categorical/continuous)	From 1 (for very unsatisfied) to 7 (for totally satisfied)
Traditional media (categorical)	0 – Do not use them daily; 1 – Use one daily; 2 – Use both daily
SNS (*dummy*)	0 – Do not use them daily; 1 – Use them daily
Other variables	
Health (categorical)	1 – From very poor to reasonable; 2 – Good; 3 – Very good
Financial situation (continuous)	From 1 (for very unsatisfied) to 7 (for totally satisfied)
Social class (categorical)	1 – the lower class; 2 – the upper lower or lower medium class; 3 – the medium class or above
Felling insecure (categorical)	1 – Never; 2 – Rarely; 3 – Sometimes or frequently
Religiosity (categorical)	1 – Less than monthly; 2 – Approximately monthly; 3 – Weekly; 4 – More than weekly
Charity institution (*dummy*)	0 – No; 1 – Yes
Trust on family (*dummy*)	0 – Less than completely; 1 – Completely
Trust on neighbors (categorical)	1 – Not very much or not at all; 2 – A little; 3 – Completely
Trust on people you know (categorical)	1 – Not very much or not at all; 2 – A little; 3 – Completely
Self-determination (continuous)	From 1 (for very little) to 7 (for very much)
Working hard (categorical)	1–for a totally no to 5 – for a totally yes
Sex (*dummy*)	0 – Female; 1 – Male
Race/ethnicity (*dummy*)	0 – Black/Pardo/Indigenous; 1 – White/Asian
Civil *status* (*dummy*)	0 – Otherwise; 1 – Married/Living together
Age (categorical)	18-24; 25-34; 35-44 45-54; 55-64; 65 and more
Number of children (categorical)	0 – Zero; 1 – One; 2 – Two; 3 – Three or more
Education level (categorical)	1 –Less than elementary; 2 – Elementary; 3 – Secondary; 4 – Tertiary or more
Worked full-time (*dummy*)	0 – No; 1 – Yes
Unemployed (*dummy*)	0 – No; 1 – Yes
Retired (*dummy*)	0 – No; 1 – Yes
Worried with unemployment (categorical)	1 – No at all; 2 – Worried; 3 – Very worried

Other variables

Besides the above-mentioned variables, the models include many variables that are among the determinants of SWB (Blanchflower; Oswald, 2004; Corbi; Menezes-Filho, 2006; Diener, 1984; Dolan *et al.*, 2008; Golgher; Coutinho, 2021; Gori-Maia, 2013; Helliwell,

2006; Ribeiro, 2015). Amongst those determinants of well-being, some are also associated with FI, as discussed in Felker-Kantor and Wood (2012) and Souza *et al.* (2019), in particular those related to SES.

All the variables discussed in this section are included as controls in the econometric models. Thus, they are not directly linked to any of the three hypotheses, which are mostly addressed by the variables classified as the variables of main interest.

One of the most important among the determinants of SWB is self-evaluated health levels. I used a categorical variable with three categories, as shown in Table 1. I expect positive associations between health levels and SWB, as already extensively discussed (Golgher; Coutinho, 2021; Ribeiro, 2015). After the controls are included in the models, I have no *a priori* expectation for the association of health levels with FI.

Two variables are associated with the household's financial situation. The subjective financial situation is evaluated by the question "how are you satisfied with yours family income situation". This variable ranges from 1 (for very unsatisfied) to 10 (for totally satisfied). Some categories were grouped and the final variable has 7 categories. Given that this number is quite large, this variable is treated as continuous. The other variable is whether the family considered being in the lower class, in the upper lower or lower medium class, or in the medium class or above. Correlations among these variables are positive, but not very strong, suggesting different perspectives of the household's financial situation, as they respectively represent a more absolute and more relative perspective of own financial situation. I expect for both positive correlations with SWB, as discussed elsewhere (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021; Ribeiro, 2015), and negative correlations with FI, as both a related to SES.

Households commonly face deprivations in multiple dimensions (Machado *et al.*, 2014). I included in the analysis a categorical variable for felling insecure in the household. I expect negative correlations with SWB and positive correlations with FI.

To assess religiosity and social support, both important variables as determinants of well-being, I used two variables. The first is a categorical variable with the frequency the individuals attended religious temples. The second is a dummy whether the person was a member of a charity institution. Positive associations with SWB are expected for both variables, as presented elsewhere (Golgher; Coutinho, 2021; Ribeiro, 2015). I have no *a priori* expectation for FI.

There are some variables associated with trust on particular groups of the population that are also among the determinants of SWB. I selected three of them: trust on family members, trust on neighbors and trust on people you know personally. The first among these variables is a dummy and the last two are categorical. I expect positive associations with SWB (as in Golgher; Coutinho, 2021). Households that do not trust others might be more prone to FI, thus, I expect negative associations.

