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Loss of Financial Well-Being in the Covid-19 Pandemic: first evidences from a Websurvey

Perda de Bem-Estar Financeiro na Pandemia Covid-19: evidências preliminares de um Websurvey

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ABSTRACT
To assess the loss of Financial Well-being due to the pandemic. A websurvey was conducted with Brazilian citizens and the data were analyzed using descriptive statistics and tests of mean difference. The results indicate the loss of Financial Well-Being occurs mainly for individuals who have had a decrease or a total loss of income since the pandemic. Individuals with the greatest falls in the level of financial Well-being are those who have dependents, have no job stability, with lower incomes and that did not have financial reserves before the pandemic. The loss of Financial Well-being is a public health problem once it relates to other aspects of life such as levels of general Well-Being, happiness, satisfaction, social relationship and quality of life, and may be associated with increased anxiety and depression.

Keywords: Covid-19. Financial management. Income. Well-being.

RESUMO
Avaliar a perda de Bem-Estar Financeiro em virtude da pandemia. Foi realizado um websurvey com cidadãos brasileiros e os dados foram analisados a partir de estatísticas descritivas e testes de diferença de média. Os resultados indicam a perda de Bem-Estar Financeiro principalmente para os indivíduos que tiveram uma diminuição ou uma perda total da renda desde a pandemia. Os indivíduos com maiores quedas são os que possuem dependentes, sem estabilidade empregatícia, com menores rendas e que não possuíam reservas financeiras antes da pandemia. A perda de Bem-Estar Financeiro é um problema de saúde pública na medida em que se relaciona com outros aspectos da vida, como níveis de bem-estar geral, felicidade, satisfação, relacionamento social e qualidade de vida, e pode estar associado com aumento da ansiedade e depressão.

Palavras-chave: Administração financeira. Bem-estar. Covid-19. Renda.

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INTRODUCTION

The new coronavirus (COVID-19) spread quickly around the world, which led the World Health Organization to declare, in March 2020, the pandemic. Without an approved vaccine, countries were forced to adopt measures such as quarantine and social distancing, in order to reduce contagion. Flattening the disease curve, that is, slowing down the spread of Covid-19 in space and time[1], is essential to reduce the risk of healthcare system collapse.

Such measures have important psychological, social and economic effects. From a psychological point of view, situations of anxiety, stress and anguish are common[2]. As for social aspects, quarantine and social isolation require rapid changes in the behavior of the populations involved and impacted by the disease. However, this change, depending on social norms and cultural customs, can be accompanied by undesirable consequences for individuals[3,4,5]. Studies already indicate, for example, that such changes promote a reduction in quality of life[6,7].

From an economic point of view, there is a visible impact on the increase in unemployment and financial difficulties of many companies, mainly micro and small. In this context, the secretary-general of the Organization for Economic Cooperation and Development (OECD), released the organization's latest estimates, showing that the pandemic will directly affect sectors that represent up to one third of GDP (Gross Domestic Product) in the main economies. The forecast is that for each month of restriction, there will be a loss of 2 percentage points in the annual GDP growth[8], bringing direct impact to variables such as employment and income.

In this scenario, citizens are afraid of losing jobs or are faced with reduced wages. Many informal workers are prevented from obtaining income, as they cannot perform their activities and the most vulnerable population starts to depend almost exclusively on government financial aid and food donations. Situations that tend to negatively impact the perception of financial well-being[9,10,11,12].

In an objective view, financial well-being refers to the classification obtained by each individual in relation to the adequacy of their income to meet their general needs[13]. In a subjective view, it is related to general well-being, and represents the state in which the individual is able to fully meet his/her current and ongoing financial obligations, thus feeling secure about his/her financial future[14].

Thus, the goal of this study was to assess the loss of financial well-being of individuals due to the pandemic because the economic crisis arising from the pandemic generates direct consequences for financial situation, consequently altering their perception of financial well-being. The loss of financial well-being is a relevant public health problem insofar as it relates to other aspects of life such as levels of overall well-being, happiness, satisfaction, social relationships and quality of life[15]. And an imbalance in financial well-being may be associated with increased levels of anxiety and depression, violent behavior and, consequently, greater demands on the health system[16]. Knowing the impact of the pandemic on the financial well-being of families can help public managers better understand the behavior and needs of citizens and, therefore, assist in building disease prevention mechanisms and strategies to bring new insights to optimize the pandemic response.

