International Journal of Latest Research in Humanities and Social Science (IJLRHSS)
Volume 05 - Issue 11, 2022
www.ijlrhss.com || PP. 182-192

Student Perspective and Variables Associated with the Return to face-to-face Classes, after Confinement by Covid-19

Ciro Andraca Sánchez[1], Justiniano González González[1], Alejandra Hitahii Muñoz García[2], Manuel Mendoza Mojica[3]&Paulino Bueno Domínguez[3]
[1]*Centro Regional de Educación Superior Zona Sur Acapulco,*
Universidad Autónoma de Guerrero,
Carr. Cayaco-Puerto Marques Ejido Llano Largo, Código Postal 39906
Acapulco de Juárez, Guerrero, Mexico
[2]*Observatorio Institucional, Universidad Autónoma de Guerrero*
Av. Javier MéndezAponte 1 Servidor Agrario, Código Postal 39070
Chilpancingo de los Bravo, Guerrero, Mexico
[3]*Facultad de Ecología Marina, Universidad Autónoma de Guerrero*
Av. Gran Vía Tropical, Código Postal39390, Acapulco de Juárez Guerrero, Mexico

Abstract: The objective of the study was to identify the variables associated with returning to face-to-face classes, and the perspective regarding gender, after confinement due to the Covid-19 pandemic. Cross-sectional study, conducted in the February-July 2022 semester, with the participation of 114 high school students (58 men and 86 women) from the Autonomous University of Guerrero, Mexico. To measure the effect and magnitude of the variables included in the study, the odds ratio tests, $\chi 2$(p-value ≤ 0.05), as well as the analysis of variance (ANOVA) were used. The results showed that: not having digital tools to follow their virtual classes was associated with family socioeconomic problems; emotional affectation (mood, sadness and fear); the perspective of men and women regarding collateral effects, vulnerability due to the pandemic, and their attitudinal profile. Women, in addition to having greater irritability due to confinement, experience a positive relationship with regard to getting sick with Covid-19.

Keywords: pandemic, statistics, student, attitude, Covid-19.

.

1. Introduction

One month after the outbreak of COVID-19 in China, on January 30, 2020, the World Health Organization (WHO) declared the epidemic caused by the SARS-CoV-2 virus as a public health emergency of concern. international, however, its rapid expansion to more than a hundred countries, caused it to be declared a pandemic on March 11, 2020, a situation that led to the closure of various spaces with a greater concentration of people such as offices, places for social events, schools, among others [1].

The closure of public spaces, including schools, has proven to be a useful tool to contain the spread of Covid-19, however, as the spread of the disease decreased, the gradual and staggered return to schools in approximately 1,500 million students and young people around the world, where the greatest impact occurred, mainly in the most vulnerable population. The adoption of proactive approaches implemented during the return to face-to-face classes such as social distancing, school hygiene practices, the use of face masks, as well as liaison with health authorities, and the training of teaching staff to timely identify behavioral changes and student cognitions [2]. The level of socio-educational affectation of the countries was fundamentally related to the duration of the closure of their schools, observing a different temporality, for example: New Zealand kept schools closed for approximately four weeks, France and Switzerland for 10 weeks, Germany and Italy 30 weeks, while Mexico kept them closed for more than 35 weeks, longer than theaverage time for the countries of the Organization for Economic Cooperation and Development, which was around 14 weeks [3]. Even though the closure of schools had advantages such as the reduction in the spread of Covid-19, it also represented a high social cost at a global level [4]. In Mexico, the suspension of face-to-face classes became official throughout the country as of March 23 [5], while on August 6, 2021, the provisions were established for the return to classes in person [6].

During the Covid-19 health emergency, the authorities implemented various actions to contain the spread of the disease. These confinement measures to prevent or reduce cases, caused by themselves an increase in the responsibilities of women within the home, due to the role they play by occupying most of the intra-family care [7,8]. Likewise, the high rate of stress caused by the pandemic, in different parts of the world, is implicitly related to the economic and social crisis generated by the economic uncertainty of the family, precariousnessand labor informality, as well as the low wage income of the youth population that develops some paid activity

[9,10,11]. The perspective observed in the student body, since before the Covid-19 pandemic, was marked by socioeconomic inequality, affecting to a greater extent low-income households, where limited access to technological tools for education was observed. online, as well as the educational gaps increased by the interruption of the academic achievements of men, in relation to women; however, the frequency of risky contacts with the etiological agent is higher in women [8,12,13].

1.1 Objective

Identify the variables associated with the return to face-to-face classes, and the perspective regarding gender, after confinement due to the Covid-19 pandemic.

1.2 Research questions

This study aims to answer the following research questions:

1) What was the level of emotional affectation that, with respect to gender, the high school students experienced during the confinement by Covid-19?
2) What are the potential variables associated with the deficiency of digital tools during the transitory phase between virtual classes and the return to face-to-face classes?

1.3 Rationale

The confinement derived from Covid-19 affected people physically and emotionally, and consequently the interruption of school activities, almost two years after the emergence of SAR-CoV-2, has exacerbated inequities in various sectors of the population, mainly affecting marginalized communities[13] (Pan American Health Organization, 2021). On the one hand, the education sector has faced unprecedented difficulties such as the lack of infrastructure and school logistics that ensure sanitary conditions to prevent contagion among schoolchildren, and on the other, the difficulty for families to access technological devices, Internet connectivity and necessary materials for the continuity of learning from home, mainly in homes with fewer economic resources [12,14]. However, the return to face-to-face classes has prompted the permanent implementation of strategies such as physical distancing and the promotion of health and hygiene to reduce transmission within schools, considering that the Covid-19 pandemic is still active [15,16]. It is necessary that the analysis of the information generated in the study contributes to the understanding of the affectation of the different factors associated with the immediate environment of the student body and their individual perspective regarding the return to the classroom, during the transition from virtual classes to face-to-face classes, after the decrease in Covid-19 infections.

