

# Student Life During Pandemic: Social Isolation, Remote Education and Life Satisfaction

## *Vida de Estudante Durante a Pandemia: Isolamento Social, Ensino Remoto e Satisfação com a Vida*

ISSN 2177-8310  
DOI: 10.18264/eadf.v10i3.1147

Kelmara Mendes Vieira<sup>1\*</sup>  
Gabrielle Fagundes Postiglioni<sup>1</sup>  
Géderson Donaduzzi<sup>1</sup>  
Caroline dos Santos Porto<sup>1</sup>  
Leander Luiz Klein<sup>1</sup>

<sup>1</sup> Universidade Federal de Santa Maria,  
Santa Maria – Rio Grande do Sul, Brasil.

\*[kelmara@terra.com.br](mailto:kelmara@terra.com.br)

### Abstract

The COVID-19 pandemic hit many countries in 2020, including Brazil, which adopted several measures to combat the virus, thus interfering in the life of society, especially with the demand for social isolation. To maintain teaching activities, the Federal University of Santa Maria initiated the Special Home Exercises Regime, for face-to-face courses. This study investigated social isolation, the adoption of remote education and the change in satisfaction with the lives of these students. For that, an online survey was adopted, whose answers were analyzed with descriptive statistics, exploratory factor analysis and multiple linear regression. The results indicate that the majority of students are practicing isolation and leaving home only to purchase essential products. In this process of “staying at home” students perceive a drop in productivity, changes in mood and feelings of anguish and anxiety. Satisfaction with life today is lower when compared to the period before the pandemic. However, most of them positively evaluate the efforts to maintain remote teaching activities, both in terms of the dynamics that are being developed and in terms of adherence to activities.

**Keywords:** COVID-19. Remote teaching. Social isolation. Satisfaction with Life.



Received 17/08/2020  
Accepted 21/09/2020  
Published 23/09/2020

### COMO CITAR ESTE ARTIGO

**ABNT:** VIEIRA, K. M. *et al.* Vida de Estudante Durante a Pandemia: Isolamento Social, Ensino Remoto e Satisfação com a Vida. **EaD em Foco**, v. 10, n. 3, e1147, 2020.  
doi: <https://doi.org/10.18264/eadf.v10i3.1147>

## Vida de Estudante Durante a Pandemia: Isolamento Social, Ensino Remoto e Satisfação com a Vida

### Resumo

A pandemia de COVID-19 atingiu muitos países em 2020, incluindo o Brasil, que adotou diversas medidas para combater o vírus, interferindo assim na vida da sociedade, especialmente com a exigência do isolamento social. Para manter as atividades letivas, a Universidade Federal de Santa Maria iniciou o Regime de Exercícios Domiciliares Especiais, para os cursos presenciais. Esse estudo investigou o isolamento social, a adoção do ensino remoto e a mudança na satisfação com a vida desses estudantes. Para isso adotou-se uma survey online, cujas respostas foram analisadas com a estatística descritiva, análise fatorial exploratória e regressão linear múltipla. Os resultados indicam que a maioria dos estudantes está praticando o isolamento e saindo de casa apenas para a compra de produtos essenciais. Nesse processo de “ficar em casa” os estudantes percebem queda na produtividade, alterações de humor e sentimentos de angústia e ansiedade. A satisfação com a vida hoje é menor quando comparada a do período anterior a pandemia. Contudo, a maioria avalia positivamente os esforços para a manutenção das atividades de ensino remoto tanto no que se refere às dinâmicas que estão sendo desenvolvidas quanto à aderência às atividades.

**Palavras-chave:** COVID-19. Ensino remoto. Isolamento social. Satisfação com a Vida.

## 1. Introduction

The beginning of 2020 was marked by a delicate scenario in several areas due to the Coronavirus Pandemic (COVID-19), which, in order to face it, is demanding changes in society's behavior. On January 30, 2020, the World Health Organization (WHO) declared a Public Health Emergency of International Concern (GOV, 2020). In Brazil, the existence of community transmission of COVID-19 was declared in March by the Ministry of Health (2020).

In view of this, several actions were adopted to prevail social isolation, through Federal, State and Municipal decrees, with the closure of commerce and schools, the release of activities only that are essential, considered indispensable to meet the needs of the population. Around the world, similar measures were taken by other countries.

Social isolation, that is, the recommendation to “stay at home”, adopted to curb the spread of COVID-19, has impacted the lives of Brazilians in different ways. For Bittencourt (2020), social isolation is uncomfortable and requires patience. Situations of anxiety, stress and anguish are common. People who tend to be effusive may suffer more from social isolation and look forward to meeting right away.

One of the consequences of the need for social isolation is the restriction of work and school activities. Schools were the first to be closed. Education institutions, regardless of the level of education, were forced to seek alternatives to maintain at least part of their activities, such as the Special Home Exercise Regime (REDE), which characterizes remote teaching and includes synchronous and asynchronous activities between teachers and students.

