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### America at a glance: Social isolation and loneliness during the first wave of COVID-19

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## America at a glance: Social isolation and loneliness during the first wave of COVID-19

August 2020

**RTC:Rural**

Research and Training Center  
on Disability in Rural Communities

### SUMMARY:

- **Social isolation and feelings of loneliness are associated with poor mental and physical health.**
- **Opportunities for in-person social engagement have become more limited during the COVID-19 pandemic due to social distancing and stay-at-home mandates.**
- **We compared two groups who provided data at different points of time – one pre-COVID and another post-COVID. Post-COVID rural and urban samples reported significantly more interactions with family and close friends.**
- **Post-COVID urban respondents reported significantly lower rates of feeling left out, while the post-COVID rural respondents reported similar rates.**

### Introduction

Social isolation and loneliness are a public health concern because they are associated with poor mental and physical health outcomes and mortality.<sup>1-4</sup> Social isolation is lack of social connections and participation, while loneliness is a feeling of dissatisfaction about level of social engagement.<sup>5</sup> For some, social isolation (i.e. lack of social connections) can lead to loneliness.<sup>6</sup> While evidence suggests that both are associated with poor health, it is less clear whether isolation and loneliness cause poor health or if poor health leads to isolation and eventually results in loneliness.<sup>5</sup> It is likely that the two are reinforcing. In an effort to reduce the spread of COVID-19,



many U.S. states implemented various “stay-at-home” or “shelter-in-place” orders beginning in early April 2020. These mandates closed or restricted most business operations and limited public outings to essential activities such as grocery shopping, medical care, or outdoor exercise and recreation.<sup>7</sup> While these orders have helped slow the spread of COVID-19, they have also led to concerns about increasing isolation and feelings of loneliness.<sup>8</sup>

Social isolation and loneliness are particularly impactful to people with disabilities, because they already experience fewer opportunities for social engagement due to such things as inaccessible businesses and events, limited accessible public transportation, social stigma, and lower rates of employment.<sup>9-11</sup> In fact, people with disabilities report significantly higher rates of social isolation and loneliness than those without disabilities.<sup>6</sup>

In the midst of COVID-19, opportunities for social engagement have become even more constrained. Many people with disabilities experience chronic health conditions which place them at heightened risk of complications from COVID-19.<sup>12</sup> While it is especially important for them to limit their in-person social interactions to reduce exposure to COVID-19, they are trading one risk factor for another.

To learn more about how COVID-19 and related responses (i.e. stay-at-home orders) may contribute to feelings of social isolation and loneliness among people with disabilities, we compared data from two cross-sectional samples collected before and after the first wave of “stay-at-home” orders.

## Methods

We recruited two samples of people with disabilities through Amazon Mechanical Turk (MTurk). The first sample was recruited as part of the National Survey on Health and Disability

### Mechanical Turk

MTurk is an online marketplace where “requestors” post small tasks called Human Intelligence Tasks (HITs) for “workers” to complete. For survey research, HITs often begin with a short set of screening questions to target a specific group of interest. Those meeting screening criteria are invited to participate in a longer survey of interest. A short screening survey is typically paid between \$0.10 and \$0.25, while a longer survey may earn a worker several dollars depending on the survey length.



(NSHD) between January 6 and January 26, 2020, just prior to the U.S. COVID-19 outbreak.<sup>15</sup> The second sample was collected between April 22 and May 10, 2020, when most state-wide lockdowns were in place, but prior to when most phased re-openings began. For both samples, we used MTurk to screen and recruit people with disabilities into an online survey. Individuals were invited to

participate if they lived in the United States, were aged 18-

64, and were limited in activities or used special equipment because of a physical, mental, or emotional disability or health problem.

## Measures

Both samples answered questions about their health, social connectedness, and loneliness, which allowed us to explore how these factors differed in pre- and post-COVID environments.

### Health

We measured health status using three questions from the Behavioral Risk Factor Surveillance System (BRFSS) Health-Related Quality of Life

Module (HRQoL-4; “Healthy Days”). The first question focused on overall health, and asked “in general, would you say your health is ...” (1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent). Participants also estimated how many days in the past 30 days (1) their physical health was not good and (2) their mental health was not good.