1.4 Theoretical reference

Until June 9, 2022, the World Health Organization (WHO) had reported 531,550,610 confirmed cases of Covid-19 and 6,302,982 deaths worldwide, while in Mexico, where the use of public health and social measures in spaces as schools were less strict than in countries like China and India, 5,808,696 confirmed cases and 325,091 deaths from the same cause were registered, reaching 59% (19/32) of the states, an incidence rate of accumulated cases >3,500 per 100,000 inhabitants [17,18].

The pandemic caused the suspension of face-to-face classes in Mexico from March 23, 2020 to August 20, 2021, the date on which the Ministry of Public Education (SEP) published the general provisions for the gradual and orderly return of school activities. national educational service [5,6].

In this context, the Autonomous University of Guerrero (UAGro) proposed a staggered return to face-to-face classes, however, high school schools such as high school number 9 in Chilpancingo, restarted their fully face-to-face classes as of March 7, 2022, since at the end of May 2022 positivity was reached 2.32 times more, compared to what was reported 14 days before, going from 5,609 to 13,060 confirmed cases of Covid-19 in the same period [17,19].

The return to face-to-face classes, since the educational system migrated to virtual education due to the pandemic, represented, on the one hand, a new student perspective facing the new problems that virtual education per se implies, as well as its relationship with variables associated with their personal, family, social and educational context. On the other hand, the student attitude towards the return to face-to-face classes, qualified positively or negatively, links the predisposition of the students towards the transition from virtual to face-to-face education, through statements that allow to notice the problems experienced during confinement. by disease whose etiological and epidemiological aspects are still not fully understood [18].

During the period of school isolation due to the pandemic, a heterogeneous physical and emotional affectation was manifested, mainly due to the socioeconomic conditions experienced in the different student environments. Likewise, inherently, it is also related to the intra-family socioeconomic gap, characterized by the lack of electronic devices or connectivity. In addition, the schooling of their relatives greatly limits the

possibility of supporting them in their school tasks, a situation that positively or negatively influences the teaching-learning process of the student body, a local situation that was also replicated nationally and internationally. manifested by the digital divide and the availability of digital resources such as computers and cell phones [20,21]. The Covid-19 pandemic has caused adverse effects on the economy through the interruption of production chains, the increase in unemployment, as well as the limitation in the financial capacity of the family that, in many cases, could fail to comply with its previously contracted financial commitments. In addition, the prolonged confinement due to the pandemic has caused significant changes in people's daily behavior as well as socio-emotional affectation, generating stress, depression and anxiety, especially among teachers and students, who were used to socializing associated with classes in the classroom [22,23,24,25].

Attitudes towards confinement due to the current health emergency caused by Covid-19 indicate the favorable or unfavorable predisposition of virtual learning compared to face-to-face learning, in such a way that the answers given can be extrapolated to an additive scale that allows observing the meaning of the affirmations regarding the return to face-to-face classes [26,27].

2. Methodology

2.1 Approach

The methodological proposal of this study was based on the descriptive-correlational approach, where, on the one hand, the variables related to the socioeconomic and family context of the students are analyzed, during the final phase of the health emergency due to Covid-19 [28,29], and on the other, socio-emotional and attitudinal aspects among high school students (by gender) from the Autonomous University of Guerrero, Mexico, after social isolation caused by risk of contagion. of SARS-CoV-2. The investigation was carried out from March 7 to 9, 2022, during the first week of the return to face-to-face classes, framed in the gradual return of the student body to the classrooms at the national level [6].

With prior authorization from the school authorities, the academic groups that would be surveyed were randomly chosen (one group for each academic grade). The application of the survey, anonymous and voluntary, was carried out by a team of two people, previously trained. To minimize the number of missing data (students in each group), it was decided to apply the survey in the hour before the break, in which the following criteria were considered:

- **Inclusion:** legally enrolled students; that they were on the official lists of teachers, and that they have agreed to answer the questionnaire.
- **Exclusion**: students who received the survey, but the information was incomplete.

144 students participated: 57 men and 87 women. Two incompletely answered questionnaires were excluded from the analysis.

2.2 Instrument

The validity of the questionnaire was evaluated through a panel of experts [30]: an organizational psychologist, an epidemiologist and an expert in regional development, while the reliability of the questionnaire, through the operationalization of variables , was carried out with the application of a pilot test to 14 students, men and women, with similar ages but who did not belong to the educational center where the questionnaire would be applied, in order to avoid bias in the study and reduce the margins of error between the observed value (the responses given) and true value (corresponding to thevariable to be measured). The comments, doubts and inconsistencies observed were included in the final draft of the questionnaire [31,32].

The application of the survey was carried out within the week after the return to face-to-face classes, after the educational and health authorities assessed the reduction in the risk of contagion from Covid-19, and when the student population between 15 and 17 years or more, they had already received, at least, the first dose of the vaccine against Covid-19 [19].