Two variables that are also associated with SWB are related to the subjective evaluated availability of possibilities in life faced by individuals. Self-determination is investigated by the question "How much freedom of choice and control do you have over your life". This

variable ranges from 1 (for no choice at all) to 10 (for totally free). Some categories were grouped and the final variable has 7 categories. Given this high number of categories, the variable is treated as continuous. A categorical variable indicated whether the person thought that working hard would bring a better life. I expect positive correlations of both with SWB (see Golgher; Coutinho, 2021) and negative correlations with FI, as hopelessness might be a factor associated with FI.

I also included demographic variables that are commonly used in studies addressing SWB (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021; Ribeiro, 2015): dummies for sex, race/ethnicity and civil status; categorical variables for age, number of children in the household and formal education level. Among these variables, I expect positive correlations of civil status with SWB. The other variables are not among the main determinants of happiness or life satisfaction and I do not propose any *a priori* expectation. However, some of these variables are among the main factors associated with SES and with FI. It is expected higher levels of FI for Blacks/*Pardos*/Indigenous, those not married/living together, those with many children and those with lower levels of formal education (Felker-Kantor; Wood, 2012; Souza *et al.*, 2019).

Finally, some variables related to the labor market were also included: dummies for whether the individual worked full-time, was unemployed or was retired. I expect lower levels of SWB for those unemployed, as already extensively discussed (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021; Ribeiro, 2015) and lower levels of FI for those working full-time, employed or retired, as they are related to SES or retirement (Felker-Kantor; Wood, 2012; Souza *et al.*, 2019). A categorical variable indicated whether the individuals was worried with unemployment was also included. I expect negative correlations with SWB and positive associations with FI for similar reasons as the other variables in this paragraph.

Empirical strategy

First, to investigate H2, I applied logistic models addressing the main factors associated with FI. Then I used ordered logistic models to explore hypothesis H1 and H3, when I estimated features related to SWB. Notice that happiness and life satisfaction are analyzed separately in the ordered logistic models.

Results

Descriptive statistics

The variable for FI was measured using WVS by how often did the individual's family went without enough food in the past 12 months. Table 2 presents the results. Most people declared that they always had enough food. Nonetheless, close to 20% did not have enough food sometimes or rarely. As already mentioned, this variable is different from EBIA. Table 2 compares the results for both measures in similar years. A rough comparison suggests

that the category "Never" for the WVS variable indicates food security or a very mild FI for EBIA, "Rarely" can be considered as mild FI, and "More than rarely" indicates moderate or severe FI.

Notice that temporal variations for FI based on WVS are not as remarkable as those based on PNAD and POF, although with the same increasing tendency. However, this variation for WVS data was non-significant when accessed by chi-square independence test for contingence table.

TABLE 2
Food insecurity levels for WVS, PNAD and POF
Brazil – 2013-2018

Categories	MVS		Categories	PNAD 2013	POF 2018
	2014	2018			
Never	80.9	77.9	Secure	73.8	59.3
Rarely	8.8	10.8	Mild	17.3	27.0
More than rarely	10.4	11.2	Moderate	5.22	8.83
			Severe	3.65	4.89

Source: WVS, 2014 and 2018, PNAD 2013 and POF 2018.

Table 3 shows the evolution for happiness and life satisfaction between 2014 and 2018. The variable happiness has three categories and was treated as categorical. The variable life satisfaction has 7 categories and was treated as a continuous variable in the descriptive section. The two SWB variables showed a negative and significant evolution in the period (in chi-square and t tests). That is, SWB decreased in Brazil after the GBR for both measures.

The table also shows distribution of happiness and food insecurity, both variables with three categories. Food insecurity levels were larger for unhappier individuals and the results were significant in a chi-square test. Moreover, those that never felt FI, had higher levels of life satisfaction than those classified as rarely or more than rarely.

TABLE 3
Temporal evolution of well-being indicators and their relation to food insecurity
Brazil – 2014-2018

Well-being indicators	Year		Food insecurity		
	2014	2018	Never	Rarely	More than rarely
Happiness: Not happy	7.96*	9.88*	7.62*	10.1*	18.2*
Happiness: Quite happy	56.8*	62.0*	59.6*	65.1*	55.3*
Happiness: Very happy	35.2*	28.1*	32.8*	24.8*	26.5*
Life satisfaction (mean value)	4.94*	4.66*	4.97*	4.17	3.97

Source: WVS, 2014 and 2018.
Note: * significant at 5% in chi-square, t-test and Bonferroni tests.

Table 4 shows the evolution of traditional media and SNS between 2014 and 2018. Notice that the first variable has three categories and the second is a dummy. Not surprisingly, the use of the first decreased in the period and the use of the latter increased

remarkably. Nonetheless, the association between traditional media and FI was non-significant and between SNS and FI was not clear.