In this scenario, students, until then adapted and accustomed to face-to-face teaching, began to live with a double challenge: the need for isolation and learning based on remote activities, which lead to greater autonomy. According to Silveira et al (2020), what universities are using is characterized as remote teaching, considered an emergency measure for the atypical moment. Remote teaching consists of adapting to the use of technological resources and information technology tools, however, without changing the methodology of face-to-face activities, maintaining the pedagogical project of face-to-face teaching. In view of this, the activities were adapted as needed, to enable and facilitate the holding of classes and meetings through the available digital platforms (ALVES, 2020). The sudden change in the way the classes are held can create deficits in the quality of the courses, as there is no way to simply transfer what is done in person to virtual classrooms, since this practice requires other skills in the technical, human, political dimensions. -economic and different knowledge (KONRATH, TAROUCO AND BEHAR, 2009).

This scenario can bring significant changes to the student's life, both from an economic point of view and in the social and emotional aspects, since the balance of people and even of society as a whole can be affected by emergency situations like this one, which leave in its ballast human and material losses and extremely traumatic situational changes (SA, WERLANG E PARANHOS, 2008). Regarding people's behavioral responses to the pandemic, Kok et al. (2010) state that they can affect and generate social consequences. Such consequences can directly affect the satisfaction with life of individuals, that is, the positive or negative perception of the changes that occur in their lives (CAMPARA, VIEIRA AND POTRICH, 2017).

Thus, this study evaluates the perception of university students about the effect of social isolation, the change to remote teaching and the change in satisfaction with life. Among the variables, the research proposes to investigate how the students felt in the face of these changes, how much social isolation impacted on their lives and what their perception about the conditions of remote teaching, both in relation to use and in conditions of structure. For these reasons, this study can be considered innovative, as in addition to seeking to understand the impact of a recent phenomenon, until now, no other studies have been found that propose such an investigation.

The main value of this study is to seek the behavioral response and social satisfaction with the public health measures necessary to face and stop the pandemic. Understanding these effects can help the various management bodies – both at the Federal Government level and the management of other institutions – to seek alternatives that consider psychosocial aspects, aiming at renewing and improving contingency plans and a future agenda of measures to contain the possible negative effects both for teaching and economic, social or psychological of the COVID-19 pandemic.

## 2. Method

The Federal University of Santa Maria (UFSM) has 254 face-to-face courses, in which a total of 27,200 students are active and regularly enrolled (UFSM, 2020). For this population, and considering a sampling error of 3.1%, with 95% confidence, we have a sample of 965 students. The research was approved by the research ethics committee (CAAE: 30883020.4.1001.5346). The data collection instrument was made available online through the access link on the official portals and through the University's questionnaire system and also on social networks. The questionnaire has questions on social isolation (39), course and institution (05), remote learning (43), satisfaction with life (02) and profile (06). The initial part encompasses social isolation issues that aim to identify behavior in the face of social isolation and feelings related to social isolation. To obtain the answers, a scale of degree of agreement was used (1 - totally disagree, 2 - partially disagree, 3 - indifferent, 4 - partially agree, 5 - totally agree).

In the second block are questions related to the course and the educational institution, which stage of the course the student is in, if he is a scholarship holder, among others. The third block refers to remote

teaching in the face of social isolation, containing questions such as its opinion on the university's decision to adhere to remote teaching. This block has two constructs: the first, with 19 questions that measure the degree of agreement related to the subjects the student is studying; the other, with 18 questions about the suitability of subjects for remote teaching. For satisfaction with life, two more questions related to before and after the pandemic were asked, with a satisfaction scale composed of a quantitative question of eleven points (0 to 10). Finally, the profile of the interviewees was verified, with gender, age, marital status, own monthly income, occupation and children.

Data analysis took place in two phases: descriptive statistics and multivariate statistics. The first stage refers to the descriptive statistics of the variables in order to characterize the sample and describe the students' behavior in relation to each of the evaluated factors. In the second phase, factor analysis and multiple regression analysis were applied. In order to verify whether the factor analysis is appropriate for the sample, two tests were applied: Barlett's sphericity test and the Kaiser-Meyer-Olkin (KMO) test. To maintain the variables in the factorial analysis, the criterion of commonalities was used, with variables with commonalities greater than or equal to 0.5 being maintained. To estimate the factor loadings, the principal components method was used, and to define the number of factors, the criteria of eigenvalues greater than 1.0 and percentage of explained variance were used. As a rotation technique, normalized varimax rotation was used. To assess the level of reliability of the factors generated through factor analysis, Cronbach's Alpha was used, with values greater than 0.6 considered acceptable (HAIR et al., 2009).

Concluding the analyses, the study proposed to verify the impact of factors related to social isolation and remote teaching in the change in satisfaction with life, through a multiple regression analysis. Thus, a linear regression model was estimated using the ordinary least squares method. To verify normality and homoscedasticity, the Kolmogorov Smirnov (KS) and Pesarán-Pesarán tests were applied, respectively. To analyze the multicollinearity between the independent variables, the variance inflation factor (VIF) was used.