The questionnaire was built from two frames: in the first, 48 open, closed, and multiple-choice questions were posed that included personal, family, socioeconomic, and educational aspects, among which were: gender, place of origin, schooling of the parents, person who contributes the highest family income, salaried work, own morbidity or that of their relatives, economic impact from the pandemic, communication with their teachers, which could be associated with the variables: having/not having the digital tools for their classes in a virtual way and the attitude of the students to the transitional period towards the return to face-to-face classes. Positive and negative items or statements [33] were included, which served to scale up student attitudes towards the return to face-to-face classes within the framework of the Covid-19 pandemic. Scalar information (a lot, a little or nothing) was collected to determine the gender gap in relation to socio-emotional aspects through analysis of variance (ANOVA).

Some variables included temporality, since they allowed knowing the prevailing situation at the end of the health emergency, as well as after the return to face-to-face classes. For example: "Currently, in addition to

studying, do you have a job where you receive a payment?" "If your answer is yes, since when?", the response options were 1). Before the pandemic; two). During the pandemic, and 3). I'm still working.

2.3 Analysis processing

First, descriptive statistics were used and to measure the potential association between the different factors included in the study, Microsoft Excel and the SPSS statistical package, version 25 [34] were used for descriptive and inferential analysis. The association between the variables included in the study and the lack of digital tools for their virtual classes, as well as their statistical power, was made by analyzing the dichotomous or bivariate items through the Mantel-Haenszel process using the odds ratio (OR), with a 95% confidence interval (95% CI) and the error rate [35] as well as ANOVA. The informed application of the survey was carried out anonymously and voluntarily to students of the three academic grades of high school number 9 of the UAGro, with prior authorization from the school administration.

3. Results and Discussion

The application of the survey was carried out the second week of the return to face-to-face classes, after the school authorities assessed the reduction in the risk of transmission of the SARS-CoV-2 virus, and when students aged 15 to 17 years or older, they had already received at least one dose of the Covid-19 vaccine.

3.1 Socioeconomic characteristics and digital tools for virtual education

The inferential analysis on the information obtained regarding the student environment lived during the students aged 15 to 17 years or older, they had already received at least one dose of the Covid-19 vaccine. virtual classes, are described in Table 1, where 25.7% of their fathers and 22.9% of their mothers did not study or

Table 1. Variables associated with the deficiency of digital tools in high school students during the return toface-to-face classes in the context of Covid-19.

Variable	No / sometimes he had digital tools for his classes		RMna*	**IC 95%****	**χ2 ᴴ**	**p-value**
	n	**%**				
Mother'seducation						
No studies / basic	23/29	79.3	**10.04**	3.71-27.17	**25.56**	**0.000**
High school or more	29/105	27.6				
Shared cell phone						
Yes, sometimes	30/42	71.4	**6.97**	3.08-15.78	**24.18**	**0.000**
No	24/91	26.4				
Familyfinancialproblems						
Yes, sometimes	50/95	52.6	**13.70**	3.95-47.52	**24.04**	**0.000**
No	3/40	7.5				
Sufficient internet signal						
No / sometimes	50/105	47.6	**6.13**	2.00-18.76	**12.04**	**0.001**
Yes	4/31	12.9				
hadpaidwork						
Yes, sometimes	23/38	60.5	**3.26**	1.50-7.10	**9.28**	**0.002**
No	31/97	32.0				
Salary of the head of the family						
no fixed salary	26/49	53.1	**2.65**	1.23-5.72	**6.37**	**0.012**
with fixed salary	20/67	29.9				
Place of origin						
Out of the city	12/20	60.0	**2.66**	1.00-7.05	**4.06**	**0.044**
From Chilpancingo	40/111	36.0				
Father's education						
No studies / basic	18/51	35.3	2.08	0.95-4.56	3.43	0.064
High school or more	17/82	20.7				
Gender						
Female	35/81	43.2	1.40	0.68-2.85	0.86	0.351
Male	19/54	35.2				

Source: own elaboration

* Unadjusted odds ratio (Odds ratio)
**Confidence intervals at 95%
[H] Chi square of heterogeneity

have until secondary school as the maximum level of studies while 43.5% indicated that the head of the family did not have a fixed salary, dedicating himself mainly to commerce. Likewise, 48.6% indicated that themother is the one that contributes the highest income to the family, followed by the father with 41.7% and 8.3% of both. 88.9% of the studied population reported that when a relative falls ill, women provide better care, contrasting with 4.0% of those who believed that men provide better care for the sick relative. No significant difference was found between the 17.4% of the women and the 17.2% of the men who reported being from a place other than the city of Chilpancingo, either in a community in the same municipality or in another place. The age of the students ranges from 15 to 20 years.

48.1% of those who participated in the study and did not have the digital tools to study virtually, said they agreed or strongly agreed to return to face-to-face classes, compared to 29.3% of those who indicated they had digital tools to continue their studies. virtual classes [OR=2.24 95% CI (1.09-4.58); χ^2=4.99 p=0.025]. This result is in line with what was found in other studies carried out during confinement due to the Covid-19 pandemic [26,36].

The variables: having fallen ill with Covid-19 and considering that the return to face-to-face classes, with respect to gender, represents a risk of contagion of the disease by showing a very similar significant strength of association (p-value $\leq$0.05), comparable situation With other studies, where social distancing is restricted, due to the recurrent crowding of students in schools, mainly those that do not have sufficient physical infrastructure [37] and with limited didactic resources for students [38]. The results show that the inherent difficulty in accessing digital tools during virtual classes are indicative of the impact on the female student population, who, unlike men, faced various conflicts to continue studying online. the lack of communication with the teachers, or the differentiation in the adaptability to return to face-to-face classes [22,25].

