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The experience of social distancing for families with children and adolescents during the coronavirus (COVID-19) pandemic in Uruguay: Difficulties and opportunities

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ABSTRACT

The social distancing measures implemented to contain the coronavirus (COVID-19) pandemic worldwide have created a series of emotional and economic challenges. The aim of the present work was to explore the experiences of families with children and adolescents during the coronavirus (COVID-19) pandemic in Uruguay. An online study was conducted in March 2020 with 1725 parents with children under 18 years old. A series of closed and open-ended questions about their family life since the implementation of social distancing measures were asked, addressing the following topics: how they had felt, changes they had experienced in their daily life, children's daily routine, changes implemented in relation to child-care, changes they had perceived in children's eating patterns, changes in their relationship with their children, changes in their children's mood and behavior, and their reaction to those changes. Results showed that the coronavirus pandemic elicited negative feelings in the majority of participants, mainly related to worry, fear, anxiety and uncertainty. Social distancing measures caused a major disruption in daily habits, which were mostly attributed to changes in work-related activities and the closure of educational institutions. Changes in children’s mood and behavior were perceived by the majority of the participants, who mainly referred to boredom, agitation and restlessness. Although some participants reported difficulties to cope with children’s behavior during social distancing, others valued the opportunity of spending more time with their children. In terms of children’s eating patterns, changes related to both an increase and a decrease in the consumption of healthy foods were observed. Results from the present work have relevant implications for public health policy and practice by highlighting the importance of providing emotional and psychological support to people during social distancing measures and providing insights for the design of communication campaigns and interventions.

1. Introduction

A series of cases of pneumonia of unknown etiology were reported in December 2019 in the city of Wuhan, in the southeast of China (Lu, Stratton, & Tang, 2020). In January 2020, a new strain of coronavirus that had not been previously identified in humans (Severe Acute Respiratory Syndrome Coronavirus-2, SARS-CoV-2) was identified as the cause of the outbreak (European Centre for Disease Prevention and Control, 2020a). The infectious disease caused by the new coronavirus, named COVID-19, rapidly spread around the world and was declared as a pandemic by the World Health Organization on March 11th 2020 (World Health Organization, 2020a). Given that no vaccines or specific drugs were available, classic public health measures such as physical interventions (i.e. personal hygiene, barriers and distancing) were the only tools available for interrupting and reducing the spread of the virus (Jefferson et al., 2009). In particular, social distancing measures became the core component of the response of public health authorities worldwide to curb the pandemic of COVID-19 (Wilder-Smith & Freedman, 2020).

Social distancing, and particularly quarantine, is one of the oldest
public health measures for controlling the outbreak of communicable diseases (Kilwein, 1995). The term social distancing refers to “efforts that aim, through a variety of means, to decrease or interrupt transmission of COVID-19 in a population (sub-)group by minimizing physical contact between potentially infected individuals and healthy individuals, or between population groups with high rates of transmission and population groups with no or a low level of transmission” (European Centre for Disease Prevention and Control, 2020). Social distancing measures affecting multiple persons are particularly relevant once community transmission occurs and when restrictions on confirmed or suspected cases or people who have had contact with confirmed cases are regarded as insufficient to prevent further transmission of the virus (Wilder-Smith & Freedman, 2020). Examples of social distancing measures include closure of educational institutions and workplaces, mass gathering cancellations and mandatory quarantine of residential areas (European Centre for Disease Prevention and Control, 2020). The most recent large-scale application of social distancing can be traced back to the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003, when individuals exposed to SARS were required to isolate themselves at home (Wilder-Smith & Freedman, 2020; Cava, Fay, Beanlands, McCay, & Wignall, 2005). In the context of the COVID-19 pandemic, countries implemented different types of social distancing measures. In the specific case of Latin America, measures ranged from nationwide curfews and lockdowns (e.g. Argentina, Chile and Peru) to softer restrictions that combined closure of educational institutions, mass gathering cancellations and stay-at-home recommendations (e.g. Uruguay and Brazil) (Costa, Olona, & Tombesi, 2020).

Social distancing measures disrupt daily life and are expected to have negative consequences on well-being (Dubey et al., 2020; Chu, Alam, Larson, & Lin, 2020). Lockdown and quarantine may directly lead to psychological problems, such as anxiety, depression and emotional fatigue, due to difficulty in coping with the constraints of the quarantine requirements in terms of isolation (Blendon, Benson, DesRoches, Raleigh, & Taylor-Clark, 2004; Cava et al., 2005; Brooks et al., 2020; Chu et al., 2020). In addition, social distancing implies that people may be unable to conduct some of their daily routines, which may have negative consequences in perceived well-being. Engaging in routinized behaviors has been reported to be a route to enact important goals that create sense of purpose, being closely related to meaning in life, a cornerstone of wellbeing (Heintzelman & King, 2019). Disruption of daily life may be particularly relevant in the case of children, causing distress and confusion. In this sense, variations in family routines have been reported to have negative effects on children’s socioemotional, academic and social skill development (Spagnola & Fiese, 2007). On the contrary, adherence to routines has been reported to be important for family resilience during times of crisis (Arlinghaus & Johnston, 2018). Therefore, families’ ability to continue with their daily life may reduce the negative psychological consequences of social distancing.