### 3. Analysis of results

The online survey was applied between March 21 and April 12, 2020; a total of 977 valid instruments were obtained. Among the respondents, there is a predominance of those who classify themselves as Cisgender Woman (61.6%) and Cisgender Man (28.4%). As for age, the average was 26.3 years with a standard deviation of 8.6, with emphasis on the ranges from 16 to 20 years and 24 to 30 years, with 27.9% and 25.5% respectively. Regarding income, 27.5% reported not having their own income, another 25% have an income of up to R\$1,045.00, and 19.5% have an income between R\$1,045.01 and R\$2,090.00. The predominant marital status is single, representing 77.3% of the sample. As for children, 85.4% reported not having and 8.5% have only one. The most representative occupation is that of people who dedicate themselves only to studies (42.1%) or receive some type of remuneration from activities in incentive grants (21.3%). Still on occupation, among those who checked the option "Others" (15.4%), informal workers and unemployed people looking for a job stand out.

Most are at the on-site undergraduate level (66.5%), followed by respondents at the master's level (17.3%). For the "Others" option, the most cited was the technical level and specialization course (2.5%). As for the stage they are in, the option with the most responses was the one that indicates that the student is starting the course now (30.1%), followed by the group that has 10 to 30% of the course completed (18.1%). Regarding work in research, teaching, extension or assistance grants, 75.9% of respondents do not have a paid grant.

Among the social isolation guidelines, most students said they are leaving home to purchase essential products (77.1%) and 20.9% declared that they are isolated without leaving home. Already 16.1% said they were leaving home to work, and a minority said going out for physical and leisure activities (7.2%) and to

buy non-essential products (1.9%). In order to identify how the students' routine is according to the social isolation guidelines, Chart 1 contains degrees of agreement and average of each variable.

**Chart 1:** Routine of students in the face of social isolation

Routine in the face of Social Isolation	Average	Percentages				
		totally disagree	partially disagree	Indifferent	partially agree	totally agree
Staying at home brought big changes in my life	3,98	3,9	9,1	12,3	34,8	39,9
Staying at home all the time makes me stressed	3,73	8,6	13,4	8,7	34,6	34,7
I believe that social isolation is effective in containing the spread of the coronavirus	4,77	1,7	1,2	0,8	10,5	85,7
I am confident that social isolation protects myself and my family from the coronavirus	4,68	1,3	2,6	1,2	16,3	78,6
I feel that my productivity has dropped due to social isolation	3,9	8,4	11	7,9	27,6	45,1
I have feelings of depression due to social isolation.	3,10	22,5	12,7	17,4	27,2	20,2
I have mood swings due to social isolation.	3,64	12,2	9,6	12,0	34,4	31,8
I have feelings of distress due to social isolation.	3,65	14,0	8,9	10,6	30,7	35,7
I have a change in appetite due to social isolation.	3,46	17,4	8,8	15,8	26,2	31,8
I have been drinking alcohol more frequently due to social isolation.	1,99	59,2	9,2	13,5	9,6	8,5
I have feelings of anxiety due to social isolation	3,73	13,1	9,0	9,2	28,9	39,8

Source: Survey data (2020)

It is noted that there is a high degree of student agreement with the effectiveness of social isolation in containing the spread of the coronavirus, and they are confident that social isolation protects themselves and their family against the coronavirus. These two concordances are in accordance with the guidelines of the Ministry of Health (2020), which advocates social isolation as essential to prevent an uncontrolled acceleration of the disease.

Regarding the feeling of a drop in student productivity, there are those (72.7%) who partially and totally agree. Most disagree that there has been an increase in alcohol consumption, but agree or completely agree that there is a change in appetite. As for the psychological effects of isolation, it can be observed that a large part of the sample indicates that mood swings and feelings of anguish and anxiety are occurring. Such results are in line with the study by Bittencourt (2020), which states that social isolation is uncomfortable and situations of anxiety, stress, anguish are common.

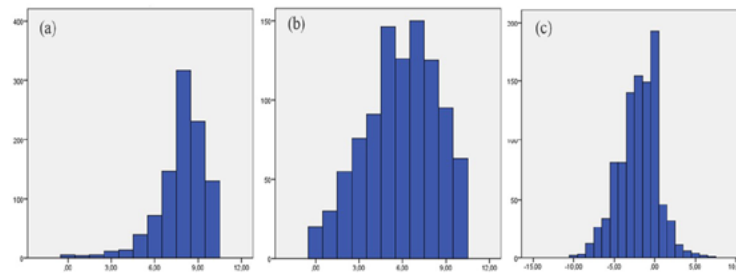
As for the practices of the measures, avoiding bars, restaurants and shopping malls (95.7%), wearing a protective mask (93.8%) and frequently washing hands with soap and water (91.9%). Regarding shopping behavior, 82.2% answered that they buy only the necessary items and 49.6% shop online. Regarding

occupation, (87.7%) indicate that they are carrying out distance school activities and (58.2%) are working at home.