From the economic point of view, the data obtained on the affectation of men and women was similar, observed in the population studied, considering that the impact of the pandemic on the family economy was similar for both men and women [OR=1.22 95% CI (0.45-331); χ^2=0.15, p-value=0.690]. The data obtained in our study, and what was observed in older age groups, show that: when the perception of the risk of getting sick from Covid-19 is lower, the stress that people present is also lower [39].

3.2 Emotional affectation from the gender perspective

During the health emergency caused by Covid-19, various actions by the authorities were implemented to try to stop the spread of the disease, such as the "stay at home" strategy, however, this action by itself increased the workload of women , due to the role they play by occupying most of the care within families, finding that 8.9% of the population studied reported that, when a relative falls ill, the woman provides better care, contrasting with 4.0% of those who They believed that men are the ones who provide the best care when a family member falls ill.

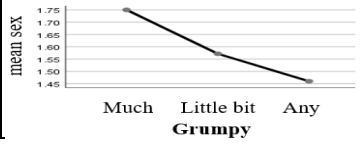
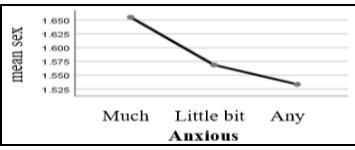
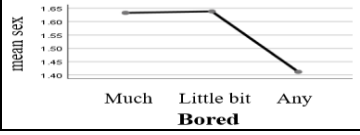
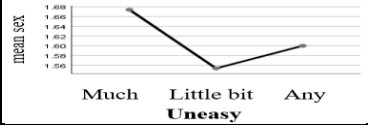
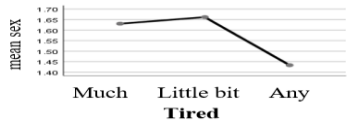
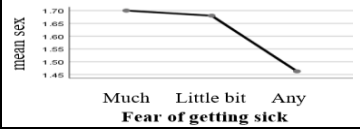
Despite the fact that no association was found between being a woman and dropping out of school to care for a family member who became ill during the pandemic [OR=1.333 IC95% (0.236-7.536), χ^2=0.107, p-value=0.744], It has been observed that the cultural role of Mexican society delegates to women a greater workload at home, a situation that has worsened with the pandemic, but it is necessary to mitigate this impact, with the intention of responding adequately to the health crisis. and direct it towards recovery and resilience [7].

Table 2 shows the level of emotional affectation experienced by the studied population due to the isolation caused by the pandemic, where 88.1% of the studied population stated that they had presented boredom to a greater or lesser degree, of which 82.1% (46/56) are men and 92.0% (80/87) are women; 78.7% indicated havingpresented fatigue, of which 69.6% (39/56) are men and 84.7% (72/85) are women; 78.7% reported feeling restless, of which 78.6% (44/56) are men and 78.8% (67/85) are women; 78.5% reported havingsad sense, of which 68.4% (39/57) are men and 85.1% (74/87) are women; 78.4% reported having experienced anxiety, of which 75.0% (42/56) are men and 80.7% (67/83) are women; 73.8% stated that they had felt in a bad mood, of which 64.3% (36/56) are men and 80.0% (68/85/ are women, and finally, 38.8% mentioned feeling afraid of getting sick from Covid- 19, of which 52.7% (29/55) are men and 29.8% (25/84) are women.The results obtainedin the previous analysis show that women had greater emotional affectation than men, similar to that found in various studies [40] [41]. Likewise, the gender variable (female=1; male=2) was significantly associated with emotions expressed in: a) bad mood generated during the pandemic [OR=2.222 IC95% (1.037-4.763), χ^2=4.307, p-value=0.038], b) feeling oftiredness [OR=2.414 IC95% (1.063-5.485), χ^2=4.573, p-value=0.032], c) feeling sad [OR=2.627 IC95% (1.166-5.917), χ^2=5.642, p-value=0.018] and d) fear of getting sick from Covid-19 [OR= 2.632 CI95% (1.299-5.335),χ^2=7.379, p-value=0.007]. Unlike men, the variable being a woman is positively related to the fear of getting sick from Covid-19 [41,42].

3.3 Socioeconomic and attitudinal aspects related to gender

The inferential analysis of the variables included in the study, described in Table 3, shows the point of

Table 2. Result of the ANOVA test between gender and the scales of level of emotional affectation due to the health emergency, within the first week of returning to face-to-face classes, in high school students from the Autonomous University of Guerrero, Mexico.

