COVID-19 Coronavirus and Social Distancing
Survey Results

----------- Preliminary Draft -----------
----------- Latest Revision: March 24, 2020 -----------

OVERVIEW:
The COVID-19 Coronavirus and Social Distancing Survey was made available on-line between Thursday, March 19, and Sunday, March 22, 2020. In total, 26,505 respondents from Wisconsin completed the survey. The goal of the survey was to (a) determine the characteristics of individuals who currently do not yet fully comply with recommended social distancing, (b) understand what prevents them from doing so, (c) examine the types of persuasive messages that they are likely responsive to, and (d) identify the media channels through which they can be reached.

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Executive Summary

The "COVID-19 Coronavirus and Social Distancing Survey" was completed online by 26,505 residents of Wisconsin.

Nearly two thirds of the respondents reported that they engage in "very much" social distancing (response option 5 on a 5-point scale). Those who currently do not engage in the recommended social distancing are on average younger than those who do, but no socio-demographic category as being drastically more or less compliant than others.

Those who engage in more social distancing are also more likely to believe that it is effective and that similar others currently engage in social distancing. Comparatively, perceived likelihood of becoming infected with the COVID-19 coronavirus in the near future and knowledge transmission are unrelated to self-reported social distancing. The less respondents engage in social distancing, the more they say that they do not know which behaviors count and do not count as social distancing.

Most individuals who currently do not fully comply with recommendations on social distancing report that practicing social distancing is consistent with the fact that they generally care about other people. The vast majority of them personally know someone who is likely to suffer serious negative consequences if infected with the COVID-19 coronavirus. Messages that appeal to people’s sense of responsibility and sense of caring for others are likely to be effective.

The most frequently reported barriers to practicing more social distancing are structural in nature, i.e., respondents’ work, family, and other obligations prevent them from doing more. Concerns about keeping busy or deteriorating mental health also prevent some individuals from practicing more social distancing.

The best way to reach the individuals who should be engaging in more social distancing is through Facebook and, to a lesser extent, through Instagram and YouTube.

The survey participants were recruited through social media and are thus not representative of the residents of Wisconsin. An analysis of the demographic data confirmed that our sample contained a disproportionate number of women and of young individuals. The results should thus be interpreted with caution.

This report has important implications for everyone whose goal it is to get others to practice more social distancing in order to prevent the rapid spread of COVID-19 coronavirus. Social marketers, practitioners, and social influencers will find in this report useful information that will help them design messages that effectively change people’s social distancing behavior.
Background

On March 17, a group of interdisciplinary researchers, outreach specialists, and practitioners formed a loosely defined group with the goal to examine what can be done to get a larger percentage of people in Wisconsin to comply with the social distancing recommendations. Both Gavin Luter, Managing Director of the UniverCity Alliance, and Gail Sumi, Member Engagement and Communications Director at the Wisconsin League of Municipalities, along with Haley Madden of the Morgidge Center for Public Service were instrumental in forming the group. Numerous graduate students and undergraduate students joined the group offering their help with various tasks.

With documented widespread “community transmission” (the virus being transmitted by individuals with no travel history) COVID-19 is already established in the US population. Social distancing – the deliberate increase of physical space between individuals – is one of primary factors that slows down the spread of the virus. Public health officials, therefore, have established “social distancing” as an urgent top priority. New model estimates show we should try to reach 90% compliance across the US population. [REF]

The goal of the group was to develop persuasive and effective communication tools – primarily for social media, but also more generally for other communications about COVID-19 – to get a larger number of individuals to comply with social distancing recommendations. During a zoom meeting on March 18 the group members came to the conclusion that it was necessary to learn more about the individuals whose behavior we wanted to change. It was decided to conduct a survey among Wisconsin residents, initially with a convenience sample due to the time sensitivity of the issue, but to be followed up by a probability sample.

The survey was created within a few hours, integrating the input from many group members. Thanks to the support by Laura Conger, senior analyst at the Institutional Review Board, the survey was approved overnight. It went live on Thursday, March 19, at noon.

Recruitment occurred through a snowball procedure on social media. Members of the group posted the link to the survey on their personal and professional social media platforms and asked readers to complete the survey and further distribute the link. Communication experts in many departments tweeted about the survey. Gail Sumi reached many individuals through distribution channels related to Wisconsin municipalities. Ann Grauvogl, GHI Senior Communications Specialist, published two highly influential articles about the survey on the websites of the Global Health Institute and University Communications.