In addition to the negative effects of social distancing measures, some families may also encounter positive effects. Lack of ability to conduct some of their daily activities may imply that people could have more time to conduct other activities they usually postpone, reducing feelings of time scarcity. Such feelings have been reported to be widespread in modern industrialized societies and have been linked to several psychological problems, such as stress and depression (Roxburgh, 2004; Roxburgh, 2012). The positive effect of social distancing measures may be particularly relevant in the case of parents, given that spending quality time with children has been identified as an important aspect of the parenting experience (Roxburgh, 2004).

The outbreak of COVID-19 has caused an unprecedented impact on the economy as the implemented social distancing measures caused a slowdown or a complete stop in several economic activities, leading to a large reduction in working hours (UNDP, 2020). This situation is expected to cause a reduction in families’ income and damage their capacity to earn a living (International Labour Organization, 2020). The economic impact of COVID-19 is expected to be particularly detrimental for families in the most vulnerable situations, including those living in poverty conditions (United Nations, 2020). Lack of money for earn a living is expected to trigger negative emotional reactions and negatively influence wellbeing (Brzozowski & Spotton Visano, 2019). Research conducted during the SARS outbreak showed that the effects of quarantine were more adverse on socially and economically disadvantaged individuals, as highlighted by Basrur, Yaffe, and Henry (2004) and Leung and Guan (2004). Therefore, it could be hypothesized that the negative psychological consequences of COVID-19 would be more frequent among families from low socio-economic status compared to those from middle and high socio-economic status.

Empirical evidence on the effects of social distancing measures at the population level is scant given that this public health measure has not been previously used in most countries. Research on citizens’ subjective experience of social distancing is needed for developing action plans to facilitate adherence and mitigate the potential negative effects it may cause (European Centre for Disease Prevention and Control, 2020).

In this context, the aims of the present work were: (i) to explore the experiences of families with children and adolescents during the coronavirus (COVID-19) pandemic in Uruguay, (ii) to compare the experiences of families from low and middle socio-economic status.

2. Materials and methods

An online study was conducted in Uruguay during three days in March 2020, while the following social distancing measures were implemented: closure of educational institutions, mass gathering cancellations, partial closure of workplaces, and a stay-at-home recommendation (Uruguay Presidencia, 2020). The implementation of social distancing measures coincided with the detection of the first cases of COVID-19 in the country. As of October 2020, Uruguay was the only country in Latin America that had managed to control the COVID-19 outbreak (Taylor, 2020).

2.1. Participants

A convenience sample of participants was obtained using an advertisement on Facebook and Instagram. This methodological decision was based on the popularity of these social media among the Uruguayan population (Instituto Nacional de Estadística, 2019). The advertisement included the text “If you have children younger than 18 years old, participate in the study and help us to curb coronavirus”, accompanied by a drawing of the virus. The advertisement was delivered to 319,808 users of the social media (who were not necessarily eligible for participation in the study). A total of 11,316 participants clicked on the link and 2,619 agreed to take part in the study by providing their informed consent. From those participants, 1,725 completed the whole study, giving as a result a completion rate of 66%. No compensation was given to participants.

2.2. Questionnaire and procedure

When participants clicked on the advertisement, they were redirected to the server where the questionnaire was hosted (Compuse Cloud, Compuse Inc., Canada). Participants completed an online informed consent form.

The questionnaire was divided in seven sections: i) word association task about coronavirus, ii) knowledge about symptoms, contagion and prevention of coronavirus, iii) changes in family life since the implementation of social distancing measures in the country, iv) barriers and enablers for the adoption of prevention recommendations, v) insights to motivate citizens to adopt the prevention recommendations, vi) sources of information about COVID-19, and vii) socio-demographic information.

The present research is focused on the sections of the questionnaire related to changes in family life since the implementation of social
distancing measures. A series of closed (‘Yes’/’No’) and open-ended questions were included in the section. First, participants were asked to indicate how they had felt since the implementation of social distancing measures using an open-ended question. Then, they were asked to indicate if they had experienced changes in their daily life using a closed question. Participants who answered ‘Yes’, were asked to describe the changes in an open-ended question. The following questions were related to their children. They were asked to describe a typical day of their children since the implementation of social distancing measures. Then, a series of closed questions were asked to explore changes implemented in relation to child-care, changes they had perceived in children’s eating patterns, changes in their relationship with their children, changes in their children’s mood and behavior, and their reaction to those changes. For each of the questions, they were asked to describe the changes using an open-ended question. The wording of the questions is presented in Table 1.

2.3. Data analysis

The percentage of participants who provided each response (‘Yes’/’No’) to the closed questions was calculated. Data from the open-ended questions were analyzed using content analysis based on inductive coding (Krippendorf, 2004). For each of the questions, responses were coded into categories. The percentage of participants who provided responses within each of the categories was calculated. Examples of responses within each of the categories were selected and translated into English for publication.

For each of the questions the chi-square test was used to explore the influence of socio-economic status on the frequency of reported changes (closed questions) and on the frequency of mention of responses within each of the identified categories of the open-ended questions. When significant differences were found, the chi-square per cell test was used to identify the source of variation of the global chi-square test.

3. Results

A total of 1725 participants completed the study. As shown in Table 2, participants were diverse in terms of gender, age, educational level and socio-economic status (SES). The largest proportion of the participants were female, aged between 26 and 45 years old, and from low SES.

Results showed that participants experienced major changes in their daily routines and family life. The percentage of participants who reported having experienced changes in different aspects of their life since the implementation of social distancing measures did not significantly differ between participants from low and medium SES (all p-values higher than 0.05). In the following sections, results from each of the topics included in the questionnaire are presented.