TABLE 4
Temporal evolution of media use and associations with food insecurity
Brazil – 2014-2018

Media use	Year		Food insecurity		
	2014	2018	Never	Rarely	More than rarely
Traditional: do not use them daily	17.7*	30.3*	23.5	29.2	26.7
Traditional: use one daily	58.0*	48.1*	52.8	51.3	53.1
Traditional: use both daily	24.3*	21.6*	23.8	18.8	20.2
SNS: Do not use them daily	66.6*	49.5*	57.0*	50.2*	67.3*
SNS: Use them daily	33.4*	50.5*	43.0*	49.8*	32.7*

Source: WVS, 2014 and 2018.
Note: *significant at 1% in chi-square.

Table 5 shows the association between the use of media and well-being variables. The more the individual used traditional media or SNS, the higher the levels of happiness. This was also observed for the traditional media and life satisfaction. The use of SNS showed similar results for happiness, however, results for life satisfaction differed. These results suggest a more detrimental effect of SNS use for life satisfaction, likely to be more affected by the objective-material conditions of life, than for happiness, a global evaluation of the individual's life quality according to cognitive or emotional aspects (Haller; Hadler, 2006; Medvedev; Landhuis, 2018; Nemati; Maralani, 2016; Ng, 2015).

TABLE 5
Associations between media use and well-being variables
Brazil – 2014/2018

Media use	Happiness			Life satisfacion
	Not happy	Quite happy	Very happy	
Traditional: do not use them daily	29.0*	24.3*	22.9*	4.59*
Traditional: use one daily	51.1*	53.9*	51.3*	4.84
Traditional: use both daily	20.0*	21.8*	25.9*	4.93
SNS: Do not use them daily	68.5*	57.6*	54.3*	4.91*
SNS: Use them daily	31.5*	42.4*	45.7*	4.64*

Source: WVS, 2014 and 2018.
Note: * significant at 5% in chi-square. Bonferroni and t tests.

Table 6 shows the temporal variations of selected covariates. Between 2014 and 2018, the processes of population aging, fertility decline and increases in formal education attainment continued (results not shown). Regarding labor market outcomes, less individuals worked full-time and more persons were unemployed, trends expected due to the Brazilian economic performance. Nevertheless, the subjective assessment for financial situation and self-determination showed non-significant variations. Health levels deteriorated, possibly due to population aging and socioeconomic changes. Religiosity

apparently decreased, as frequency to temples decreased. Trust on family members dropped sharply. All these results can be directly associated with a decrease in SWB and most can be related to an increase in FI.

Table 6 also shows the association between these explanatory variables and the main variables of interest: FI, happiness and life satisfaction. Many variables showed the same profile and were negatively related to FI and positively associated with SWB: whether the person was unemployed, financial situation, control over one´s life, health levels and trust on family. That is, they all were significantly associated with FI and SWB and can be initially considered among the main determinants of both. Notice that many are also associated with SES.

The other variables had different profiles. Frequency to temples were associated with SWB but not with FI. Whether the individual worked full-time was associated with FI and happiness, but not with life satisfaction.

TABLE 6
Temporal evolution of selected covariates and associations with food insecurity and well-being levels Brazil – 2014/2018

Variables	Year		Food insecurity			Happiness			Life satisfaction
	2014	2018	Never	Rarely	More than rarely	Not happy	Quite happy	Very happy	
Work full-time	0.340*	0.273*	0.321*	0.268*	0.218*	21.4*	30.9*	32.1*	4.80/4.78 (yes/no)
Unemployed	0.126*	0.167*	0.128*	0.186*	0.263*	0.210*	0.153*	0.120*	4.53/4.83* (yes/no)
Financial situation	4.28	4.16	4.40*	3.83*	3.21*	3.24*	4.11*	4.72*	0.385* (correlation)
Freedom	4.81	4.70	4.91*	4.26	4.08	4.15*	4.66*	5.11*	0.313* (correlation)
Health: From very poor to reasonable	28.7*	33.7*	29.6*	33.0*	42.4*	61.4*	32.5*	20.4*	4.43*
Health: Good	47.1*	45.8*	45.7*	53.4*	44.8*	32.5*	51.6*	40.4*	4.78*
Health: very good	24.2*	20.6*	24.7*	13.6*	12.8*	6.12*	15.9*	39.2*	5.33*
Freq. to religious: Less than monthly	30.2*	36.1*	34.0	33.4	28.6	42.3*	34.6*	28.3*	4.65
Freq. to religious: approximately monthly	19.6*	17.5*	17.8	18.2	23.5	15.9*	19.5*	16.8*	4.63
Freq. to religious: weekly	27.5*	25.0*	26.5	24.2	25.3	25.0*	26.2*	26.6*	4.84
Freq. to religious: more than weekly	22.8*	21.4*	21.7	24.2	22.7	16.7*	19.6*	28.4*	5.10*
Trust family	0.704*	0.573*	66.7*	50.9	49.1	0.445*	0.625*	0.703*	5.07/4.31* (yes/no)

Source: WVS, 2014 and 2018.
Note: * significant at 5% in chi-square and t tests.