In this sense, Garcia and Duarte (2020) list Non-Pharmacological Interventions (NFI) to face the COVID-19 epidemic, such as hand hygiene, respiratory etiquette and social distancing. Among the NFI presented by the authors, most UFSM students answered that they frequently wash their hands with soap and water, use the cough etiquette (when coughing and sneezing, use the forearm, if they do not have a tissue) and point out to maintain the recommended distance from other people. When asked about the number of days they believed social isolation would still remain, the average response was 69 days, with a lower limit of 10 days and a maximum of 500 days.

After analyzing the situation of social isolation, we sought to analyze the change in students' satisfaction with life. Students assigned grades from zero (not at all satisfied) to ten (completely satisfied) for satisfaction with life before and since the beginning of the pandemic. Figure 1 presents the frequency distributions before the pandemic, since the beginning of the pandemic and the variation in satisfaction.

**Figure 1:** Degree of satisfaction with life before the pandemic (a), degree of satisfaction with life at this time (b) and variation between these (c)

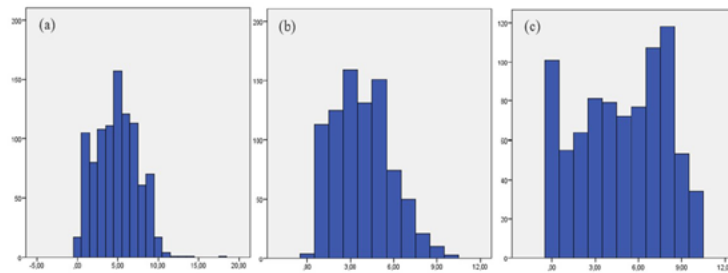


Source: Survey data (2020)

For Satisfaction with Life before the pandemic (a), the standard deviation was 1.678 and the average of the responses was 7.86, which can be considered a good degree of general satisfaction with life, as it tends more to the level "Very satisfied". As for satisfaction with life at the current moment (b), the responses showed a standard deviation of 2.489 and an average of 5.89, which can be considered an intermediate degree, as it tends more towards the "satisfied" level. For a better assessment of the change, the difference between the assessment since the beginning of the pandemic and before the pandemic was computed. Variation (c) shows that, for the majority, there was a drop in life satisfaction, which averaged 2 points on the scale.

In the next stage of the research, we sought to assess the students' perception of remote teaching. Most respondents (86.1%) stated that they are having activities in the subjects they are enrolled in and (66%) consider the educational institution's decision to allow them during the suspension of face-to-face classes to be appropriate. Figure 2 shows the number of disciplines in which the student is enrolled, in how many activities he is taking and his satisfaction with remote learning activities.

**Figure 2:** Number of subjects they are enrolled in (a), number of subjects they are taking activities in (b) and satisfaction with remote learning activities (c)



Source: Survey data (2020)

Data (a) show that respondents are enrolled in an average of 4.88 courses (standard deviation 2.598). Some respondents reported “0 subjects” justifying having suspended enrollment for the semester. And, for the option are having activities, the mean is 3.81 (standard deviation 1.982). For satisfaction with activities (c), on a scale from zero (not at all satisfied) to ten (completely satisfied), the mean response was 4.84 (standard deviation 3.014), indicating respondents’ dissatisfaction with activities.

When asked what their decision would be if they had the opportunity to decide on the implementation of distance activities, the highest percentage of answers was “There would be no distance activity and the school semester would be canceled, that is, in the year 2020 it would be possible to attend only one academic semester” with 26.3% of respondents. Another similar portion (23.8%) considers that the use of distance learning activities should be at the discretion of each professor, and the given workload would be computed for the first half of 2020 for subjects that have distance learning (23.8 %).

The adoption of remote activities at the institution in the face of the pandemic scenario brought a totally new teaching method to most students and teachers. Thus, to assess the students’ perception of this change, two scales were used: The first, called Dynamics of Remote Teaching, with a 5-point Likert scale, 1 – Totally Disagree and 5 – Completely Agree; The second dimension, Adherence to Remote Learning, with a 5-point Likert scale, 1 – Totally Inadequate and 5 – Totally Adequate. Charts 2 and 3 show the results for each of the dimensions.

**Chart 2:** Composition of the Dynamic dimension of Remote Learning: Cronbach's alpha, mean and variance of factors and mean and factor loading of variables