METHODOLOGY

A websurvey survey was carried out with a convenience sample. The population is made up of 211,439,266 Brazilians. A total of 1,230 individuals accessed the instrument, eight of whom after reading the Informed Consent Form (ICF) preferred not to participate, making a final sample of 1,222 participants.

For data collection, a questionnaire composed of 2 main sections was elaborated. The first section was developed to operationalize the perception of financial well-being, the questions were adapted from the scale proposed by CFPB (2015b)[17] on a Likert scale (1-Much worse, 2-Worse, 3-Equal, 4-Improved, 5-Much improved). The second section contained questions about the profile and income of the respondents. The instrument was evaluated by three experts for content analysis and a pre-test was performed with ten individuals from different profiles.

To apply the questionnaire, the Google Forms platform was used. Invitations to participate in the survey were sent via social media, without promotion, and e-mail, between the 2nd and the 20th of May, 2020. The promotion on Facebook was made through the institutional page of the Federal University of Santa Maria (UFSM). The research was approved by the UFSM Research Ethics Committee (CAAE 30235020.2.0000.5346), the interviewees read the ICF before agreeing to participate. The instrument was completely anonymous, without the collection of respondents' internet protocols and data privacy guaranteed by the confidentiality term.

As data analysis techniques, descriptive statistics and mean difference tests were performed. The significance level of 5% was adopted. The Student's t-test is a parametric test that serves to assess the mean of two groups when data assume a normal distribution, in order to determine whether the t-test is homoscedastic or heteroscedastic, a test for equality of variances was applied[18]. To determine whether there was a difference in the mean for variables with more than two groups (age, marital status, educational level, occupation, among others), the Analysis of Variance (ANOVA) was applied, which allows the simultaneous comparison of the mean of several groups[19]. This process was performed using One-Way ANOVA performed in three tests: homogeneity of variance, ANOVA or F of Welch and Post Hoc HDS Tukey's test or Post Hoc by Games-Howell test. First, the Levene test was used to test the homogeneity of variances, that is, to evaluate the equality of variances between the groups that were investigated. Thus, for the test, the null hypothesis was that the differences between the variances are zero (sig.> 0.5) and the alternative hypothesis that the variances are different (sig. <0.5), disregarding thus the assumption of homoscedasticity[20].

Following the observations of variance homoscedasticity, the F-test was performed. This test aimed to evaluate the null hypothesis of equivalent means of groups on a dependent variable[18]. Otherwise, the F-test aimed to average several groups and check for significant differences in at least one group. If there is a significant difference (sig <0.5), it indicates the existence of a mean difference in at least one of the groups compared. When the test does not show significance (sig> 0.5), it represents that in the investigated sample there is no case in which the mean value of the groups under analysis is high to the point of presenting statistical significance[18]. It should be noted here that this test is only applied if the assumption of homogeneity of variances is met.

If the Levene's test has presented a significant result in relation to the non-rejection of the alternative hypothesis, the Welch F-test was used, which is more robust for equality tests of means[18,20]. If the F-test showed significance, the next step was to perform the Tukey's Post Hoc HSD test. This test is used to indicate the differences in means between groups that have shown to be significant (HAIR et al., 2009). Tukey's HSD test was chosen among several Post Hoc tests, as it is the most suitable for analysis of multiple comparisons. It is noteworthy that when there was a failure of homoscedasticity, the Games-Howell Post Hoc test was used, as it is specific to this situation and shows a better performance[20].

RESULTS AND DISCUSSION

Table 1 lists the profile of respondents.