Econometric models for food insecurity

This section presents the logistic models that addressed H2: SNS use is unrelated to FI when few people use them, however, SNS use increasingly relates to FI, when the use became more widespread. The results for the coefficients and standard errors of the models are shown in Table 7.

The dependent variable is whether the individual's household faced FI at any level (1 – Yes, 0 – No). I estimated two logistic models, one for each year. Felker-Kantor and Wood (2012) and Souza *et al.* (2019) used similar models, but here I could include in the models variables associated with beliefs, trust and the use of different types of media.

Concerning the demographic variables, two variables showed similar results in both models. Males and females showed similar propensity of being in FI after controlling for the other variables in the models, as observed by Souza *et al.* (2019). Households with children are commonly expected to have higher levels of FI, especially those with more children or households with more individuals (Braga; Souza, 2022; Souza *et al.*, 2019). This was not observed in the models, even for households with three children or more, as all the coefficients were non-significant at 5%, suggesting that households with children give particular importance to food security, as discussed in (Braga; Souza, 2022).

Two variables, age and formal education, showed significant coefficients in 2018 and non-significant in 2014, when FI levels were smaller and food security was more widespread. That is, in 2014 there was a homogenization between population groups for FI, but after the GBR, those who had a tertiary degree or aged 55 to 64 had lower levels of FI. Braga and Souza (2022) and Souza *et al.* (2019) also observed significant results for both variables, as households with elderlies or with more educated individuals faced lower levels of FI. Formal education is strongly related to SES and to FI, however, other variables in the models are capturing this association.

Married individuals had a lower propensity to face FI. These households have a potential possibility of having at least two individuals in the labor market. Skin color showed non-significant coefficients in 2014 and Whites had a lower propensity to FI in 2018, suggesting that the higher levels of FI faced by Browns/Blacks in Brazil could be explained by the other variables in the models only in 2014. These results together suggest that, in 2014, FI was more linked to uniparental households while in 2018, skin color mattered more. Braga and Souza (2022) observed significant higher propensity of Blacks and of single mothers to FI.

The models also included labor market variables that are directly associated with income or being an elderly, which are main determinants of FI (Braga; Souza, 2022; Souza *et al.*, 2019). Those with full-time jobs, unemployed or retired had similar propensities of being in FI, after controlling for the household financial situation, social class and other variables. That is, these other variables are explaining much of the difference between labor market variables and FI. Differently, those who were worried about not finding or losing the job faced higher levels of FI, suggesting a worth socioeconomic and more risky situation.

Two variables are associated with the financial status of the individual's households. Those who considered they had a better financial situation had lower propensity to FI, as expected. Moreover, even after controlling for this variable, those who compared their financial situation with others and considered themselves as medium class or above showed a lower propensity to FI. These results suggest that the subjective evaluation of own income

matters, but the subjective comparisons with others also matters, as was observed by Elgar *et al.* (2021) and by Smith and Wesselbaum (2023).

Those with lower level of self-determination, indicating a higher level of hopelessness, faced higher levels of FI. However, notice the positive coefficient in 2014 for hard work. That is, when FI was lower, individuals believed at a greater extent that working hard would bring life gains.

Next group of variables related to trust in different population groups, variables that might impact FI (Souza *et al.*, 2019). Those who trusted their families had a lower propensity to FI, probably due to mutual support. Trust in neighbors and people the person knew showed non-significant results, indicating that for food issues, family matters.

Those who felt unsafe at the household faced higher levels of FI, indicating the presence of multidimensional deprivation (Machado *et al.*, 2014).

Finally, all the coefficients for media use, including SNS, were non-significant. These results partially corroborate (H2). FI is unrelated to SNS use when few people use them. Nonetheless, the hypothesis also stated that FI would increasingly relate to SNS use when the use became more widespread, what was not verified, maybe because the use was still not so widespread in 2018. Notice the value in table 4, 50.5% of the individuals used SNS daily in 2018. More recent results are needed to properly test this hypothesis.

TABLE 7
Logistic models coefficients and standard errors for food insecurity
Brazil – 2014-2018

Variables	2014	2018
Male	-0.0466	-0.238
	(0.177)	(0.156)
White/Asian	0.0483	-0.303**
	(0.162)	(0.154)
Age		
18 to 24	Reference	
25 to 34	0.416	0.0171
	(0.279)	(0.252)
35 to 44	0.106	0.00568
	(0.306)	(0.275)
45 to 54	0.0645	-0.143
	(0.319)	(0.283)
55 to 64	-0.271	-0.719**
	(0.352)	(0.334)
65 and over	-0.0485	-0.572
	(0.409)	(0.416)
Married	-0.504***	-0.266*
	(0.176)	(0.159)
Children		
None	Reference	
One child	-0.358	-0.195
	(0.270)	(0.224)

(continued)

(continuation)