Variable	Level of affectation	n (%)	F[H]	p-value	Difference	Graphic
Grumpy	Much	48 (34.0)	0.013	**0.020***	**1-2**	
	Little bit	56 (39.8)				
	Any	37 (26.2)				
Anxious	Much	58 (41.7)	0.738	0.480	---	
	Little bit	51 (36.7)				
	Any	30 (21.6)				
Bored	Much	79 (55.2)	1.569	0.212	---	
	Little bit	47(32.9)				
	Any	17(11.9)				
Uneasy	Much	46 (32.6)	0.804	0.450	---	
	Little bit	65 (46.1)				
	Any	30 (21.3)				
Sad	Much	38 (26.4)	2.944	**0.054***	**2-3**	
	Little bit	75 (52.1)				
	Any	31 (21.5)				
Tired	Much	46 (32.6)	2.370	0.097	---	
	Little bit	65 (46.1)				
	Any	30 (21.3)				
Fear of getting sick	Much	60 (43.2)	3.828	**0.024***	**1-3**	
	Little bit	25 (18.0)				
	Any	54 (38.8)				

Source: own elaboration

* Significant difference (≤ 0.05)

[H]Female/male

view of the students. In the first place, it is shown that 52.6% of men and 32.9% of women indicated that they agree or strongly agree that, given the economic problems of the family, it is women who preferably do everything possible to continue studying, therefore a man's sense of opinion about the positive meaning of the variable was more than twice (OR=2.26) in relation to a woman. This aspect is very similar to that reported in other studies where, faced with economic difficulties, men tend to interrupt their studies to support the family as a provider. The gender gap may result from the interruption of the educational trajectory of males, hindering school success, either due to differences in socialization or the promotion of values. and attitudes that oppose

school success is similar to what has been observed in other studies where the traditional model places women in the home, private socialization and insistence on the classic role as caregiver, mother and wife, even thoughgirls, at average ages 15, are 1.5 times as likely to get better grades [43,44].

Table 3. Bivariate analysis between gender and the variables associated with the family, social and educational environment of high school students from the Autonomous University of Guerrero, Mexico.

Variable	**Male**		**Female**		**OR***	**IC 95%****	**χ^2 Ĥ**	**p-value**
	number	%	number	%				
Faced with family economic difficulties, the woman you must do your best to continue studying.								
Yes	**30**	52.6	**28**	32.9	**2.26**	**1.13-4.50**	**5.47**	**0.019**
No	**27**	47.4	**57**	67.1				
The woman must take care of the sick and the man work								
Yes	**12**	21.1	**8**	9.5	2.53	0.96-6.66	3.70	0.054
No	**45**	78.9	**76**	90.5				
Men and women should work equally								
Yes	**51**	89.5	**74**	86.0	1.37	0.48-3.91	0.36	0.545
No	**6**	10.5	**12**	14.0				
Did you get sick from Covid-19?								
Yes	**22**	39.3	**20**	23.5%	**2.10**	**1.00-4.38**	**4.00**	**0.045**
No	**34**	60.7	**65**	76.5%				
Men and women should care for just like someone when they get sick								
Yes	**43**	76.8	**54**	62.8	1.96	0.91-4.18	3.06	0.080
No	**13**	23.2	**32**	37.2				
It is preferable to take care of a sick person, beforestudying								
Yes	**23**	40.4	**34**	40.0	1.01	0.51-2.01	0.00	0.967
No	**34**	59.6	**51**	60.0				
It is important to study to improve the quality of life								
Yes	**55**	92.5	**78**	90.7	2.82	0.57-13.79	1.76	0.183
No	**2**	3.5	**8**	9.3				
Virtual education is better than face-to-face education								
Yes	**13**	22.8	**18**	20.9	1.11	0.49-2.50	0.07	0.790
No	**44**	77.2	**68**	79.1				
With the return to face-to-face classes, do you consider that there is a risk of getting sick from Covid-19?								
No/ I don´t know	**37**	67.3	**41**	49.4	**2.10**	**1.03-4.24**	**4.30**	**0.038**
Yes	**18**	32.7	**42**	50.6				

Source: own elaboration

* Unadjusted odds ratio (Odds ratio)
**Confidence intervals at 95%
ĤChi square of heterogeneity

With the analysis of variance (ANOVA) it was found that emotional aspects such as sadness, tiredness, restlessness, boredom and anxiety did not show a significant difference between people of different genders, however, a strong association was found between variables, finding that women expressed greater concern about the risk of contagion from Covid-19, in relation to men [OR=2.49 IC 95% (1.23-5.03); χ^2=6.60, p-value=0.010] in a similar way to that found in other countries10 [10,45,46]. Considering that bad mood is one of the various sources of stress[47] (NaranjoPereira, 2009), in this investigation a statistical association was found between being a man and indicating the refusal or not knowing if the return to face-to-face classes could represent a risk of contagion by the SARS-CoV-2 virus. Women, unlike men, reported having a higher degree of irritability or

being moody due to being confined during the pandemic (OR=2.41 95% CI (1.13-5.14); χ^2=5.37, p-value=0.020).

Table 4 shows the attitude of the male and female students towards the return to face-to-face classes, a statistical association was found between being a man and indicating the refusal or not knowing if the return to

Table 4. Analysis of variance and its relationship with attitude, during the return to face-to-face classes, in high school students from the Autonomous University of Guerrero, Mexico.

