

IMPACT OF THE COVID-19 PANDEMIC ON THE ACCESS AND UTILIZATION OF HEALTH SERVICES BY CHILDREN AGED 0-12 YEARS IN BRAZIL

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1. INTRODUCTION

Although children without underlying conditions are not considered to be at high-risk for infection with COVID-19 and show the lowest mortality rates among age groups, the pandemic may still have lifelong impacts on them due to its effects on the social determinants of health (NATIONAL INSTITUTE FOR CHILDREN'S HEALTH QUALITY, 2020). As a result, household income loss or changes in the parents or caregivers' work schedule could interfere with the family's ability to maintain pediatric medical and dental appointments, as well as with keeping the child's vaccination schedule up-to-date.

A recent study by ROBERTON et al. (2020) quantified the indirect effects of the pandemic on maternal and child mortality in 118 low and middle-income countries. They estimate that reduced access to essential health care services could lead to a monthly rise of 9.8-44.7% in the deaths of children under 5 years of age. Similarly, the WORLD HEALTH ORGANIZATION (WHO) estimates that around 80 million children under 1 can miss important vaccines across 68 countries because of COVID-19 lockdown measures (WHO, UNICEF, GAVIN, SABIN VACCINE INSTITUTE, 2020).

The objective of this summary is to present findings as to how the pandemic has affected the need and ability of families of children aged 0 -12 years in Brazil to access public and private medical, dental and vaccination services. Measuring access to and utilization of health services by the families will enable us to better plan and implement more efficient strategies to sustain and restore children's health in the short, medium, and long term.

2. METHODS

This report is part of a larger investigation aimed at examining the COVID-19 pandemic and social distancing measures impact on childcare. This cross-sectional study was approved by the Catholic University of Pelotas (Universidade Católica de Pelotas - UCPel) Ethics Research Committee (#4.212.463) and consisted of an online survey hosted in Google Docs Platform. All participants were informed of the study objectives and agreed to participate by signing an electronic informed consent form embedded in the survey. They were also informed that their participation was confidential and that the investigators would not be able to identify any personal details.

The criterion for inclusion was that the respondent is a parent, legal guardian or caregiver of children aged 0-12 years in Brazil. Multiple-child parents were advised

to respond to the survey based on the oldest child in the household. The primary target population comprised users of Community Health Care Centers (Unidades Básicas de Saúde - UBS) in the city of Pelotas/ RS, Brazil, where Catholic University of Pelotas (UCPel) students serve in clinical and educational projects. Initially, respondents were invited to participate in the survey via the WhatsApp application, where they were given a link to access the Google Form to respond to the survey. Next, a link was made available to the general public via social networks, Instagram and Facebook, using publications in the research profile (@pesquisaconvivendoemfamilia). Using a snowball sampling approach, participants were asked to invite friends, relatives or acquaintances who had children in the same age group to respond to the survey. The questionnaire included general questions pertaining to the characteristics of families and participants and specific questions related to the use of medical, dental and vaccination services during the COVID-19 pandemic in Brazil. Data were collected from August through September 2020.

Data analysis was performed on RStudio 1.3 (RStudio Team Corp., Boston, USA). Descriptive analysis with absolute and relative frequencies was performed considering that confidence intervals were set at 95%.

3. RESULTS AND DISCUSSION

A total of 255 respondents comprise the sample of this report. The highest participation rate was seen among individuals who were reached via social media sites, with 229 respondents (90%) versus 26 (10%) survey respondents who were UBS users. Table 1 summarizes the highest frequencies of a few sociodemographic characteristics in which differences were observed between groups that could be associated with the effects of the pandemic on the access to and utilization of health services by the families.

The proportion of parents reporting the need for medical visits during the pandemic was 40% among the UBS users and 47.37% among the social media respondents, with 50% of the UBS users reporting the reason for their visit being an emergency, compared to 20.3% of the respondents in the other group. In terms of vaccination coverage, 76% of the respondents in the UBS group indicated that their children needed to be vaccinated during the pandemic, and 100% had access to it. Among the social media group respondents, 62.88% reported needing to vaccinate their children, and 93.71% had access to this service. These results contrast with a recent report by SANTOLI (2020), which stated that parents' fears about exposing their children to COVID-19 during medical visits may be related to the noted decrease in routine pediatric vaccine ordering and administration in the United States.