Variables	2014	2018
Two children	-0.107	-0.240
	(0.266)	(0.229)
Three or more children	0.0288	0.236
	(0.267)	(0.237)
Formal education		
Less than elementary	Reference	
Elementary	0.0100	0.160
	(0.214)	(0.227)
Secondary	-0.285	-0.0542
	(0.213)	(0.216)
Tertiary	-0.533	-1.010***
	(0.352)	(0.322)
Full-time job	-0.336	-0.196
	(0.207)	(0.194)
Unemployed	0.335	0.146
	(0.237)	(0.198)
Retired	0.0188	-0.385
	(0.256)	(0.291)
Worried losing job		
Not at all	Reference	
Rarely	1.096***	0.347
	(0.267)	(0.279)
Frequently	1.004***	0.474*
	(0.260)	(0.276)
Financial situation	-0.101**	-0.229***
	(0.0429)	(0.0402)
Social class		
Very low	Reference	
Low	0.0244	-0.404**
	(0.193)	(0.173)
Medium class and above	-0.758***	-0.526***
	(0.219)	(0.190)
Self-determination	-0.108***	-0.0902***
	(0.0357)	(0.0328)
Work hard	0.139***	-0.0262
	(0.0537)	(0.0467)
Trust		
Family	-0.498***	-0.320**
	(0.167)	(0.149)
Neighbors	-0.123	-0.0278
	(0.156)	(0.149)
People that you know	0.0725	0.267
	(0.181)	(0.170)
Unsafeness		
Never	Reference	
Rarely	1.325***	0.997***
	(0.234)	(0.210)
Frequently	1.616***	0.985***
	(0.193)	(0.170)

(continued)

(continuation)

Variables	2014	2018
SNS	-0.304	-0.154
	(0.196)	(0.165)
Traditional		
Daily use of none	Reference	
Daily use of one	0.0364	-0.209
	(0.210)	(0.168)
Daily use of two	-0.269	-0.131
	(0.254)	(0.219)
Constant	-1.684***	0.00832
	(0.592)	(0.580)
Observations	1,332	1,427

Source: WVS, 2014 and 2018.
Note: Standard errors in parentheses.
*** p < 0.01, ** p < 0.05, * p < 0.1.

Econometric models for subjective well-being

This section presents the results for the ordered logistic models coefficients and standard errors for happiness and life satisfaction separately in Table 8. Some demographic variables are not among the most decisive factors associated with SWB (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021; Gori-Maia, 2013; Ribeiro, 2015). For sex, all the coefficients were non-significant. For skin color, however, the two coefficients for happiness were negative and significant, but only at 10%. The question is why are Whites/Asians unhappier, although only slighter, after controlling for the other variables in the model? A tentative explanation is that, in this decade, there was an increase in race/skin color awareness among non-Whites and advances were made in many spheres of the Brazilian society to decreased race inequalities, in particular in public higher education institutions (Golgher, 2021).

Age is not among the main determinants of SWB, most coefficients were non-significant, but some coefficients were significant. Individuals aged 45 to 54 showed lower levels of happiness, but not of life satisfaction in 2018. On the other hand, individuals aged 55 and over in 2014 showed greater levels of life satisfaction. The first result suggests a middle-age crisis regarding a global evaluation of the individual's life quality, including a purpose in life, personal growth, environmental mastery, autonomy, and positive self-esteem. The second indicate a smaller perceived discrepancy for those aged 55 or more between aspirations and expectations with actual achievements in 2014, before the economic crisis.

Civil status is among the main determinants of SWB (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021; Ribeiro, 2015). Married individuals tend to have higher levels for SWB and this was observed for happiness in the two models and for life satisfaction for the 2014 model, but not for 2018. This last result was not expected. Notice that trust on family decreased in 2018. Moreover, for life satisfaction, the coefficients for having

one child or three or more children were positive and significant for 2018 model. These last results might be linked with the non-significance of the married coefficient in 2018.

More educated individuals tend to have a better financial situation and health levels, and lower rates of unemployment, among other factors that influence SWB, however, net effects on SWB tend to be small (Golgher; Coutinho, 2021; Ribeiro, 2015). Nonetheless, after controlling for these and other variables in the model, more educated people were unhappier and had lower levels of life satisfaction in 2014, just after the mass protests (Saad-Filho, 2013), and less satisfied with their life, but not unhappier in 2018, just after the GBR.

Among the labor market features, unemployment is among the main determinants of SWB (Corbi; Menezes-Filho, 2006; Golgher; Coutinho, 2021). The variables whether the individual worked full-time or was retired showed no clear trend with significance only at 10% or had non-significant coefficients. For those unemployed, only one coefficient for happiness was negative and significant, what was not initially expected. Other variables in the model might be capturing the influence of this last variable, especially for life satisfaction, such as the worriedness of losing or not finding a job, which showed negative coefficients in 2018. Moreover, as expected, subjective financial situation showed all positive and significant coefficients (Golgher; Coutinho, 2021; Ribeiro, 2015). Relative positioning represented by subjective evaluation of social class belonging showed positive coefficients for happiness, but not for life satisfaction, that is, it was more decisive for a global evaluation of the individual's life quality.