3.1. Moods and emotions experienced since the implementation of the social distancing measures

As shown in Table 3, most participants reported negative moods and emotions, mainly worry, fear and anxiety since the detection of the first cases of COVID-19 in the country. Some of the participants explicitly referred to the motives underlying their feelings and reported feeling worried about the health of their family, their employment and economic situation, as well as the economic situation of the country. Examples of the responses are provided below:

“I’m worried about the health of my loved ones”
“I’m worried, not only about health, but also about employment and economy”
“First, I’m worried and afraid about the disease. Then, I’m worried about the country’s economy”

Only a minority of the participants reported having felt good, hopeful, calm, positive, or in a normal mood (Table 3).

No large differences were found in the moods and feelings reported by participants from low and medium SES. However, significant
significant differences in the frequency of mention of a category were found between participants from low and medium socio-economic status according to results of the chi-square per cell test ($p \leq 0.05$).

3.2. Changes in daily routines

Ninety-five percent of the participants reported having experienced changes in their daily routines after the implementation of social distancing measures. As expected, the most frequent response was “staying at home” (Table 4). Some participants stressed that they were not able to see their relatives and friends, whereas others indicated that they tried not to have physical contact with other people, including their children (Table 4).

The second most frequently mentioned change was related to work-related life. Participants referred to four types of changes: job loss, unemployment insurance or special vacation due to the coronavirus situation, impossibility of working due to the social distancing measures or changes in child-care arrangements and working from home (Table 4). Associated with work-related changes, 9% of the participants mentioned economic changes. In particular, they referred to lack of money or changes in resource management due to the uncertainties generated by COVID-19.

Participants also referred to changes in their mood and mentioned having felt negative moods and emotions, such as worry, fear, stress, anxiety and boredom (Table 4), in line with results reported in the previous section. The uncertainty about the duration of the pandemic and social distancing was highlighted by many participants (Table 3). In addition, other participants recognized feeling overwhelmed by the excess and ubiquity of the information related to the pandemic, as exemplified in the following quote: “I am stressed by so much information in social media. I am overwhelmed. I can’t even smile because I’m thinking of all this”.

Hygiene measures to prevent COVID-19 were identified as a change in daily life. As shown in Table 4, participants mentioned washing their hands and cleaning their house more often. Obsession about cleaning and hygiene emerged from some of the comments: “I can’t stop cleaning and thinking about the risk” and “We are constantly washing our hands”. Some participants also referred to the adoption of other preventive measures, such as not touching their mouth and keeping distance from other people (Table 4).

Table 3

| Mood or feeling | All participants (n = 1725) | Low socio-economic status (n = 1142) | Medium socio-economic status (n = 583) |
|-----------------|-----------------------------|-------------------------------------|--------------------------------------|
| Worry           | 26                          | 26                                  | 27                                   |
| Fear            | 21                          | 21                                  | 21                                   |
| Anxiety         | 20                          | 20                                  | 21                                   |
| Feeling bad     | 12                          | 13 (+)                              | 10 (-)                               |
| Anguish         | 12                          | 12                                  | 12                                   |
| Sadness         | 12                          | 12                                  | 10                                   |
| Depression      | 7                           | 7                                   | 7                                    |
| Anger           | 4                           | 4                                   | 4                                    |
| Feeling good    | 11                          | 11                                  | 12                                   |
| Normal          | 3                           | 3                                   | 3                                    |
| Positiveness    | 4                           | 4                                   | 4                                    |
| Hope            | 3                           | 3                                   | 3                                    |
| Calm            | 4                           | 4                                   | 5                                    |
| Caution         | 3                           | 3                                   | 2                                    |
| Uncertainty     | 3                           | 2 (-)                               | 6 (+)                                |
| Alertness       | 3                           | 3                                   | 4                                    |
| Confusion       | 3                           | 2                                   | 4                                    |
| Ups and downs   | 2                           | 1 (-)                               | 4 (+)                                |
| More or less    | 1                           | 1                                   | 1                                    |

Note: (+) and (-) indicate that significant differences in the frequency of mention of a category were found between participants from low and medium socio-economic status according to results of the chi-square per cell test ($p \leq 0.05$).

Table 4

| Category                  | Example of responses                                                                 | Percentage of participants (%) |
|---------------------------|--------------------------------------------------------------------------------------|--------------------------------|
|                            | All participants (n = 1643) | Low socio-economic status (n = 1087) | Medium socio-economic status (n = 556) |
| Staying at home           | “I don’t go out”, “We stay at home”                                                 | 47                             | 46                             | 49                             |
| Work-related changes      | “I lost my job”, “I’m receiving unemployment insurance”, “I can’t work. I have a small child and I have to stay with him”, “I work from home” | 27                             | 25                             | 31                             |
| Social life               | “I don’t visit other people”, “We don’t receive visits”, “I don’t hug the ones I love”, “My social life” | 22                             | 20                             | 25                             |
| Mood changes              | “I’m worried”, “My children are bored”, “I am all the time worried, thinking about what will happen, when we’ll get back to normal” | 21                             | 22 (+)                         | 19 (-)                        |
| Hygiene and cleaning      | “We wash our hands more often”, “I clean more often”                                 | 16                             | 14                             | 19                             |
| Education                 | “My children are not going to school”, “My studies through online platforms are chaotic” | 11                             | 11                             | 10                             |
| Routines and habits       | “Routines”, “Daily routines have changed”                                            | 10                             | 9                              | 10                             |
| Family life               | “I’m 24 h at home in charge of my children”                                           | 10                             | 9                              | 11                             |
| Economic aspects          | “We have lost our source of money”, “Management of the resources under the uncertainty of future income” | 9                              | 10 (+)                         | 8 (-)                         |
| Preventive measures       | “I’m all the time trying not to touch my mouth”, “I try to keep distance”             | 9                              | 9                              | 10                             |
| Lack of outdoor activities| “We can’t do any outdoor activity”                                                   | 6                              | 6                              | 6                              |
| Positive changes          | “We spend more time together”, “We valued other things”                               | 5                              | 4                              | 5                              |
| Organization and planning | “We try to plan the purchases for more than a week”                                  | 4                              | 3 (-)                          | 5 (+)                          |
| Changes in the environment| “Economy, public transport”, “Changes in medical consultations”                      | 2                              | 3                              | 2                              |