Table 1. Profile of respondents

Variable	Alternatives	Frequency	Percentage
Sex	Male	747	61.1%
	Female	469	38.4%
	Declined to answer	6	0.5%
Age	From 18 to 29 years	328	26.8%
	From 30 to 36 years	283	23.2%
	From 37 to 47 years	328	26.8%
	Above 47 years	283	23.2%
Marital status	Single	467	38.2%
	Married/Stable union	618	50.6%
	Divorced	120	9.8%
	Another situation	17	1.4%
Do you have children?	No	666	54.5%
	Yes, 01 child	235	19.2%
	Yes, 02 children	232	19.0%
	Yes, 03 children or more	89	7.3%
Occupation	Wage earner, with a formal contract	203	16.6%
	Wage earner, without a formal contract	31	2.5%
	Public Employee	494	40.4%
	Self-employed	121	9.9%
	Businessman	63	5.2%
	Retired	43	3.5%
	Student	157	12.8%
	Unemployed (looking for a job)	35	2.9%
	Another situation	75	6.1 %

Source: Research data (2020)

Most participants are male (61.1%) and the predominant marital status among respondents is married/in a stable union, representing 50.6% sample. As for the variable *Age*, it can be seen that the groups formed were similar in percentage terms. A characteristic that stands out among respondents was the fact that 54.5% of them do not have children. Finally, two groups call attention to the occupation: "Public employee", which represents 40.4% sample and "Wage earner with a formal contract", representing 16.6% sample.

In order to demonstrate the changes in the financial situation during the pandemic and the income of the sample, Table 2 was elaborated.

Table 2. Income situation of respondents

Variable	Alternatives	Frequency	Percentual
Income	No own income	73	6.0%
	Up to R$1,045.00	85	7.0%
	Between R$ 1,045.01 and R$ 2,090.00	139	11.4%
	Between R$ 2,090.01 and R$ 3,135.00	126	10.3%
	Between R$ 3,135.01 and R$ 4,180.00	110	9.0%
	Between R$ 4,180.01 and R$ 6,270.00	170	13.9%
	Between R$ 6,270.01 and R$ 10,450.00	228	18.7%
	Between R$ 10,450.01 and R$ 15,675.00	173	14.2%
	Above R$ 15,675.00	118	9.6%
Dependents	None	485	39.7%
	One	308	25.2%
	Two	235	19.2%
	Three	124	10.1%
	Four or more	70	5.8%
With the pandemic, what happened to your income/ salary?	Remained the same or increased.	764	62.5%
	Reduced	387	31.7%
	I lost all my income.	71	5.8%
With the pandemic, what happened to your financial reserves?	I had no financial reserves before the pandemic. (1)	340	27.8%
	I have a reserve and I haven't had to use it yet. (2)	648	53.0%
	I have a reserve, but I'm already using it. (3)	179	14.6%
	I had a reservation, but I already used all the resources (4)	55	4.6%

Source: Research data (2020)

It can be seen that most participants have an income of R$ 6,270.01 and R$ 10,450.00 (18.7%), followed by those who declared to have between R$ 10,450.01 and R$ 15,675.00 (14.2%). A point that stands out is the fact that almost 40% of the sample claims to have no dependents. The joint analysis of these two variables leads to an interpretation that the people investigated would not have too many expenses with the family and could maintain themselves for a period of time, if they stopped receiving remuneration.

The results in Table 2 also demonstrate that the income/wage of 62.5% respondents remained the same or increased, and that only 5.8% lost all their income. It can also be seen that, regarding financial reserves, 53.0% say they have some reserve and have not yet had to use it. This result is understandable in view of the previous information on the respondents' income/wage. A fact that requires attention from government authorities is that 27.8% had no financial reserves before the pandemic and 4.5%, had a reserve, but has already used all resources. Since people do not have the financial resources to meet their basic needs, problems parallel to the pandemic (other than just being infected with the disease) can occur, such as increased poverty and psychosocial illnesses. In addition, the percentage of people who are left without resources over time can increase, which tends to make these problems even worse.

To assess the perception of financial well-being, Table 3 was constructed, as well as the overall mean of responses and a comparison between groups formed by the respondents' income situation.