Other variables that are among the main determinants of SWB (Golgher; Coutinho, 2021) showed the expected results as self-determination, including that hard work matters, health levels and belonging to a charity institution. Moreover, trust is also among the main determinants of SWB, but the results were only significant for trust on the family, as the coefficients for trust on neighbors and on people the individual knew were all non-significant. These results on trust were similar to those found for FI, that is, family matters for FI and SWB. Another variable that is commonly among the major determinants of SWB in Brazil is frequency of religious service attendance. Most coefficients were positive and significant for those who attendance was more than weekly, however, the results for life satisfaction in 2018 were non-significant. Notice in table 6 that temple attendance decreased in 2018. The use of traditional media showed a positive coefficient for life satisfaction in 2018.

This study investigates, among others, the following hypothesis: (H1) FI is negatively correlated with SWB for both indicators, but is more associated with life satisfaction than with happiness. The empirical results partially corroborated the hypothesis, as coefficients for life satisfaction were negative and significant for FI and also for the unsafeness feeling and were non-significant for happiness.

Another hypothesis of this paper is the following: (H3) SNS use might have positive or non-significant relationships with SWB when the use is not very widespread, but associations became negative when the use became more widespread. The empirical results corroborated the hypothesis, as happiness models showed a positive and significant coefficient in 2014 and a non-significant in 2018, and the coefficients were non-significant for life satisfaction in 2014 and became negative and significant in 2018.

TABLE 8
Ordered models coefficients and standard errors for happiness and life satisfaction
Brazil – 2014-2018

Variables	Happiness		Life satisfaction	
	2014	2018	2014	2018
Male	0.136	-0.0222	-0.0533	-0.117
	(0.133)	(0.123)	(0.116)	(0.107)
White/Asian	-0.203*	-0.216*	-0.144	-0.0819
	(0.121)	(0.120)	(0.106)	(0.104)
Age				
18 to 24		Reference		
25 to 34	-0.258	-0.0565	0.149	0.0345
	(0.211)	(0.214)	(0.180)	(0.179)
35 to 44	-0.0237	-0.0458	0.253	0.0891
	(0.228)	(0.233)	(0.199)	(0.198)
45 to 54	-0.313	-0.649***	0.0850	-0.330
	(0.239)	(0.245)	(0.208)	(0.206)
55 to 64	-0.184	-0.217	0.509**	-0.105
	(0.267)	(0.266)	(0.234)	(0.230)
65 and over	-0.0283	-0.289	0.654**	-0.0312
	(0.305)	(0.319)	(0.272)	(0.279)
Married	0.467***	0.237*	0.300**	0.0496
	(0.137)	(0.126)	(0.118)	(0.110)
Children				
No children		Reference		
One child	0.0914	0.181	0.123	0.407***
	(0.194)	(0.181)	(0.168)	(0.156)
Two children	-0.0848	-0.0429	-0.156	0.189
	(0.200)	(0.181)	(0.177)	(0.155)
Three or more children	-0.239	0.194	-0.0846	0.313*
	(0.205)	(0.194)	(0.182)	(0.170)
Formal education				
Less than elementary		Reference		
Elementary	-0.317*	0.179	-0.355**	-0.448**
	(0.168)	(0.190)	(0.148)	(0.174)
Secondary	-0.356**	0.0345	-0.304**	-0.584***
	(0.162)	(0.172)	(0.144)	(0.159)
Superior	-0.539**	-0.191	-0.306	-0.964***
	(0.235)	(0.220)	(0.204)	(0.196)

(continued)

(continuation)