Notes: Percentages are calculated considering the number of participants who reported having experienced changes in their daily routines. (+) and (-) indicate that significant differences in the frequency of mention of a category were found between participants from low and medium socio-economic status according to results of the chi-square per cell test ($p \leq 0.05$).
In addition, changes related to education were also mentioned, both in terms of their children and their own education. Some participants highlighted that their children or themselves could not attend classes due to the closure of educational institutions, whereas others reported having faced difficulties to access online classes (Table 4).

Changes in routines, habits and family life were mentioned by 10% of the participants, mainly in relation to the closure of educational institutions and the need to stay with their children at home. As shown in Table 4, a small proportion of participants mentioned changes in organization and planning, particularly in relation to food purchase to minimize their trips to the supermarket, and changes in the environment (e.g. public transport, cancellation of medical consultations).

Significant differences in the frequency of mention of responses within the identified categories were found ($\chi^2 = 23.9$, $p = 0.031$). Participants from low SES mentioned “mood changes” and “economic aspects” significantly more frequently than participants from medium SES, whereas the opposite trend was found for “changes in organization and planning” (Table 4).

3.3. Description of a typical day of their children

Participants were asked to describe a typical day of their children. Table 5 presents the activities included in the descriptions. The most frequently mentioned activity was “staying at home”, followed by “using technology” (e.g. computers, tablets, cellphones), “playing” and “studying”.

Significant differences in the frequency of mention of the different activities were found between participants from low and medium SES ($\chi^2 = 97.0$, $p < 0.001$). As shown in Table 5, “studying”, “eating”, “spending time together with the rest of the family”, “helping with the housework”, “practicing physical activity” and “using social media” were significantly more frequently mentioned by participants from medium SES compared to those from low SES, whereas the opposite trend was found for “being bored/uninterested”, “being anxious/restless” and “asking/wanting to go out”. In addition, a trend towards a more frequent use of technology was observed in participants from medium SES.

3.4. Changes in child-care

The majority of participants (83%) reported having experienced changes in child-care since the implementation of social distancing measures. The most frequent responses were related to “personal hygiene” (Table 6) as participants reported that their children more frequently washed their hands and took a bath. Participants also reported being more affectionate and protective with their children, mainly due to the fear generated by COVID-19. In relation to this point, 2% of the participants reported having less physical contact with their children (Table 6). Responses related to social distancing were mentioned by 15% of the participants, who stressed that their children could not see friends or other family members due to movement restrictions.

According to chi-square test, the frequency of mention of responses within the identified categories significantly differed between participants from low and medium SES ($\chi^2 = 51.5$, $p < 0.001$). Participants from low SES tended to mention responses related to “personal hygiene” more often than participants from medium SES, whereas the opposite trend was found for the categories related to “spending more time together”, “changes in daily routines”, “changes in child-care arrangements” and “difficulties in relation to child-care arrangements”.

3.5. Changes in children’s eating patterns

When asked about the existence of changes in their children’s eating patterns, 37% responded affirmatively. The most frequently mentioned change was “lack of sufficient food”, particularly among low SES participants (Table 7). The rest of the changes were mainly related to the quantity and quality of food consumed.

Changes in the quantity of food consumed were mentioned by 23% of the participants: 19% stated that their children were eating more, whereas 4% stated that they were eating less. Several participants associated changes in the quantity of food consumed to emotional aspects. Anxiety and boredom were associated with eating more, whereas eating less was associated with sadness and the fact that children missed their usual activities (e.g. school) and their friends.

Changes in the quality of the foods consumed were mostly positive. As shown in Table 7, participants reported that children were eating healthier, eating more healthy foods (e.g. fruits, vegetables, pulses, water) and eating less unhealthy foods (e.g. soda, ultra-processed milk desserts). The reasons for these changes emerged from the responses and were mainly related to the fact that parents stayed at home and had more time to cook at home, as well as to the concern to keep children healthy to protect them from COVID-19.

However, a minority of participants reported that negative changes in diet quality through a decrease in the consumption of healthy foods and an increase in the consumption of ultra-processed products (Table 7). Several factors underlie these changes, such as lack of money, the decision to minimize trips to the supermarket, and emotional aspects (e.g. boredom).