Question	Average	Load	variance
<b>Factor 1: Support from teachers (Cronbach's Alpha: 0.918)</b>	3,77	-	
When I have difficulties, the teachers show interest in solving them.	4,06	0,843	45,88%
Teachers demonstrate a positive attitude.	3,91	0,817	
Teachers are sensitive to meeting student needs.	3,94	0,812	
The time of the professors, dedicated to solving the doubts of the students, is 4.	3,74	0,746	
The teacher responds promptly to my queries/doubts.	3,78	0,740	
The answers provided by the professor to the students' doubts/questions regarding the content of the course are adequate.	3,82	0,701	
Teaching materials are up-to-date and of good quality.	3,61	0,646	
Feel free to ask questions to teachers	3,32	0,499	
<b>Factor 2: Student Adequacy to Remote Activities (Cronbach's Alpha 0.861)</b>	2,79	-	
I am adequately managing the time to dedicate myself to my studies.	2,51	0,810	10,82%
My ability to study alone is helping me to develop activities.	2,81	0,780	
I am motivated to carry out the activities of the disciplines.	2,45	0,771	
The courses are meeting my expectations.	2,77	0,591	
My ability to use the technological resources of the course (e.g. internet, e-mail, forums, audio and video tools, among others) is helping me to develop the activities.	3,43	0,590	
<b>Factor 3: Mastery of Technology (Cronbach's Alpha 0.808)</b>	3,86	-	
The infrastructure (e.g. computer, internet, among others) that I have to study at a distance is adequate.	3,87	0,790	6,35%
I can properly use the tools of the virtual learning environment (e.g. forum, chat, messages, among others) during the disciplines.	3,69	0,675	
I have easy access (e-mail, chats, forums, etc.) to the professors, in order to help me with my doubts.	4,03	0,628	

Source: Survey data (2020)

In the Dynamics of Remote Teaching dimension, to meet the commonality criterion, the variable: "The syllabus was presented in the subjects" (commonality 0.419). The KMO measure presented a value of 0.935, Bartlett's sphericity test was significant, confirming the factorability of the data. As for the variance, it appears that the four factors that presented eigenvalues greater than one, together, explain 63.05% of all variance. It is noteworthy that three of them showed satisfactory reliability, according to Cronbach's Alpha, with values of 0.918, 0.861 and 0.808, and the fourth factor "Student Autonomy" (Cronbach's Alpha 0.589) was excluded from the analysis, because, according to Hair et al (2009), in an exploratory analysis, Cronbach's Alpha must have a value greater than 0.6 for the factor to have internal consistency.

The Teachers' Support factor was presented as the most relevant for the formation of the students' perception and corresponds to the variables that evaluate the quality of the materials available, the



interest and attention of the teachers with the students who need support to carry out the activities. proposals. The average of 3.77 for this factor suggests a high degree of agreement with the importance of the teacher's role in this context, in the same way that the variables that highlight the teacher's participation in this process have the highest factorial loads. Such results are in line with studies such as that by Lott et al. (2018), which indicates support for learning as one of the main determinants of student permanence in distance learning courses.

The Student Adequacy to Remote Activities factor, composed of the variables that measure the efforts of students in order to adapt to remote teaching, reached the second highest level of explained variance (10.82%), but with an average of 2.79, indicating a level of indifference with adapting to the teaching modality, highlighting the low average (2.45) of the variable "I am motivated to carry out the activities of the discipline". It is observed that adapting to the NETWORK education system has not been an easy task, as it requires autonomy, self-motivation and self-discipline from the student (Farias and Dias, 2010) - factors that can be difficult to maintain in a pandemic scenario which can lead to psychological effects resulting from social isolation.

Differently from the previous one, the Domain of Technologies factor presented a high average of agreement (3.86), understanding that the use of information technologies does not represent difficulties for the responding students. Of this factor, the high average of agreement (4.03) stands out for the variable "I have easy access (e-mail, chats, forums, etc.) to teachers, in order to help me with my doubts", noting the ease of interaction between professors and students. It is observed that the use of the Moodle system as an auxiliary instrument in face-to-face teaching allowed that, when switching to online teaching, the student already had at least a basic command of one of the technologies most used by teachers.

From the results verified for the Dynamic dimension of Remote Learning, considering that two averages, of a total of three factors analyzed, were close to the value 4, on a scale that varies from 1 to 5, it is understood that most of of respondents agree with the statements that suggest the availability of resources and skills of teachers and students for Remote Learning.

In the dimension Adherence to Remote Teaching, the KMO measure presented a value of 0.952, Bartlett's test of sphericity the value of 7199.758 (Sig 0.000; GL 136). Confirming the factorability of the data, Chart 3 was created to present the results.

**Chart 3:** Composition of the Dimension Adherence to Remote Learning: Cronbach's alpha, mean and variance of factors and mean and factor loading of variables

Question	Average	Load	Variance
<b>Factor 1: Adaptation of Didactic Resources (Cronbach's Alpha 0.949)</b>	<b>3,44</b>	-	
Conducting online classes.	3,36	0,812	52,63%
Learning interactions (between students, between students and teacher) in subjects.	3,39	0,776	
The quality of feedback/guidance provided by the teacher regarding my entries.	3,38	0,758	
The video lessons made available.	3,46	0,741	
The provision of tools (eg forums, chat, messages, among others) in the virtual learning environment for student and teacher interaction.	3,64	0,737	
The adequacy of the subjects to my expectations.	2,81	0,727	
The evaluations of the subjects.	3,23	0,711	
The readiness (speed) of the professor's response to my queries/doubts.	3,59	0,707	
The content of exchanged messages.	3,76	0,704	
The duration (time) of the activities of the subjects.	3,39	0,653	
The quality of the didactic materials of the disciplines.	3,63	0,642	
Access to the didactic material used in the disciplines.	3,69	0,642	
The number of activities proposed in relation to the workload of the subjects.	3,18	0,621	
Access to the virtual learning environment of the disciplines.	3,70	0,578	
<b>Factor 2: Student Adaptation (Cronbach's Alpha 0.675)</b>	<b>3,61</b>	-	
The conditions of the study environment at home.	3,30	0,741	6,55%
My familiarity with using the computer.	4,14	0,739	
My available time to carry out the disciplines.	3,38	0,693	

Source: Survey data (2020)

All variables showed satisfactory factor loadings, and the two factors that showed eigenvalues greater than one, together, explain 59.18% of all variance, which also characterizes them as satisfactory. Also noteworthy is the excellent reliability of both, indicated by Cronbach's Alpha.