### Social isolation

To assess social isolation, we asked about satisfaction with activity, feelings of isolation, and social supports. Two items came from the Patient-Reported Outcomes Measurement Information System (PROMIS) Satisfaction with Participation in Discretionary Social Activities survey: “I am satisfied with the amount of time I spend doing leisure activities” and “I am satisfied with my current level of social activity,” and an additional item “I feel isolated from other people in my community” were each rated on a 5-point Likert type scale where 1 = not at all, 2 = a little, 3 = some, 4 = quite a bit, and 5 = very much. A final item asked “How many family members or close friends do you see or hear from at least once a month?”

### Loneliness

We measured loneliness using 2 items from the UCLA Loneliness Scale, which asks respondents how often they feel that they lack companionship and feel left out, based on a scale: 1 = hardly ever, 2 = some of the time, or 3 = often.

## Data Analysis

We used Chi-square tests to compare categorical data, and t-tests to compare continuous and ordinal data for pre- and post-COVID groups. All

health status, social isolation, and loneliness variables met assumptions of normality.



## Participants

Table 1 compares the pre-COVID (n = 758) and post-COVID (n = 384) groups on key demographic characteristics. The groups were similar in terms of age, gender, marital status, and geographic distribution. The groups reported similar rates of high school education, but significantly different rates of some college and college graduation or higher. The post-COVID group had significantly higher rates of Latinx and Asian respondents, while the pre-COVID sample reported higher rates of Whites.

**Table 1: Pre- and Post-COVID group key demographic characteristics**

	Pre-COVID Group (n = 757)	Post-COVID Group (n = 382)
<b>Age</b>		
18-34	45%	50%
35-64	55%	50%
<b>Gender</b>		
Female	58%	56%
Male	42%	43%
Other	1%	1%
<b>Marital Status</b>		
Married	39%	41%
<b>Education</b>		
High school	15%	12%
Some college*	49%	34%
College graduate or higher*	36%	55%
<b>Race and Ethnicity</b>		
White*	89%	84%
Asian*	3%	7%
Black	6%	9%
American Indian/Alaska Native	4%	3%
Native Hawaiian/Pacific Islander	0%	1%
Hispanic/Latinx*	3%	12%
<b>Geography</b>		
Rural (micro and noncore)	21%	26%
Urban (metro)	78%	74%

\* Rates are significantly different between pre and post-COVID groups at  $p \leq .05$

## Findings

Table 2 compares urban and rural respondents from the pre-COVID and post-COVID groups in terms of health status, social connectedness, and loneliness. For health status, the post-COVID group reported slightly better health status, but more days where their mental health was not good. These results were significant for the urban sample, but not for the rural sample. The magnitude of differences, however, were similar and likely related to smaller sample sizes.

The pre-COVID and post-COVID groups reported similar rates of satisfaction with time doing leisure activities and current level of social activity. The post-COVID groups, however, reported feeling more isolated, but hearing from significantly higher numbers of family and close friends.

The pre-COVID and post-COVID groups had similar mean ratings in terms of lacking companionship and feeling isolated from others. The urban post-COVID group, however, had significantly lower ratings of feeling left out compared to the urban pre-COVID group and both the rural pre-COVID and post-COVID groups.

**Table 2: Comparison of urban and rural respondents from Pre- and Post-COVID groups**

	Urban		Rural	
	Pre-COVID Group Mean (n = 560)	Post-COVID Group Mean (n = 300)	Pre-COVID Group Mean (n = 197)	Post-COVID Group Mean (n = 82)
<b>Health Status</b>				
In general would you say your health is... 1 = poor to 5 = excellent	2.73	2.92**	2.69	2.78
How many days out of the last 30 was your physical health not good?	8.54	8.11	10.03	11.16
How many days out of the last 30 was your mental health not good?	12.49	14.63**	12.61	14.18
<b>Social Isolation</b>				
I am satisfied with the amount of time I spend doing leisure activities. 1 = not at all to 5 = very much	2.95	2.96	2.94	2.93
I am satisfied with my current level of social activity. 1 = not at all to 5 = very much	2.47	2.35	2.56	2.78
I feel that I am isolated from other people in my community. 1 = not at all to 5 = very much	3.33	3.84***	3.33	3.59
How many family members of close friends do you see or hear from at least once per month?	3.86	5.31***	3.66	5.04***
<b>Loneliness</b>				
How often do you feel you lack companionship? 1 = hardly ever, 2 = sometimes, 3 = often	2.10	2.03	2.05	2.09
How often do you feel left out? 1 = hardly ever, 2 = sometimes, 3 = often	2.20	1.90***	2.11	2.09

**Note: Asterisks denote statistically significant differences between groups. \*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ .**

## Discussion

Participants in the post-COVID group reported better overall health ratings but more days of poor mental health. This was surprising because self-rated mental health is strongly associated with overall health.<sup>13</sup> One possible explanation is that immediate mental health impacts from COVID-19 had not yet impacted overall general health. Unfortunately, it is difficult to fully address this question without longitudinal data into the future.