Significant differences in the frequency of mention of responses within the different categories were found ($\chi^2 = 59.8$, $p < 0.001$). Apart from the previously described difference in the category “lack of sufficient food”, participants from medium SES mentioned responses within the categories “more home-made food” and “less ultra-processed products” significantly more often than participants from low SES (Table 7).
Table 6
Percentage of participants who reported having experienced different changes in child-care since the implementation of social distancing measures, disaggregated by socio-economic status.

| Category                              | Example of responses                                  | Percentage of participants (%)* |
|---------------------------------------|-------------------------------------------------------|---------------------------------|
|                                       |                                                       | All participants (n = 1425)     | Low socio-economic status (n = 952) | Medium socio-economic status (n = 473) |
|                                       |                                                       | 49                              | 51 (+)                           | 46 (-)                               |
| Personal hygiene                      | “They wash their hands more often”, “They take a bath and change their clothes three times a day” | 27                              | 30 (+)                           | 22 (-)                               |
| Not going out                         | “They don’t go out”                                   | 15                              | 14                               | 18                                   |
| Social distancing                     | “They don’t see their friends”, “They don’t have contact with other people” | 11                              | 11                               | 9                                    |
| Increased care and protection         | “We’re more careful as we know the virus is around”, “We are more affectionate, and we watch over their safety all the time” | 8                               | 6 (+)                            | 12 (+)                               |
| More time together                    | “We’re all the time with them”, “We spend more time together” | 2                               | 2                                | 3                                    |
| Less physical contact                 | “I don’t greet them until I take all the necessary measures”, “I don’t allow them to kiss or hug him, mainly to the ones who have to go out” | 2                               | 2                                | 3                                    |
| Changes in daily routines             | “All our routine has completely changed”              | 5                               | 4 (-)                            | 5 (+)                                |
| Changes in eating patterns            | “They eat more”, “They eat more fruit”                | 3                               | 3                                | 4                                    |
| Changes in child-care arrangements    | “We need to organize ourselves because we don’t have much space at home” | 2                               | 1 (-)                            | 4 (+)                                |
| Difficulties for child-care           | “We need to see who works and who stays at home with them” | 2                               | 2                                | 4 (+)                                |
| Cancellation of medical consultations | “Their medical consultations have been cancelled”, “We can’t take them to the hospital” | 2                               | 2                                | 2                                    |

Notes: Percentages are calculated considering the number of participants who reported having experienced changes in child-care. (+) and (-) indicate that significant differences in the frequency of mention of a category were found between participants from low and medium socio-economic status according to results of the chi-square per cell test (p ≤ 0.05).

Table 7
Percentage of participants who reported having perceived different changes in children’s eating patterns since the implementation of social distancing measures, disaggregated by socio-economic status.

| Category                              | Example of responses                                                   | Percentage of participants (%)* |
|---------------------------------------|------------------------------------------------------------------------|---------------------------------|
|                                       |                                                                        | All participants (n = 630)      | Low socio-economic status (n = 436) | Medium socio-economic status (n = 194) |
| Lack of sufficient food               | “We don’t have enough quantity of the foods they like anymore”, “The eat what we have”, “Due to economic situation, we had to ration food” | 22                              | 29 (+)                           | 8 (-)                                |
| Eating more                           | “They eat more because of their anxiety”, “They eat more than usual”    | 19                              | 19                               | 19                                   |
| More fruits                           | “More fruits”, “Fruit all the time”                                   | 16                              | 14                               | 20                                   |
| Eating healthier                      | “We try to eat healthier”                                              | 16                              | 14                               | 19                                   |
| More vegetables and pulses            | “More vegetables”, “Stews, lentils”                                    | 10                              | 10                               | 12                                   |
| More home-made food                   | “Snacks are always home-made, bread or home-made cake”, “We cook at home” | 8                               | 6 (-)                            | 13 (+)                               |
| Eating times                          | “They want food at any time”, “Eating times have changed”, “Lack of order in our eating schedule” | 7                               | 7                                | 8                                    |
| More vitamins and minerals            | “I cook dishes with a lot of vitamins, ‘Dishes rich in vitamins”       | 5                               | 5                                | 6                                    |
| More parental control                 | “I try to make them have breakfast”, “I insist them to eat all their food” | 4                               | 3                                | 6                                    |
| Eating less                           | “They eat less”, “They miss the school and eat less”                   | 4                               | 4                                | 3                                    |
| Difficulties to purchase food         | “I’ve run out of fruit and I don’t to get out”, “It is difficult to get to out to purchase vegetables” | 4                               | 3                                | 6                                    |
| More water                            | “They drink a lot of water”, “It is difficult to get to out to purchase vegetables” | 3                               | 3                                | 3                                    |
| Less ultra-processed products         | “We quit giving them soda”, “We don’t get out to buy them milk desserts” | 3                               | 2 (-)                            | 6 (+)                                |
| Less consumption of healthy food      | “They don’t eat much fruit, vegetables, meat and milk”                 | 3                               | 2                                | 5                                    |
| More pot food                         | “In order not to go to the supermarket often we try to eat stews as main dish” | 3                               | 2                                | 4                                    |
| More rice/flour-based dishes          | “They eat a lot of rice, pasta and flour”                              | 2                               | 2                                | 3                                    |
| More natural juices                   | “They drink natural orange and lemon juice”, “We give them more natural juices to strengthen their immune system” | 2                               | 2                                | 2                                    |
| More ultra-processed products         | “They are bored and they eat more candy”                              | 1                               | 1                                | 3                                    |

Notes: Percentages are calculated considering the number of participants who reported having perceived changes in children’s eating patterns. (+) and (-) indicate that significant differences in the frequency of mention of a category were found between participants from low and medium socio-economic status according to results of the chi-square per cell test (p ≤ 0.05).