items	Stronglyagree / agree		Neitheragreen ordisagree		disagree / stronglydisagree		*p*-ANOVA^(between groups)
	n		n		n		
	M♄	F˂	M♄	F˂	M♄	F˂	
If a family member gets sick, it is preferable to take care of them and then you could continue studying	23	34	25	39	9	13	0.984
I believe that the vaccine against Covid-19 generates immunity and protection	55	84	2	3	0	0	0.985
During the return to face-to-face classes, preventive measures must be followed	56	86	0	1	1	0	0.341
Being vaccinated against Covid-19 reduces the risk of contagion	17	16	22	37	18	34	0.273
Men and women should share responsibilities in the home	**43**	**55**	11	17	**2**	**15**	**0.043***
When a family member is sick, it is preferable that women take care of him	**12**	**8**	31	33	**14**	**44**	**0.003***
When a family member gets sick, it is preferable that men take care of him	47	80	5	5	3	2	0.444
When a family member is sick, it is preferable that both men and women take care of him	51	75	6	9	0	3	0.371
When there are economic problems at home, it is preferable for men to study	**28**	**26**	22	33	**7**	**27**	**0.014***
When there are economic problems at home, it is preferable for women to study	**30**	**28**	20	35	**7**	**23**	**0.028***
With the decrease in cases of Covid-19, we must return to face-to-face classes	41	52	15	27	1	8	0.130
I believe that the study is the best way to improve the quality of life	55	78	1	6	1	3	0.305
Virtual classes during the pandemic produced higher school achievement	13	18	9	27	35	42	0.113

Source: own elaboration
♄ Male
˂ Female
^Analysis of Variance (between groups)
* p-value = significant difference (≤ 0.05).

face-to-face classes could represent a risk of contagion by the SARS-CoV-2 virus. Women, unlike men, show a greater perception of the prevalence of the disease and appears to be more concerned about the potential risk of contracting and spreading the coronavirus. This situation shows that women have a significantly higher level of stress than men [45].

4. Conclusions

Despite having found various variables associated with the economic environment of the student body during the transition from virtual to face-to-face classes, the physical and emotional affectation observed from the gender perspective, the attitude towards the disruption of face-to-face classes due to the pandemic, as well as the return to face-to-face classes. This research has several limitations, which should be considered for future studies. First of all, the transversality of this work delimits the causal inference between the variables studied.

Consequently, it is necessary that in future studies the design and implementation of longitudinal studies be considered, which, through repeated measures [48], allow observing the follow-up of the problem through new empirical investigations that lead to the analysis of the possible student adaptation to the traumatic event caused by the pandemic. Likewise, another weakness of the study is attributed to that demonstrated for convenience, although the groups included in the study include students from the three academic grades. The questionnaires applied were anonymous and voluntary.

It is necessary to deepen and expand this type of research since it can provide a novel explanation that helps to understand the significant association between the factors inherent to the student context, in such a way that decision makers have a more solid starting point, having tangible elements that contribute to the attention of the student body, together with the analysis of the physical and emotional effects that the health emergency caused by Covid-19 has caused in the student population, especially if the emergence of different variants of SARS-CoV-2 causes extremes new peaks of contagion and causing accumulated stress, mainly due to uncertainty in the face of a pandemic that is far from over [1].

5. Literature

[1]. Pan American Health Organization/World Health Organization (2020). La OMS caracteriza a COVID-19 como una pandemia. https://www.paho.org/es/noticias/11-3-2020-oms-caracteriza-covid-19-como-pandemia

[2]. United Nations Educational, Scientific and Cultural Organization (2021). Education: from school closure to recovery. https://www.unesco.org/en/covid-19/education-response

[3]. Organization for Economic Co-operation and Development (September, 2021). The State of Global Education. 18 Months into the Pandemic. https://doi.org/10.1787/1a23bb23-en

[4]. Viner, R. M., Russell, S. J., Croker, H., Packer, J., Ward, J., Stansfield, C., Mytton, O., Bonell, C., &Booy, R. (2020). School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. The Lancet Child & Adolescent Health, 4(5), 397–404. https://doi.org/10.1016/S2352-4642(20)30095-X

[5]. Diario Oficial de la Federación. (2020a). ACUERDO número 02/03/20 por el que se suspenden las clases en las escuelas de educación preescolar, primaria, secundaria, normal y demás para la formación de maestros de educación básica del Sistema Educativo Nacional, así como aquellas de los tipos medio superior y superior dependientes de la Secretaría de Educación Pública. https://www.dof.gob.mx/nota_detalle.php?codigo=5589479&fecha=16/03/2020#gsc.tab=0

[6]. Diario Oficial de la Federación. (2021). ACUERDO número 23/08/21 por el que se establecen diversas disposiciones para el desarrollo del ciclo escolar 2021-2022 y reanudar las actividades del servicio público educativo de forma presencial, responsable y ordenada. https://www.dof.gob.mx/nota_detalle.php?codigo=5627244&fecha=20/08/2021#gsc.tab=0

[7]. GaydouBorsotti, M. A. (2021). El efecto disruptivo de la pandemia de Covid-19 en la mujer. Revista Argentina de Medicina, 9(4), 273–276. http://revistasam.com.ar/index.php/RAM/article/view/642/542

[8]. López Gómez, P., Gelpi, G., y Freitas, M. (2018). La brecha entre varones y mujeres en la interrupción de sus trayectorias educativas. Explicaciones recientes de un fenómeno que se acentúa. Perfiles Educativos, 40(161), 162–180. https://www.scielo.org.mx/pdf/peredu/v40n161/0185-2698-peredu-40-161-162.pdf

[9]. Castillo, C. (2021). Pandemic and labor pre-care in Argentina. O Social em Questão (49), 89-110. https://www.redalyc.org/articulo.oa?id=552265046014

[10]. Escoto Castillo, A. R., Padrón Innamorato, M., & Román Reyes, R. P. (2021). The Complexity of the Covid-19 Crisis and the Fragility of the Mexican Labor Market. The Gap between Men and Women in Employment, Unemployment and Availability for Work. Revista Mexicana de Ciencias Políticas y Sociales, 66 (242), 373–417. https://www.revistas.unam.mx/index.php/rmcpys/article/view/79055