Among the factors, the Adaptation of Teaching Resources corresponds to the variables that measure the quality of teaching resources and the availability of technologies used by teachers and available to students. Based on the average (3.44), it is understood that the respondents consider the resources adequate for Remote Learning.

The second factor, Student Adaptation, assesses the student's ability to adapt to the distance learning modality. With an average of 3.61, this factor suggests that most respondents consider the adaptation to Remote Learning to be adequate. The conditions of the study environment at home was the variable with the lowest average in this factor, highlighting that, for some students, there may be difficulties with access to the internet, the availability of appropriate equipment or a suitable place to study. In a pandemic context, with the determination of social distance and the incentive to "stay at home", the family

environment necessarily undergoes major changes, with the possibility of greater circulation of people, greater demand for internet use and the need to share computer equipment, which can make it difficult for students to adapt to online teaching.

With the objective of knowing the students' perception about the adoption of Social Isolation, a scale called Perception of Social Isolation was used. Chart 4 shows the factorial of the scale.

**Chart 4:** Perception of Social Isolation: Cronbach's alpha, mean and variance of factors and mean and factor loading of variables

Variables	Average	Load	Variance
<b>Factor 1: Feelings during Social Isolation (Cronbach's Alpha: 0.913)</b>	<b>3,57</b>	-	53,55%
I have feelings of distress due to social isolation.	3,65	0,900	
I have mood swings due to social isolation.	3,64	0,889	
I have feelings of anxiety due to social isolation.	3,73	0,875	
I have feelings of depression due to social isolation.	3,10	0,856	
"Staying at home" all the time makes me stressed.	3,73	0,778	
<b>Factor 2: Effectiveness of Social Isolation (Cronbach's Alpha: 0.831)</b>	<b>4,73</b>	-	24,00%
I am confident that social isolation protects myself and my family from the coronavirus.	4,68	0,924	
I believe that social isolation is effective in containing the spread of the coronavirus.	4,77	0,922	

Source: Survey data (2020)

To meet the commonalities criterion, four variables were excluded: The KMO measure had a value of 0.8245, Bartlett's sphericity test was significant, confirming the factorability of the data.

The first factor, called Feelings during Social Isolation, corresponds to 53.55% of the total explained variance and is composed of variables that aim to investigate possible changes and emotional and behavioral oscillations of students during social isolation. The factor average is 3.57, which suggests a high degree of agreement regarding negative changes in respondents' feelings, emotions and behaviors. Such results are in line with studies that indicate that the COVID-19 pandemic has caused psychological effects, such as anxiety, depression and different levels of stress (Cao et al., 2020, Qiu *et al.*, 2020, Wang et al., 2020).

The second factor, Effectiveness of Social Isolation, is made up of only two variables and has an average of 4.73, showing a high degree of agreement among respondents regarding the effectiveness of Social Isolation as a measure to combat the coronavirus. This perception is fundamental for the adopted measures to effectively contribute to the control of the disease, since distancing is the main measure to combat the spread of COVID-19.

The influence of the studied variables on Satisfaction with Life was verified through linear regression analysis, where Satisfaction with Life in the pandemic represents the dependent variable, and the seven factors found through factor analysis, as well as the variables age and the five binary variables, represent the independent variables. The binary variables were: Dummy gender (1- woman and 0 man), Dummy income (1 means no income and 0 existence); Dummy marital status (0 represents others and 1 is married),

Dummy children (0 without children and 1 has children), Dummy occupation (0 other occupations and 1 student only). For the estimation of the linear regression model, Ordinary Least Squares (OLS) were used; the estimated parameters are presented in Chart 5.

**Chart 5:** Values and significance of the estimated regression model coefficients for Life Satisfaction in the pandemic.