Variables	Happiness		Life satisfaction	
	2014	2018	2014	2018
Full-time job	-0.267*	0.271*	-0.0938	0.0328
	(0.150)	(0.150)	(0.130)	(0.130)
Unemployed	-0.226	-0.293*	0.0188	0.169
	(0.198)	(0.177)	(0.172)	(0.154)
Retired	-0.0501	0.166	0.267	-0.313
	(0.198)	(0.209)	(0.172)	(0.186)
Worried losing job				
Not at all	Reference			
Rarely	-0.0589	-0.0696	-0.0949	-0.437***
	(0.172)	(0.187)	(0.148)	(0.166)
Frequently	-0.0245	-0.103	0.0288	-0.449***
	(0.167)	(0.188)	(0.145)	(0.169)
Financial situation	0.138***	0.155***	0.237***	0.417***
	(0.0327)	(0.0321)	(0.0297)	(0.0304)
Social class				
Very low	Reference			
Low	0.257	0.207	0.0308	-0.0963
	(0.160)	(0.146)	(0.140)	(0.126)
Medium class and above	0.438***	0.499***	0.0113	0.103
	(0.166)	(0.151)	(0.146)	(0.132)
Self-determination	0.0788***	0.0458*	0.196***	0.260***
	(0.0280)	(0.0273)	(0.0252)	(0.0248)
Work hard	0.0261	0.0659*	0.0499	0.0574*
	(0.0391)	(0.0372)	(0.0343)	(0.0329)
Health				
Poor	Reference			
Good	0.483***	0.610***	0.358***	0.0943
	(0.150)	(0.144)	(0.128)	(0.121)
Very good	1.609***	1.566***	0.831***	0.410***
	(0.181)	(0.178)	(0.156)	(0.154)
Freq. to religious service				
Less than monthly	Reference			
Monthly	0.0292	0.155	0.0472	-0.249*
	(0.172)	(0.169)	(0.146)	(0.146)
Weekly	0.177	0.239	0.0258	-0.0278
	(0.159)	(0.153)	(0.139)	(0.132)
More than weekly	0.846***	0.528***	0.343**	0.203
	(0.170)	(0.162)	(0.149)	(0.142)
Charity member	0.346**	0.152	0.359**	-0.158
	(0.173)	(0.185)	(0.152)	(0.166)
Trust				
Family	0.473***	0.154	0.377***	0.233**
	(0.135)	(0.121)	(0.116)	(0.104)

(continued)

(continuation)

Variables	Happiness		Life satisfaction	
	2014	2018	2014	2018
Neighbors	0.0823	0.0514	0.114	0.149
	(0.119)	(0.119)	(0.104)	(0.108)
People that you know	-0.0248	-0.105	0.00375	-0.0626
	(0.134)	(0.133)	(0.119)	(0.121)
Food insecurity				
Not at all	Reference			
Rarely	-0.164	0.0317	-0.0504	-0.579***
	(0.215)	(0.192)	(0.180)	(0.165)
Frequently	-0.0338	-0.0661	-0.144	-0.408**
	(0.208)	(0.207)	(0.181)	(0.177)
Unsafeness feeling				
Not at all	Reference			
Rarely	-0.0422	-0.164	-0.285**	-0.119
	(0.169)	(0.167)	(0.145)	(0.141)
Frequently	0.00692	-0.0329	-0.290**	-0.0923
	(0.134)	(0.131)	(0.117)	(0.115)
SNS	0.407***	0.0941	0.167	-0.220*
	(0.144)	(0.133)	(0.126)	(0.116)
Traditional				
Daily use of none	Reference			
Daily use of one	0.136	0.0978	-0.117	0.319***
	(0.161)	(0.139)	(0.139)	(0.120)
Daily use of two	0.0924	0.0831	-0.0727	0.276*
	(0.188)	(0.175)	(0.165)	(0.154)
Observations	1,318	1,391	1,316	1,397

Source: WVS, 2014 and 2018.
Note: Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p < 0.1.

Discussion

This section further discusses the three proposed hypotheses of the paper. All the above-mentioned studies that related FI to SWB used the indicator for life satisfaction and observed negative associations (Elgar *et al.*, 2021; Frongillo *et al.*, 2014; Kornher; Sakketa, 2021; Salahodjaev; Mirziyoyeva, 2021; Smith; Wesselbaum, 2023). Nonetheless, life satisfaction is only one among the SWB indicators. This paper analyzed the association of FI with life satisfaction, as these other authors, and observed similar results. Nevertheless, the paper also discussed the relationship of FI with the indicator for happiness. Life satisfaction and happiness measurements differ in essence and significance, and each only represent a partial view of SWB (Haller; Hadler, 2006; Medvedev; Landhuis, 2018; Nemati; Maralani, 2016; Ng, 2015). FI was related to the objective-material conditions of life, measured by

life satisfaction, but was unrelated to a global evaluation of the individual's life quality, as assessed by the happiness indicator.

Most individuals that face FI are from lower SES strata. The daily use of SNS began at the higher SES levels. Both population groups poorly overlap when use of SNS is not extensive, and the second hypothesis stated that SNS use is unrelated to FI when few people use them, what was empirically observed for 2014. However, the rapid popularizing of SNS dramatically transformed social interactions of all groups in the population (Bai *et al.*, 2021; Pang, 2018; Yang, 2020), and those who use SNS passively and frequently are more prone to develop addictive behaviors, anxiety, depression, boredom and loneliness, with negative impacts on SWB (Bai *et al.*, 2021). Hence, I proposed that the popularization of SNS could have negative effects on FI, as social comparisons became more widespread. The results from 2018 data did not show this effect and a tentative explanation was proposed: the daily use of SNS was not so widespread to impact the lower SES strata in 2018, as slightly above half of the population used SNS daily. More recent data of FI showed extremely high values (Pessan, 2022), which could not be explained by socioeconomic outcomes. Besides the obvious idiosyncrasies of the Covid-19 pandemics on FI, maybe the recent nearly universalization of SNS may had an effect reducing self-esteem, exacerbating social comparisons, lowering perceived social support and aggravating social isolation, with negative implications on FI.