[11]. Pierce, M., McManus, S., Hope, H., Hotopf, M., Ford, T., Hatch, S. L., John, A., Kontopantelis, E., Webb, R. T., Wessely, S., & Abel, K. M. (2021). Mental health responses to the COVID-19 pandemic: a latent class trajectory analysis using longitudinal UK data. Lancet Psychiatry, 8, 610–19. https://www.thelancet.com/action/showPdf?pii=S2215-0366%2821%2900151-6

[12]. Mérida Martínez, Y., & Acuña Gamboa, L. A. (2020). Covid-19, Pobreza y Educación en Chiapas: Análisis a los Programas Educativos Emergentes. Revista Internacional de Educación Para La Justicia Social, 9(3e), 61-82.https://doi.org/10.15366/riejs2020.9.3.004

[13]. Pan American Health Organization. (2021). COVID-19 Health Outcomes by Sex in the Americas. From January 2020 to January 2021. Washington, D.C.: OPS. https://iris.paho.org/handle/10665.2/53603

[14]. UNICEF. (2020). Unequal access to remote schooling amid COVID-19 threatens to deepen global learning crisishttps://www.unicef.org/press-releases/unequal-access-remote-schooling-amid-covid-19-

threatens-deepen-global-learning

[15]. Armitage, R., &Nellums, L. B. (2020). Considering inequalities in the school closure response to COVID-19. The Lancet, 8(5), e644.https://doi.org/10.1016/S2214-109X(20)30116-9

[16]. Diario Oficial de la Federación. (2020b). ACUERDO por el que se establecen las medidas preventivas que se deberán implementar para la mitigación y control de los riesgos para la salud que implica la enfermedad por el virus SARS-CoV2 (COVID-19) https://www.dof.gob.mx/nota_detalle.php?codigo=5590339&fecha=24/03/2020#gsc.tab=0

[17]. Secretaría de Salud. (2022). Plataforma SISVER, SINAVE, DGE. Subsecretaría de Prevención y Promoción de la Salud. Informe Técnico Diario COVID-19 MÉXICO. https://www.gob.mx/cms/uploads/attachment/file/702920/Comunicado_Tecnico_Diario_COVID-19_2022.02.11.pdf

[18]. World Health Organization. Scientific Advisory Group for the Origins of Novel Pathogens (SAGO). (2022). Preliminary report, 9 June 2022. https://www.who.int/publications/m/item/scientific-advisory-group-on-the-origins-of-novel-pathogens-report

[19]. Secretaría de Salud. (29 de 03 de 2022). Reporte: Guerrero ocupa el lugar 30 a nivel nacional en casos activos por Covid-19. https://www.guerrero.gob.mx/2022/03/reporta-la-secretaria-de-salud-que-guerrero-ocupa-el-lugar-30-a-nivel-nacional-en-casos-activos-por-covid-19/

[20]. AndereteSchwal, M. (2022). Confinement and return to classes in Argentina: teachers' stories about inequality in a pandemic. Texto Livre, 15, 1–11. https://www.redalyc.org/articulo.oa?id=577170677020

[21]. Suárez Lantarón, B., & García Perales, N. (2021). Covid-19: Covid-19: Educational (digital) divide throughthepress Revista Interuniversitaria de Investigación En Tecnología Educativa, 11, 53–68. https://doi.org/10.6018/riite.475881

[22]. Andraca Sánchez, C., Muñoz García, A. H., y González González, J. (2022). Factors associated with face-to-face educational disruption by COVID-19: Higher education students' opinions towards virtual education. Educatio Siglo XXI, 40(1), 153–178. https://revistas.um.es/educatio/article/view/440391

[23]. Cabezas Heredia, E., Herrera Chávez, R., Ricaurte Ortiz, P., y Novillo Yahuarshungo, C. (2021). Depression, Anxiety, Stress in Students and Teachers: Analysis from Covid 1. Revista Venezolana de Gerencia, 26(94), 602–617. https://www.redalyc.org/journal/290/29069612008/html/

[24]. Lindgren, H. C. (2006). Psicología social, 3ª ed., Editorial Trillas

[25]. Serrano Sarmiento, Á., Sanz Ponce, R., & Aurelio González, B. (2021). Resilience and COVID-19. An Analysis in University Students during Confinement. Education Science, 1-18. https://www.mdpi.com/2227-7102/11/9/533

[26]. Chiecher, A. C. (2022). Proffesors in pandemic. Attitudes towards technologies and perceptions of virtual education. Revista Actualidades Investigativas En Educación, 22(2), 1–30.http://dx.doi.org/10.15517/aie.v22i2.48680

[27]. Likert, R. (1932). A technique for the measurement of attitude. Archives of Psychology, 140, 5–55. https://legacy.voteview.com/pdf/Likert_1932.pdf

[28]. Cvetkovic Vega, A., Maguiña, J. L., Soto, A., Lama Valdivia, J., & Correa López, L. E. (2021). Cross-sectional studies. Rev. Fac. Med. Hum., 21(1), 179–185. http://www.scielo.org.pe/pdf/rfmh/v21n1/2308-0531-rfmh-21-01-179.pdf

[29]. González, M. L., &Difabio de Anglat, H. E. (2016). Cross and longitudinal approach in the study learning patterns of engineering university students. Actualidades Investigativas En Educación, 16(3), 1–20.http://dx.doi.org/10.15517/aie.v16i3.26089

[30]. Escobar Pérez, J., & Cuervo Martínez, Á. (2008). Validez de contenido y juicio de expertos: Una aproximación a su utilización. Avances En Medición, 6, 27–36.