Model	Coefficients	t test		VIF
		T	Sig.	
Age	-0,006	-0,147	0,883	2,316
Factor 01 Feelings in Isolation	-0,451	-14,237	<b>0,000</b>	1,291
Factor 02 Effectiveness in Isolation	0,087	3,036	<b>0,002</b>	1,056
Factor 03 Teacher Support	-0,008	-0,176	0,860	2,933
Factor 04 Adaptation to Remote Learning activities	0,222	4,939	<b>0,000</b>	2,591
Factor 05 Mastery of Technology	0,100	2,250	<b>0,025</b>	2,519
Factor 06 Adaptation of Teaching Resources	0,008	0,158	0,874	3,652
Factor 07 Student Adaptation	-0,019	-0,440	0,660	2,406
<i>Dummy</i> Gender	0,073	2,554	<b>0,011</b>	1,041
<i>Dummy</i> Income	-0,061	-1,872	0,062	1,346
<i>Dummy</i> Marital Status	0,105	2,992	<b>0,003</b>	1,569
<i>Dummy</i> Children	0,013	0,320	0,749	2,054
<i>Dummy</i> Occupation	0,006	0,184	0,854	1,554

Source: Survey Data (2020)

The result has an adjusted  $R^2$  of 0.414, that is, the independent variables explain 41.4% of the variation in satisfaction with life. As for the VIF indices, all were close to 1, confirming the absence of multicollinearity. The KS test (value 0.479 and Sig. 0.976) indicates a normal distribution in the residues and the Pesarán-Pesarán test indicated homoscedasticity.

Six independent variables influence Satisfaction with Life. The variables effectiveness in isolation, adaptation to remote learning activities, mastery of technology and the dummy gender and marital status exert a positive influence. On the other hand, the feeling of isolation variable has the opposite direction, negatively influencing satisfaction with life. Females and married people have greater satisfaction when compared to males and singles. Comin et al. (2016) collaborate by pointing out in their study that married people tend to respond more frequently to positive emotions and well-being.

The regression analysis confirmed the positive influence of the perceived effectiveness of social isolation on life satisfaction. Adapting remote learning activities and mastering technology also contributed positively to students' satisfaction with life. Such results are in line with Bresciani and Conto (2012), who argue that technologies, in general, help in the evolution of man and act as a resource to promote the well-being (physical and mental) of the user.

The feeling of isolation factor had the highest coefficient, indicating its importance for satisfaction with life. The negative influence of feelings in isolation is in line with studies that claim that individuals who adhere to social isolation are more vulnerable to manifesting mental health disorders, due to deprivation and social restraint, with symptoms of psychological distress appearing, in particular, related to stress, anxiety and depression. It is also noteworthy that the sociodemographic characteristics, such as gender,

children, occupation and the support factors of teachers, adaptation of didactic resources, student adaptation, were not significant.

## 5. Final considerations

The COVID-19 pandemic has affected the lives of many people around the world, especially due to the adoption of non-pharmacological measures in order to control and reduce the spread of the disease, since there is still no vaccine. As a result of these measures, schools were among the first to be closed. According to MEC data (Brazil, 2020), there are currently 2.36 million people in Brazil connected to the federal education network, of which 1.94 million have their activities suspended. Of the 69 federal universities, 57 have their activities suspended, affecting the routine of 934,077 students. Among those that maintained activities, some adopted the Special Home Exercises Regime (REDE), which consists of carrying out activities through remote teaching.

This study aimed to analyze the lives of students during the pandemic, especially regarding social isolation, remote activities and satisfaction with life. The results indicated that most students understood the importance of meeting the guidelines of health agencies and indicated that they only leave home to purchase essential products. It was also evident that they perceive social isolation as effective in containing the spread of the coronavirus and believe that they are protecting themselves and their families. There was a reduction in the levels of Satisfaction with Life since the beginning of the pandemic by approximately 2 points, when comparing the results obtained to the period prior to the pandemic, which is in line with the observations of Nogueira (2001), who presents the importance of interaction as a way to give meaning to experiences and offer support, important elements in the process of adapting to new routines.

The results also suggest that there are opportunities for improvement regarding the activities that are developed and presented to students in the remote teaching format. This sign corroborates the statements made about the complexity of the process of changing face-to-face classes to classes conducted remotely, as it is not enough to make use of good technological tools, such as platforms called Virtual Environments for Teaching and Learning (AVEA). In this format, there is a need for a different mental model, both for students and teachers, as the process requires even more from the student, who often needs to dedicate even more time to access the materials and study, usually alone. It is observed that, in face-to-face classes, there is greater interaction between students and between students and teachers, which is greater in the classroom, either due to proximity or the environment conducive to dialogue, when this is created by the participants. Most respondents (86.1%) stated that they are receiving activities from the disciplines and a significant portion of them agree with the remote teaching proposal during the pandemic period. In these activities, the students' perception is that the support of teachers is highly important in the process, a position that is not surprising, since many factors are relevant and decisive for remote teaching to promote success in relation to its objectives.

The abrupt shift from a lifestyle with extensive displacement and social interaction on university campuses and classrooms to a situation of social isolation and extensive change in the study routine also brings with it emotional challenges, which directly interfere with satisfaction with life. The adoption of remote teaching, maintaining interaction between students and professors, was an option, until then, of the minority of public universities. In the case of UFSM, despite bringing some challenges, it seems to be contributing to maintaining various aspects of Satisfaction with Life. Finally, it was found that, in the respondents' perception, there is a positive influence of social isolation on satisfaction, as they trust the effectiveness of the measure - which can generate a sense of security. It was also evident that the factors associated with psychological problems, such as anxiety, stress and depression arising from the pandemic, negatively interfere with Satisfaction with Life. However, in a way, the impact was softened due

to the ability to adapt to remote teaching activities and mastery of technology, a characteristic strongly present in students.