In terms of access to dental facilities, 100% of the UBS users reported using public health care centers, compared to 93.94% of the social media respondents who sought care in private clinics. About 44% of the respondents in the UBS group and 66% of the respondents in the social media group reported having seen a dentist prior to the pandemic, out of which 100% of the UBS users and 87.84% of the respondents in the social media group reported that a check-up was the reason for their visit. Approximately 44% of the respondents in both groups reported that their appointment took place less than 6 months before the social distancing measures were implemented, and only 1.10% of the respondents in the UBS group and 19% of the respondents in the social media group had not seen a dentist in more than a year.

Limitations to be acknowledged include the cross-sectional design, which does not allow us to draw causal inferences and the nature of the sampling method, which was a potential source of selection bias (mainly among respondents reached via social media networks and who might be more motivated to participate) and information bias, as the results are based on self-report. Due to the small sample size, the generalizability and, in turn, external validity of the study are also limited.

Table 1. Sociodemographic characteristics of families and children, as reported in the survey, by total sample (n=255) and by data collection method (n=229).

Characteristic	Respondents N (%)	95% CI	UBS N (%)	Social media N (%)
Female Sex	236 (92.54%)	88.65 – 95.17	24 (92.30%)	212 (92.57%)
Age (n=255)				
20-25yr	20 (7.84%)	5.13 – 11.80	12 (46.15%)	8 (3.49%)
36-45 yr	121 (47.45%)	41.40 – 53.57	6 (23.07%)	115 (50.21%)
Residence (n=255)				
Urban area	245 (96.84%)	93.88 – 98.38	22 (91.66%)	223 (97.38%)
Rural area	8 (3.16%)	1.61 – 6.11	2 (8.34%)	6 (2.62%)
Child's age (n=251)				
≤ 2 yr	62 (24.70%)	19.77 – 30.39	13 (56.52%)	49 (21.49%)
3-5 yr	85 (33.86%)	28.29 – 39.92	4 (17.39%)	81 (35.53%)
6-8 yr	42 (16.73%)	12.62 – 21.84	2 (8.69%)	40 (17.54%)
9-12 yr	62 (24.70%)	19.77 – 30.39	4 (17.39%)	58 (25.44%)
Education (n=253)				
8-12 yr	29 (11.37%)	8.03 – 15.85	13 (50.00%)	16 (6.98%)
≥ 12 yr	219 (85.88%)	81.07 – 89.62	10 (38.46%)	209 (91.26%)
Income before pandemic (n=238)				
1-2 monthly min wages (U\$194-388)	37 (15.54%)	11.49 – 20.69	13 (54.16%)	1 (0.46%)
≥ 10 monthly min wages (U\$2,000)	80 (33.61%)	27.91 – 39.83	-	80 (37.38%)
Income change (n=238)				
No change	107 (42.12%)	36.21 – 48.27	6 (23.07%)	101 (44.29%)
Greatly reduced	56 (22.04%)	17.38 – 27.54	11 (42.30%)	45 (19.73%)
Now working from home (n=249)	115 (71.88%)	58.12 – 69.95	7 (77.77%)	108 (71.52%)
Financial assistance (n=251)				
Yes	61 (24.30%)	19.40 – 29.97	19 (73.08%)	42 (18.67%)
No	190 (75.69%)	70.02 – 80.59	7 (26.92%)	183 (81.33%)

4. CONCLUSION

Despite the limitations of the study and the low response rate among the UBS users, the socioeconomic disparities found are likely to influence access to and utilization of medical and dental services. These results also highlight the need for more studies in this area to determine the long-term effect of the COVID-19 pandemic and its related social distancing measures on children's health. As researchers, we are now facing the challenge of finding new strategies that allow us to collect data from this population. Studies like this, however, are useful sources of information for medical and dental providers who are required to adapt their practices at circumstances like this to better serve this demographic.

5. REFERENCES

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