We expected feelings of loneliness to be higher among the rural and urban post-COVID groups. The rural post-COVID group reported virtually no change in feeling left out. The urban post-COVID group, however, reported feeling less lonely even though they had higher ratings of feeling isolated from others in their community. This might relate to the fact that the post-COVID groups reported more contact with close family and friends. Luchetti and others<sup>14</sup> reported similar results, where individuals reported no change in loneliness and perceived more support from others during the early stages of the pandemic. Social support may increase resilience to feelings of loneliness despite physical isolation during the current pandemic.

Another explanation for lower ratings of loneliness may relate to the historical exclusion of people with disabilities who often encounter barriers to socializing and community participation.<sup>6,9</sup> In the midst of COVID-19, people with and without disabilities may have more similar opportunities for social engagement, so people with disabilities may not feel as left out. Additionally, COVID-related accommodations to keep people connected may have actually increased social connectedness of people with disabilities. For example, online classes, virtual social gatherings, and telehealth may have increased opportunities for individuals who have environmental or transportation barriers to in-person participation. This effect may be more pronounced in urban areas, which may have

transitioned to remote opportunities earlier in the pandemic.

Ultimately, COVID-19 may lead to improved participation among people with disabilities based on new ways of doing business and engaging in society. For example, employers are adjusting to remote work arrangements, which may open new employment opportunities for people who have historically been excluded due to inaccessible work environments. In this way, technological accommodations may be fostering a more inclusive social environment for people with disabilities.



## Limitations

There are some limitations to this study. First, the pre-COVID and post-COVID samples are comprised of different people for different surveys. The cross-sectional nature of these data makes it difficult to determine whether group differences are related to COVID-19 or to other factors such as demographic differences. The samples, however, have some important similarities in terms of how the data were collected, how participants were screened, and in several demographic characteristics, such as age, gender, and marital status.

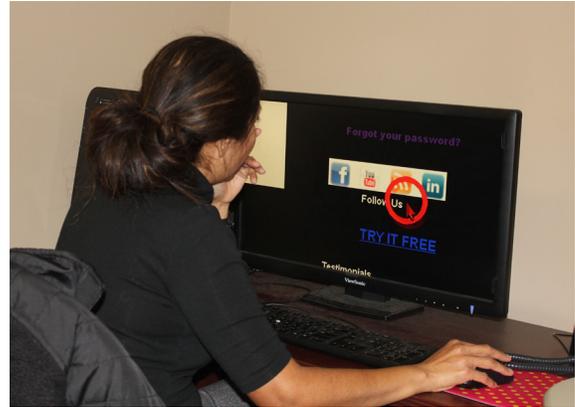
Second, this is a convenience sample of self-selected participants recruited via an online platform. Individuals in both of these samples must have access and ability to use the internet to complete a survey on Amazon MTurk. Internet access has been critical to maintaining social connections during the pandemic, and these findings exclude individuals without this access.

It seems possible that lack of internet would impact feelings of loneliness and ability to connect with others. Future research should seek to understand how the pandemic is impacting the feelings of isolation and loneliness of individuals without internet and technology access.



## Conclusion

These results suggest that despite an increase in poor mental health during the first wave of COVID-19, people with disabilities with internet access felt less left out. This could be attributed to more interactions with family and friends during this time. Future research should explore how isolation and loneliness change over time during the pandemic, and how technological accommodations may improve opportunities for people with disabilities to engage and participate in their communities.



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## Images

Unless otherwise noted, all photos are from Healthy Community Living ([www.HealthyCommunityLiving.org](http://www.HealthyCommunityLiving.org)) under which people from around the country have sent in photos of “Real People, Real Places” that have to do with living with disability in America. Icons are from The Noun Project ([www.thenounproject.com](http://www.thenounproject.com)).

## National Survey on Health Reform and Disability (NSHD)

The NSHD is fielded by the University of Kansas Institute on Health and Disability Policy Studies (KU-IHDPS) as part of the Collaborative on Health Reform and Independent Living (CHRIL). CHRIL is funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (grant #90DP0075-01-00). For access to the NSHD dataset and other inquiries, contact the NSHD Administrator Noelle Kurth at [pixie@ku.edu](mailto:pixie@ku.edu).

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## For Additional Information

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