Despite efforts to collect data in a pandemic period, one of the limitations of this research is the possibility of sample bias. Online surveys are subject to some biases and, in this case, the main one is internet access, since, although the survey was sent through the institution's system to all regularly enrolled students, students without internet access may not have had the opportunity to participate.

## References

- ALVES, L.. Educação remota: entre a ilusão e a realidade. **Interfaces Científicas-Educação**, v. 8, n. 3, p. 348-365, 2020.
- BITTENCOURT, R. N. Pandemia, isolamento social e colapso global. **Revista Espaço Acadêmico**, v. 19, n. 221, p. 168-178, 2020. ISSN 1519.6186
- BRASIL. Ministério da Educação. **CORONAVÍRUS: Monitoramento nas instituições de ensino**. Brasília, 2020. Available at: <http://portal.mec.gov.br/coronavirus/>. Access in: may 2020.
- BRESCIANI, T. A.; CONTO, S. M. de. O impacto da tecnologia Nintendo® Wii no tratamento fisioterapêutico e na satisfação de pacientes em uma clínica do Vale do Taquari. **Revista destaques acadêmicos**, vol. 4, n. 1, 2012.
- CAMPARA, J. P.; VIEIRA, K. M.; POTRICH, A. C. G.. Satisfação geral com a vida e bem-estar financeiro: revelando as percepções dos beneficiários do Programa Bolsa Família. **RAP: Revista Brasileira de Administração Pública**, v. 51, n. 2, 2017.
- COMIN, F. S. Fatores associados ao Bem-Estar Subjetivo em pessoas casadas e solteiras. **Estudos de Psicologia**. Campinas, 2016.
- CAO, W. *et al.* The psychological impact of the COVID-19 epidemic on college students in China. **Psychiatry research**, 112934, 2020.
- FARIAS, F. R.; DIAS, M. J.. Os desafios entre o ensino presencial e o ensino a distância: uma questão de cultura digital e de formação do educador. **EaD em Foco-Revista Científica em Educação a Distância**. v.1, n.1, 2010
- GARCIA, L. P.; DUARTE E. Intervenções não farmacológicas para o enfrentamento à epidemia da COVID-19 no Brasil. **Epidemiologia e Serviços de Saúde**. 2020.
- GOVERNO FEDERAL. **Transparência: Portarias publicadas sobre COVID-19**. 10 DE ABR. 2020. Available at: <https://portal.arquivos.saude.gov.br/images/pdf/2020/Abril/03/Portarias-publicadas-sobre-COVID.pdf> Access in apr 2020.
- HAIR, J. F. *et al.* **Fundamentos de Métodos de Pesquisa em Administração**. Porto Alegre: Bookman, 2009.
- KOK, G. *et al.* Behavioural intentions in response to an influenza pandemic. **BMC Public Health**, v. 10, n. 1, p. 174, 2010. <https://doi.org/10.1186/1471-2458-10-174>.
- KONRATH, M. L. P.; TAROUÇO, L. M. R.; BEHAR, P. A.. Competências: desafios para alunos, tutores e professores da EaD. **RENOTE-Revista Novas Tecnologias na Educação**, v. 7, n. 1, 2009. <https://doi.org/10.22456/1679-1916.13912>.
- LOTT, A. C. O *et al.* Persistência e Evasão na Educação a Distância: Examinando Fatores Explicativos. **Revista Eletrônica de Ciência Administrativa**, s. l., v. 17, n. 2, p. 149-171, 2018.

- MINISTÉRIO DA SAÚDE. **Ministério da Saúde declara transmissão comunitária nacional**. 20 de março de 2020. Available at: <https://www.saude.gov.br/noticias/agencia-saude/46568-ministerio-da-saude-declara-transmissao-comunitaria-nacional>. Access in apr 2020.
- NOGUEIRA, E. J. **Rede de relações sociais: um estudo transversal com homens e mulheres pertencentes a três grupos etários**. Tese (Doutorado em Educação). Campinas, SP: Faculdade de Educação: UNICAMP, 2001.
- QIU, J. et al. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. **General Psychiatry**, v.33, n.2, e100213, 2020
- SÁ, S. D.; WERLANG, B. S. G.; PARANHOS, M. E.. Intervenção em crise. **Revista Brasileira de Terapias Cognitivas**, Rio de Janeiro, v. 4, n. 1, jun. 2008.
- SILVEIRA, S. R. *et al.* O Papel dos licenciados em computação no apoio ao ensino remoto em tempos de isolamento social devido à pandemia da COVID-19. 2020. **Série Educar-Volume 40, Prática Docente**, p. 35.
- UNIVERSIDADE FEDERAL DE SANTA MARIA **UFSM em números**. Available at:<<https://portal.ufsm.br/ufsm-em-numeros/publico/painel.html?categoria=102>>. Access in apr 2020.
- WANG, C. et al. Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. **Int. J. Environ. Res. Public Health**, 17, 1729, 2020