3.6. Changes in parent’s relationship with children

Forty-one percent of the participants reported having experienced changes in the relationship with their children. As shown in Table 8, most of the changes were positive as participants mentioned “spending more time together”, “familiar bond”, “more communication” between family members, and doing “more family activities” together. On the contrary, a small proportion of participants referred to negative changes...
in their relationship, such as “less physical contact” to avoid the risk of contagion, tense family relationships due to “stress and fear”, and “more arguments and fights” (Table 8). No significant differences in the frequency of mention of responses related to the identified categories were found ($\chi^2 = 8.1, p = 0.520$).

### 3.7. Changes in children’s mood and behavior

Changes in children's mood and behavior were reported by 56% of the participants. As shown in Table 9, most of the changes were related to negative moods and emotions, including “boredom”, “fear”, “stress”, “anger”, “anxiety”, “agitation” and “restlessness”. Only a small proportion of participants reported positive changes, such as “happiness”, “maturity” and “increased familiar bond”.

Participants from low SES reported that their children were “more demanding” significantly more frequently than participants from medium SES and that their children had “abrupt mood changes” or were “disoriented” and more mature significantly less frequently ($\chi^2 = 49.0, p < 0.001$).

Most participants reported a positive reaction to the changes in children’s mood and behavior (Table 10). Participants stated that they had tried to talk to their children to explain the situation and help them understand why they should stay at home: “I try to talk to them and explain them what we are living, without scaring them”, “I try to find strategies to talk to them”. They also reported having tried to reassure their children by spending more time with them, as exemplified in the following quotes: “I try to interact, to play more, to do things we didn’t do often”, “Playing with them”, “Every day I try to have different activities to do all together”. “Patience”, “calm” and “understanding” were frequently mentioned reactions (Table 10).

However, some participants reported having faced “difficulties to handle the situation” and having felt worry, stress, sadness and anger in response to their children’s mood and behavior (Table 10). Examples of negative reactions are provided in the following quotes: “Sometimes I shout at them”, “Without much patience. I’m in a bad mood since all this started. I haven’t been able to do anything on my own. I can’t even take a bath”, “Arguing, shouting, punishment”.

The frequency of mention of responses within the identified categories did not significantly differ between participants from low and medium SES ($\chi^2 = 21.4, p = 0.124$).

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**Table 8**

Percentage of participants who reported having experienced different changes in parent’s relationship with children since the implementation of social distancing measures, disaggregated by socio-economic status.

| Category                        | Example of responses                                      | Percentage of participants (%)* |
|---------------------------------|-----------------------------------------------------------|---------------------------------|
| Spending more time together     | “More quality time together”, “We’re all the time together” | 35                             |
| Familiar bond                   | “More cooperation”, “We spend more time sharing ideas”, “We’re closer”, “The quality of our relationship has improved” | 17                             |
| More communication              | “More communication”, “More dialogue”                     | 16                             |
| More family activities          | “We do more things together”, “We play cards, we cook together” | 16                             |
| Hygiene                         | “They wash their hands more often”, “They take a bath and change their clothes three times a day” | 11                             |
| Less physical contact           | “I try not to get close to them because I am afraid of infecting them”, “Fewer hugs, fewer kisses”, “I miss the kisses, the hugs” | 8                              |
| Stress and fear                 | “Our relationship is tense due to stress”, “They are stressed”, “Routine makes us nervous, bored and stressed” | 6                              |
| More arguments and fights       | “More fights”, “We have more arguments than usual”, “Me argue more often” | 4                              |
| Not going out                   | “They don’t go out”                                       | 3                              |
| Children are more demanding     | “They are more demanding. It gets chaotic at times due to excessive attention demand” | 1                              |

Notes: Percentages are calculated considering the number of participants who reported having experienced changes in the relationship with their children.

**Table 9**

Percentage of participants who reported having perceived different changes in children's mood and behavior since the implementation of social distancing measures, disaggregated by socio-economic status.

| Category                        | Percentage of participants (%)* |
|---------------------------------|---------------------------------|
|                                | All participants (n = 976) | Low socio-economic status (n = 648) | Medium socio-economic status (n = 319) |
| Boredom                        | 29                            | 30                             | 27                             |
| Fear                           | 29                            | 30                             | 27                             |
| Stress                         | 24                            | 24                             | 25                             |
| Missing family and friends     | 11                            | 13                             | 9                              |
| Anger                          | 10                            | 10                             | 12                             |
| Anxiety                        | 10                            | 11                             | 8                              |
| Agitation/restlessness          | 10                            | 10                             | 10                             |
| More fights and arguments      | 7                             | 8                              | 7                              |
| More demanding                 | 6                             | 8(+)                           | 3(+)                           |
| Sadness                        | 5                             | 5                              | 5                              |
| Abrupt mood changes            | 5                             | 3(+)                           | 9(+)                           |
| Depressed                      | 4                             | 4                              | 5                              |
| Rebellious                     | 3                             | 4                              | 2                              |
| More familiar bond             | 3                             | 3                              | 3                              |
| Happy                          | 2                             | 2                              | 3                              |
| Bad temper                     | 2                             | 3                              | 1                              |
| Dissatisfied                   | 2                             | 1(+)                           | 4(+)                           |
| Tired                          | 2                             | 2                              | 3                              |
| Insomnia                       | 2                             | 2                              | 2                              |
| Maturity                       | 2                             | 1(+)                           | 3(+)                           |
| More screen time               | 1                             | 1                              | 2                              |

Notes: Percentages are calculated considering the number of participants who reported having perceived changes in children’s mood and behavior. (+) and (-) indicate that significant differences in the frequency of mention of a category were found between participants from low and medium socio-economic status according to results of the chi-square per cell test (p ≤ 0.05).