[31]. Argibay, J. C. (2006). Técnicas psicométricas. Cuestiones de validez y confiabilidad. Subjetividad y Procesos Cognitivos, 8, 15–33.http://www.redalyc.org/articulo.oa?id=339630247002

[32]. Prieto Adanéz, G. & Delgado González, A.R. (2010). Reliability and validity. *Papeles del Psicólogo,* 31(1) 67-74 https://dialnet.unirioja.es/servlet/articulo?codigo=3150828

[33]. Hernández Sampieri, R., Fernández Collado, C., y Baptista Lucio, M. del P. (2014). Metodología de la investigación (6a edición). Mc Graw-Hill / Interamericana Editores, S.A. de C.V. https://www.uca.ac.cr/wp-content/uploads/2017/10/Investigacion.pdf

[34]. IBM Corp. (2017). IBM SPSS Statistics para Windows, versión 25,0.

[35]. Mantel, N., & Haenszel, G. (1959). Statistical Aspects of the Analysis of Data From Retrospective Studies of Disease. Journal of the National Cancer Institute, 22(4), 719–748. https://doi.org/https://doi.org/10.1093/jnci/22.4.719

[36]. Alvarado Socarrás, J., Quintero Lesmes, D. C., Carmona, Carlos, J., Niederbacher Velásquez, J., & Franco-López, M. (2021). Associated factors with the paternal decision on the return to face-to-face

classes in Colombia during the COVID-19 pandemic. Revista de La Universidad Industrial de Santander. Salud, 53, 121–132. https://revistas.uis.edu.co/index.php/revistasaluduis/article/view/11910

[37]. Expósito, C., &Marsollier, R. (2021). Teachers' perception of the weaknesses of the educationalsystem in returning to face-to-face teaching. A qualitativestudy in times of COVID-19. RevistaEducaciónLasAméricas, 11(1), 1–16. https://revistas.udla.cl/index.php/rea/article/view/136/216

[38]. Bocchio, M. C. (2020). El futuro llegó hace rato: pandemia y escolaridad remota en sectores populares de Córdoba, Argentina. Revista Internacional de Educación Para La Justicia Social, 9(3e), 1–10. https://ri.conicet.gov.ar/handle/11336/110973

[39]. Oducado, R. M., Rabacal, J. S., Moralista, R. B., &Tamdang, K. A. (2021). Perceived Stress Due COVID-19 Pandemic Among Employed Professional Teachers. International Journal of Educational Research and Innovation (IJERI), 15, 305–316. https://doi.org/10.46661/ijeri.5284

[40]. Apaza P., C. M., Seminario-Sanz, R. S., y Santa-Cruz-Arévalo, J. E. (2020). Factores psicosociales durante el confinamiento por el Covid-19 – Perú. *Revista Venezolana de Gerencia 25 (90)*, 401-410. https://www.redalyc.org/articulo.oa?id=29063559022

[41]. Özbek, S., &NasipÖzaltaş, H. (2021). The Investigation According to Some Variables of COVID-19 Fear Levels of High School Students in the Pandemic Process. Journal of Educational Issues 7(3) Special Issue, 251-264. https://doi.org/10.5296/jei.v7i3.19185

[42]. González León, F. M., Mesa Cano, I. C., Ramírez Coronel, A. A., y Peña Cordero, S. J. (2021). Fear and behavioral self-assessment for care in thefaceoftheCOVID-19healthemergencyinthepopulationofAzogues. Archivos Venezolanos de Farmacología y Terapéutica 40 (7), 655-669. https://doi.org/10.5281/zenodo.5749895

[43]. Hernández Prados, M. Á., & Lara Guillén, B. M. (2015). Responsabilidad familiar. ¿Una cuestión de género? Revista de Educación Social, 21, 28–44. https://eduso.net/res/wp-content/uploads/2020/06/responfa_res_21.pdf

[44]. Organisation for Economic Co-operation and Development (2012). Investing in equity in education pays off. In Equity and Quality in Education: Supporting disadvataged students and schools (pp. 13–41).https://www.oecd.org/education/school/50293148.pdf

[45]. Oreffice, S., & Quintana Domeque, C. (2021). Gender inequality in COVID-19 times: evidence from UK prolific participants. Journal of Demographic Economics, 87(2), 261–287. https://doi.org/10.1017/dem.2021.2

[46]. Ramos Barroso, C. I., y Bolívar-Restrepo, M. C. (2020). Gender gap and the colombian labor market in the time of covid-19. Semestre Económico, 23(55), 285–312. http://www.scielo.org.co/pdf/seec/v23n55/2248-4345-seec-23-55-285.pdf

[47]. Naranjo Pereira, M. L. (2009). Una revisión teórica sobre el estrés y algunos aspectos relevantes de éste en el ámbito educativo. Educación, 33(2), 171–190.https://www.redalyc.org/pdf/440/44012058011.pdf

[48]. Delgado Rodríguez, M. & Llorca Díaz, J. (2004). Longitudinal studies: concept and particularities.Revista Española de Salud Pública 78(2), 141-148 https://scielo.isciii.es/scielo.php?script=sci_abstract&pid=S1135-57272004000200002