Table 3. Descriptions of the financial well-being scale

Perceptions of Financial Well-Being	Mean	Income situation		
		Remained the same or increased	Reduced	I lost all my income
The perception that I can handle an unexpected big expense	2.51	2.66	2.37	1.62
The perception that I am safeguarding my financial future	2.41	2.59	2.23	1.45
My feeling that I will never have the things I want in life	2.74	2.82	2.71	2.01
My feeling that I can enjoy life because of the way I am managing my money	2.73	2.89	2.61	1.72
My feeling that I'm just surviving financially	2.73	2.89	2.58	1.83
My concern that the money I have may not be enough	2.39	2.60	2.14	1.42
My ability to make money left over at the end of the month.	2.86	3.19	2.45	1.65
My ability to keep finances up to date	2.88	3.14	2.57	1.75
The control that my finances have over my life	2.84	3.02	2.65	1.92
My possibilities to buy a gift (wedding, birthday, etc.) without jeopardizing my monthly finances	2.51	2.79	2.16	1.3
FACTOR: Financial Well-Being (FWB)	2.66	2.86	2.45	1.67

Source: Research data (2020)

In Table 3, one fact is unanimous in all matters: the perception of Financial Well-being of those who say they have "lost all income" or that their income "has decreased" is worse compared to the group whose income remained the same or increased. Most responses in the group that lost income are less than two, indicating a worsening in the perception of Financial Well-being, with emphasis on a greater worsening in the feeling that it is guaranteeing its financial future and in the concern that money may not be enough. Such results are in line with studies that indicate a direct association between financial well-being and income[12,21] and that financial shocks lead to loss of well-being[10,11].

It should also be noted that these issues also present mean values of around two for the group with reduced income due to the pandemic, for which the perception of financial well-being also worsened due to the pandemic, but in a way less expressive than for the group that lost all income. On the other hand, for the group whose income remained the same, it is observed that the mean perception of Financial Well-being remained relatively stable.

To assess changes in the level of Financial Well-being according to other profile variables, t-tests and ANOVA were applied (Table 4).

Table 4. Mean difference tests for profile variables

Variables	Financial Well-being	
	Value	*Sig.*
Sex[1]	-1.682	0.630
Age[2]	0.629	0.596
Marital status[2]	0.414	0.743
Have children?[2]	2.165	0.071
Occupation[2]	8.343	0.000
Income[2]	11.385	0.000
Dependents[2]	6.859	0.000
Income situation	124.966	0.000
Reserve situation	122.527	0.000

Source: Research data (2020)

Obs. (1) t-test t; (2) ANOVA

The results indicate that no significant differences were found for variables “sex”, “age”, “marital status” and “have children”. For the other variables studied, differences in the perception of financial well-being were detected (*sig* <0.005). To show the differences in means between the groups formed by the respective variable, post hoc tests were applied, the results of which are listed in Table 5.

It appears that, in relation to the Occupation, the group of individuals formed by those who are “Unemployed (looking for a job)” has a worse perception of Financial Well-Being in relation to practically all other groups. The main difference is in relation to the group “Businessman” (0.903).

In relation to income, it was observed a pattern in differences: the perception of Financial Well-being is better for those groups with higher income compared to groups with lower income or who declared “not having own income”. The same is true for the “dependent” variable. In this, it appears that all those who answered that they have no dependents have a better perception of Financial Wellbeing than those who have dependents.