4. Discussion

Results from the present work showed that Uruguayan citizens frequently reported having experienced psychological distress and
is an interesting finding given that, at the time of the study, the Uru mentioned staying at home as one of the changes in their daily life. This infected; job loss and financial difficulties; uncertainty over the duration ( Blendon et al., 2004; Cava et al., 2005 ), they did not emerge in the pandemic ( Haesebaert, Haesebaert, Zante, Marciano, Eshel, Franck, 2020; Kimhi et al. 2020; Ran et al., 2020). Although rejection and stigma have been frequently reported in the context of quarantine ( Blendon et al., 2004; Cava et al., 2005), they did not emerge in the present work given that participants had not been infected with COVID-19. The main factors responsible for emotional disturbance mentioned by participants were fear about themselves or their loved ones getting infected; job loss and financial difficulties; uncertainty over the duration of social distancing measures; confinement; loss of usual routines; and reduced social contact with others.

As expected, social distancing measures caused a major disruption of daily habits and routines. Almost half of the participants spontaneously mentioned staying at home as one of the changes in their daily life. This is an interesting finding given that, at the time of the study, the Uruguayan government had not implemented compulsory curfews and lockdowns. Therefore, these results suggest a good level of adherence to the stay-at-home recommendation issued by the government.

Changes in work-related activities were one of the most frequently mentioned contributors to the disruption of daily routines. Participants reported having lost their job, being under the unemployment insurance, being unable to work or being working from home. People being unable to work with no advance planning has been previously reported as a major consequence of quarantine that causes long-lasting socio-economic distress ( Brooks et al., 2020). Changes in work-related life were associated with financial losses, concern about the future economic situation and lack of sufficient food in the household, mainly for participants from low SES.

Participants mentioned hygiene and cleaning activities as a change in their daily routines and a major change in child-care arrangements. They reported to wash their hands and to clean and disinfect their house more frequently, in line with public health recommendations for preventing COVID-19 ( World Health Organization, 2020b). Mass communication campaigns have had a strong focus on hygiene ( Ministerio de Salud Pública, 2020). Such campaigns seemed to have triggered some compulsions and obsessions over hygiene in some people. In the present work, obsessive behaviors, such as thinking about cleaning all the time and asking their children to change their clothes three times a day, were identified. This suggests the need to implement actions to help people to find a balance and to ask for help if hygiene-related activities interfere with their daily functioning in life. In a similar vein, some participants seemed to over-interpret social distancing recommendations as they reported to avoid physical contact with their children, which triggered additional emotional disturbance. This may be particularly relevant among people with low educational level.

The closure of educational institutions forced most parents to introduce changes in child-care arrangements. Participants stated that they were spending more time with their children, which in some cases implied that one of the parents was unable to work. Most of the participants reported positive effects of the increased time together, such as an improved familiar bond and more communication between family members. However, other participants reported difficulties to cope with their children’s mood and behavior and more frequent arguments and fights. This points towards a potential surge in domestic violence. In this sense, research conducted during the Hurricane Harvey crisis showed an increase in the rates of domestic violence and child abuse among families that had already experienced domestic violence before the hurricane ( Serrata & Hurtado Alvarado, 2019 ). In the context of COVID-19, a rise of cases of domestic violence following lockdown has been reported in some European countries ( European Parliament, 2020). Support to families and particularly women seems necessary as part of the response plans to COVID-19.

The impact of social distancing measures on children’s academic achievement deserves special attention. In the present work, only 26% of the participants mentioned educational activities when describing a typical day of their children. Although participants were not explicitly asked about their children’s education, this qualitatively exploration suggests that the closure of educational institutions can be expected to cause learning losses in children. Educational institutions were not ready to immediately shift from face-to-face learning to online learning platforms. According to Kuhfeld and Tarasawa ( 2020) the COVID-19 pandemic will reduce 30% the learning gains of US students relative to a typical school year. This effect is expected to be larger among children from low SES, given the inequities that already exist in academic achievement ( INEEed, 2019 ). Results from the present work provides support for this hypothesis as participants from low SES mentioned educational activities less frequently than participants from medium SES when describing a typical day of their children. Policymakers, educators and families should develop strategies to provide support to children during and after the disruption caused by COVID-19, particularly among the most vulnerable sectors of the society.