These negative effects on FI could not be analyzed with the present data, but the negative impacts on SWB were empirically observed, as proposed in the third hypothesis. When the SNS daily use became more widespread, I observed negative associations with SWB, especially for life satisfaction, and less importantly for happiness. That is, with the popularization of SNS, the negative impacts of their use overcome the positive ones (Bai *et al.*, 2021; Pang, 2018; Yang, 2020).

Conclusion

The GBR was the most marked drop in economic activity in Brazil between the end of the Second World War and the Covid-19 pandemics (Oreiro, 2017). The GBR and the Covid-19 pandemics impacted labor market outcomes and rates of unemployment, underemployment, informality and unemployment, especially among young people, increased (Courseuil; Franca, 2016; Firpo; Pieri, 2018; Montálvão; Ribeiro, 2020). Besides, the Covid-19 pandemics may have weakened many social ties that were partially responsible for previously lowering FI levels. Thus, these economic crises may have long lasting and non-anticipated negative consequences on FI and on SWB, as individuals were partially deterred from labor market experiences and from human capital accumulation.

In addition, the use of SNS recently increased and has dramatically transformed social interactions (Bai *et al.*, 2021; Pang, 2018; Yang, 2020), with negative impacts on SWB in Brazil. If this process continues in the future, it might further deteriorate SWB levels and

begin to influence FI levels. These results points for an effective regulation of SNS use, for instance, the prohibition to use mobiles at educational institutions, and the dissemination of guidelines to parents to refrain the massive use of SNS by children and adolescents.

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About the author

André Golgher holds a Ph.D in Demography from Centro de Desenvolvimento e Planejamento Regional (Cedeplar) of Universidade Federal de Minas Gerais (UFMG). He is an Associate Professor at the Economics Department of UFMG and is a researcher at the Centro de Desenvolvimento e Planejamento Regional (Cedeplar) of UFMG.

Contact address

Rua Cristina 1092/302, Santo Antônio
30330-228 – Belo Horizonte-MG, Brazil

CRediT

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Resumo

Insegurança alimentar, bem-estar subjetivo e uso de redes sociais no Brasil entre 2014 e 2018

A grande recessão brasileira foi a queda mais acentuada na atividade econômica no Brasil entre o final da Segunda Guerra Mundial e a pandemia de Covid-19. Esta crise econômica pode ter consequências negativas duradouras e não antecipadas sobre a insegurança alimentar (IA) e o bem-estar subjetivo (BES). Além disso, o BES está cada vez mais ligado ao uso de serviços de redes sociais (SRS). O artigo utilizou dados da Pesquisa Mundial de Valores (WVS) e modelos logísticos e logísticos ordenados para testar empiricamente algumas hipóteses. Os resultados empíricos mostraram que: IA está negativamente correlacionada com a satisfação com a vida, mas não com a felicidade; IA não está relacionada ao uso de SRS, pois ainda poucas pessoas os utilizam e os grupos populacionais que sofrem de IA pouco se sobrepõem aos que usam SRS diariamente; BES teve relações positivas com SRS quando o uso não era muito disseminado; as associações entre BES e o uso de SRS tornaram-se negativas à medida que o uso de SRS se tornou mais disseminado.

Palavras-chave: Insegurança alimentar. Bem-estar subjetivo. Redes sociais. Felicidade. Satisfação com a vida.

Resumen

Inseguridad alimentaria, bienestar subjetivo y uso de redes sociales en Brasil entre 2014 y 2018

La gran recesión brasileña fue la más marcada caída de la actividad económica en Brasil entre el final de la Segunda Guerra Mundial y la pandemia de COVID-19. Esta crisis económica puede tener consecuencias negativas a largo plazo e imprevistas sobre la inseguridad alimentaria (IA) y el bienestar subjetivo (BES). Además, BES está cada vez más ligado a la popularización de las redes sociales. Con datos de la World Value Survey (WVS) y modelos logísticos y logísticos ordenados se usaron en este artículo para corroborar empíricamente algunas hipótesis. Los resultados mostraron que la IA estaba más asociada a la satisfacción con la vida que a la felicidad, y se correlacionaba de manera negativa con la satisfacción con la vida, pero no con la felicidad. A su vez, la IA no se relacionaba con el uso de redes sociales, ya que la población que sufre de IA se superponen poco con quienes las usan. Por su parte, el BES mostró relaciones positivas con el uso de las redes sociales cuando su uso aún no estaba generalizado, pero las asociaciones entre el BES y el uso de las redes sociales se volvieron negativas a medida que su uso se generalizó.

Palabras clave: Inseguridad alimentaria. Bienestar subjetivo. Redes sociales. Felicidad. Satisfacción con la vida.

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