Table 5. Tukey HSD Post-Hoc test for mean difference

Variable	Comparisons		Difference	*Sig*
Occupation	Wage earner, with a formal contract	Self-employed	0.317	0.006
	Wage earner, with a formal contract	Unemployed (looking for a job)	0.764	0.000
	Wage earner, without a formal contract	Unemployed (looking for a job)	0.776	0.001
	Public employee	Self-employed	0.316	0.001
	Public employee	Student	0.217	0.034
	Public employee	Unemployed (looking for a job)	0.764	0.000
	Self-employed	Unemployed (looking for a job)	0.447	0.041
	Businessman	Self-employed	0.456	0.002
	Businessman	Student	0.356	0.032
	Businessman	Unemployed (looking for a job)	0.903	0.000
	Retired	Unemployed (looking for a job)	0.738	0.000
	Student	Unemployed (looking for a job)	0.547	0.002
	Another situation	Unemployed (looking for a job)	0.518	0.017
Income	Up to R$1,045.00	Between R$ 3,135.01 and R$ 4,180.00	-0.404	0.004
	Up to R$1,045.00	Between R$ 4,180.01 and R$ 6,270.00	-0.343	0.012
	Up to R$1,045.00	Between R$ 6,270.01 and R$ 10,450.00	-0.357	0.004
	Up to R$1,045.00	Between R$ 10,450.01 and R$ 15,675.00	-0.507	0.000
	Up to R$1,045.00	Above R$ 15,675.00	-0.404	0.003
	Between R$ 1,045.01 and R$ 2,090.00	No own income	0.386	0.007
	Between R$ 1,045.01 and R$ 2,090.00	Between R$ 3,135.01 and R$ 4,180.00	-0.305	0.028
	Between R$ 1,045.01 and R$ 2,090.00	Between R$ 6,270.01 and R$ 10,450.00	-0.259	0.026
	Between R$ 1,045.01 and R$ 2,090.00	Between R$ 10,450.01 and R$ 15,675.00	-0.408	0.000
	Between R$ 1,045.01 and R$ 2,090.00	Above R$ 15,675.00	-0.305	0.023
	Between R$ 2,090.01 and R$ 3,135.00	No own income	0.492	0.000
	Between R$ 2,090.01 and R$ 3,135.00	Between R$ 10,450.01 and R$ 15,675.00	-0.302	0.012
	Between R$ 3,135.01 and R$ 4,180.00	No own income	0.691	0.000
	Between R$ 4,180.01 and R$ 6,270.00	No own income	0.631	0.000
	Between R$ 6,270.01 and R$ 10,450.00	No own income	0.645	0.000
	Between R$ 10,450.01 and R$ 15,675.00	No own income	0.794	0.000
	Above R$ 15,675.00	No own income	0.691	0.000
Dependents	None	Two people	0.247	0.000
	None	Three people	0.253	0.007
	None	Four people or more	0.297	0.016
Income situation	Remained the same or increased.	Reduced,	0.412	0.000
	Remained the same or increased.	I lost all my income.	1.188	0.000
	Reduced.	I lost all my income.	0.776	0.000
Reserve situation*	(1)	(2)	-0.653	0.000
	(1)	(4)	0.507	0.000
	(2)	(3)	0.627	0.000
	(2)	(4)	1.160	0.000
	(3)	(4)	0.534	0.000

Source: Research data (2020).

Obs.: The numbers used to make comparisons on this variable are the same as the last variable in Table 2.

Finally, in the income situation, those who have lost all their income have a low level of Financial Well-being if compared to the other two groups, confirming the differences in Table 03. A similar analysis can be made with the "Situation of financial reserves". Those individuals who had a reserve have a higher mean perception than groups who did not have a reserve or who have already used up all their financial resources. The biggest difference (1.160) is found between group 2 (I have a reserve and I haven't had to use it yet) and group 4 (I had a reserve, but I already used all the resources).

FINAL CONSIDERATIONS

The COVID-19 pandemic, in addition to a huge public health emergency, is a broad-impact event. Governments are changing their policies to guarantee resources for the health system, financial aid to companies and financial aid to the most vulnerable population. A significant portion of the population is in a situation of reduced or total loss of income and with no prospect of regularizing the situation in the short term, which is leading to a perception of loss of financial well-being, as demonstrated in this paper.

In practical terms, with financial well-being one of the spectrum during and after the pandemic is that there may be an increase in the demand for treatment both for physical health and for psychological treatments, especially related to diseases such as depression, anxiety, stress, anguish. Therefore, the public manager has a double challenge. Efforts must be made to ensure that the health system does not collapse and, at the same time, take the social, economic and financial measures necessary to guarantee the survival of the most vulnerable people and prepare the country to come out of this crisis in conditions to resume growth.

The fact that the research was carried out via the internet due to the situation of social distancing, which makes it difficult to administer the research instruments in person, brings some limitations to the study. The first is because online research are potentially biased[22] and the second is the non-randomness of the sample. Thus, a sampling bias characteristic of this type of research is the low capacity to obtain answers from the most vulnerable population. In this sense, future research can specifically analyze this section of the population. Research is also promising to expand the discussion of the antecedents and consequences of the loss of financial well-being in the pandemic, especially the mental and psychological effects.

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