Participants from low SES reported more difficulties to cope with social distancing measures compared to participants from medium SES. This result fits expectations and is in agreement with research conducted during the SARS outbreak which showed that quarantine had more adverse effects on socially and economically disadvantaged people ( Basrur et al., 2004; Leung & Guan, 2004; Brooks et al., 2020). Economic difficulties were identified as one of the best predictors for the effects of the COVID-19 pandemic on distress symptoms and perceived danger by Kimhi et al. ( 2020). In the present work, the economic consequences of social distancing measures were more pronounced for low SES participants, who reported negative feelings ( e.g. feeling bad) and difficulties to cope with the situation more often than medium SES participants. On the contrary, participants from medium SES reported difficulties to implement changes in child-care, which can be related to the fact that medium SES have been reported to work outside their house more frequently compared to mothers low SES ( Ministerio de Desarrollo Social, 2018). Therefore, the most vulnerable segments of the Uruguayan population seem to be disproportionally affected by the economic and

| Category               | Percentage of participants (%)* |
|------------------------|---------------------------------|
| All participants       | Low socio-economic status | Medium socio-economic status |
| Talking                | (n = 976) | (n = 648) | (n = 319) |
| Spending time          | 24       | 23       | 27        |
| together               | 21       | 21       | 23        |
| Patience               | 15       | 15       | 17        |
| Positive reaction      | 15       | 15       | 15        |
| Calm                   | 14       | 16       | 11        |
| Understanding          | 9        | 7        | 11        |
| Difficulties to handle | 6        | 6        | 7         |
| Worry and stress       | 6        | 6        | 5         |
| Various reactions      | 4        | 4        | 6         |
| Negative reaction      | 4        | 4        | 2         |
| Sadness                | 3        | 4        | 2         |
| Indifference           | 2        | 3        | 2         |
| Setting limits         | 2        | 2        | 3         |
| Anger                  | 2        | 1        | 3         |
| Punishment             | 2        | 2        | 2         |
| Anxiety                | 1        | 1        | 2         |

Notes: Percentages are calculated considering the number of participants who reported having perceived changes in children’s mood and behavior. Emotional disturbance in response to the COVID-19 pandemic and social distancing measures. Negative feelings such as worry, fear, anxiety, anguish and sadness were the most frequent. Children were also said to frequently expect these boredom, fear and stress. These results are in agreement with results from studies conducted in other countries during the COVID-19 pandemic ( Haesebaert, Haesebaert, Zante, & Franck, 2020; Kimhi et al. 2020; Ran et al., 2020).
4.1. Implications of the findings for public health policy and practice

Results from the present work suggest that financial compensations for the financial losses incurred should be an essential component of the governmental response to COVID-19. Emphasis should be placed on people from low SES and on those who completely lose their earnings due to the pandemic situation (e.g., self-employed people or people who do not receive any paid leave). Financial aid should minimize the risk of food insecurity and assure access to sufficient quantity of healthy food.

Secondly, the psychological effects of the COVID-19 pandemic and social distancing measures deserve special attention. Official communications should try to keep a balance between encouraging people to engage in preventive measures and eliciting excessive fear and worry. Hopeful messages in official communications could potentially contribute to reduce the uncertainty and fear elicited by the pandemic. Effective mitigation strategies should be implemented both during social distancing and once it has finished. Practical recommendations for people to cope with boredom and isolation could have a positive effect (Brooks et al., 2020). Results from the present work suggest that people from low SES may be more prone to psychological distress as they need to simultaneously cope with the fear of getting infected, the impact of social distancing on their daily routines and economic difficulties to cope with the situation. In addition, the findings stress the need to develop mitigation strategies targeted at children, as they seem to frequently suffer the psychological consequences of social distancing.

Thirdly, strategies to mitigate the impact of social distancing on children’s academic achievement should also be an integral part of the governmental response to COVID-19. Communication to parents could contribute to motivate their children to get back on track academically. In addition, educators should develop effective approaches to catch students up once educational institutions reintroduce face-to-face lessons.

Finally, an interesting finding of the present work was that COVID-19 and social distancing measures triggered positive changes in some families, particularly in terms of family relationships and eating patterns. This suggests that COVID-19 may provide people more time to perform some activities they enjoy. In this regard, parents have reported lacking the opportunity to invest enough quality time with their children (Roxburgh, 2012). Similarly, lack of time has been identified as a major barrier for healthy eating among Uruguayan citizens (Machín et al., 2018). On this basis, COVID-19 may provide some families the opportunity to rethink some of their habits and daily routines. Changes in the circumstances have been reported to trigger a disruption in habitual behaviours if individuals have the intention to introduce changes (Wood, Tam, & Witt, 2005). Communication campaigns after the pandemic can reinforce this aspect and encourage people to stick to the positive changes they have implemented. In this sense, one of the areas that deserves special attention is related to children’s eating patterns. Some of the participants reported an improvement in the healthiness of their diet, and particularly an increase in the consumption of fruits, vegetables and pulses. This is highly relevant considering that consumption of these foods among Uruguayan children is lower than nutritional recommendations (Ministerio de Desarrollo Social, 2018). Therefore, strategies to make the positive changes in eating patterns caused by COVID-19 long lasting could have a constructive public health impact.

5. Conclusions

Results from the present work showed that the social distancing measures implemented to contain the COVID-19 outbreak in Uruguay caused a major disruption in daily habits, which were mostly attributed to changes in work-related activities and the closure of educational institutions. Difficulties to cope with such changes and the fear and uncertainty caused by COVID-19 were identified. Participants from low socio-economic status faced more difficulties to cope with the consequences of social distancing measures, both from an economic and emotional perspective. These results provide relevant insights for public health policy and practice by highlighting the importance of giving emotional and psychological support to people during social distancing measures, which can be useful for the design of communication campaigns and interventions.

Author contributions

All authors were involved in the conception and design of the study. GA, LV and GB analysed the data. GA wrote a first version of the manuscript, to which all the authors substantially contributed.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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