By 10 pm on Sunday March 22, 32,940 individuals had completed the survey and 26,505 of these were residents of Wisconsin.
Survey

The goal of the survey was to better understand people’s beliefs, attitudes, feelings, and self-reported behaviors related to social distancing and COVID-19 coronavirus. More precisely, we wanted to collect information that would allow us (or others) to design successful campaign to get people to intensify their social distancing. The survey consisted of several parts each measuring one or more specific constructs related to behavior change campaigns. These constructs are mentioned [in brackets] in the next paragraphs.

Some have argued that "physical distancing" is a more appropriate term than "social distancing," since one can increase physical space between one and others, yet still to be socially connected. After all, social connection is more important than ever in times of crisis. As we write the term “healthly distancing” is also beginning to be used. For reasons of simplicity, and from input by the Wisconsin Department of Health Services, the more widely known term "social distancing" was used in the present survey.

**Social Distancing Behavior.** Part 1 was about social distancing behavior. Our primary outcome variable was a question about the extent to which respondents currently practised social distancing. Respondents also answered related questions, such as whether they thought social distancing reduces the infection risk ("self-efficacy") and whether their friends and similar others practised it ["perceived social norms"]. This part also contained general questions about the COVID-19 coronavirus, how likely they thought it was that they would get infected with the COVID-19 coronavirus in the next month ["perceived risk"] and how negative the consequences would be for them if they were to get infected ["perceived consequences"]. We also assessed how well participants were informed about COVID-19 coronavirus ["subject knowledge"].

**Media Habits.** Part 2 assessed media habits. Respondents were asked to report how frequently they used a variety of social media platforms, such as Facebook, Instagram, Snapchat, and Twitter. The goal of this part was to identify the media channels through which individuals can be reached for our campaign ["distribution channels"].

**Effective messaging.** Part 3 examined the type of messages that likely convince individuals to practice more social distancing. For example respondents were asked if they would do more social distancing if they became convinced that they were at a high risk of becoming infected or if they learned that their behavior would contribute to the prevention of older members of the community from becoming infected ["motivators," sometimes also refered to as "benefits"].

**Barriers to Social Distancing.** Part 4 asked respondents about factors that made it difficult for them to engage in more social distancing. The items assessed people’s worries about not being able to keep busy or stay connected if they were to do more social distancing. Respondents were also asked to report whether social distancing was incompatible with their other obligations, the way they used drugs and/or alcohol, and
whether they would worried that it would increase the severity of the mental health issues that they were struggling with ["barriers" to behavior change].

**Socio-Demographic Questions.** Part 5 consisted of standard socio-demographic questions such as age, gender identity, racial/ethnic identity, type of community (rural, urban, etc.), and education. Participants also indicated the extent to which their political views were liberal versus conservative on social and economic issues.

**Respondent Comments.** Part 6 consisted of open-ended questions where respondents could report their thoughts about the factors that facilitate or prevent them from practicing more social distancing.

Respondents responded to most items using 5-point Likert response scales with appropriately labeled endpoints (e.g., 1 = "Strongly disagree" and 5 = "Strongly agree").

<table>
<thead>
<tr>
<th>Comparison Survey Sample versus Wisconsin Residents</th>
<th>Survey Sample</th>
<th>Wisconsin Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>33.6%</td>
<td>17.7%</td>
</tr>
<tr>
<td>30-39</td>
<td>22.8%</td>
<td>16.8%</td>
</tr>
<tr>
<td>40-49</td>
<td>18.8%</td>
<td>16.6%</td>
</tr>
<tr>
<td>50-59</td>
<td>13.9%</td>
<td>19.6%</td>
</tr>
<tr>
<td>60-69</td>
<td>8.0%</td>
<td>15.5%</td>
</tr>
<tr>
<td>70 years +</td>
<td>2.8%</td>
<td>13.4%</td>
</tr>
<tr>
<td><strong>Gender identity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>85.6%</td>
<td>50.3%</td>
</tr>
<tr>
<td>Men</td>
<td>13.8%</td>
<td>49.7%</td>
</tr>
<tr>
<td>Other/None of these</td>
<td>0.6%</td>
<td>-----</td>
</tr>
<tr>
<td><strong>Racial/ethnic identity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arab / Middle Eastern</td>
<td>0.1%</td>
<td>NA</td>
</tr>
<tr>
<td>Asian / Asian American</td>
<td>1.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Black / African American</td>
<td>0.3%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Hispanic / Latina/o/x</td>
<td>0.9%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Native American / American Indian / First Nation</td>
<td>0.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Pacific Islander / Native Hawaiian</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>White / Caucasian</td>
<td>94.0%</td>
<td>81.1%</td>
</tr>
<tr>
<td>Other / None of these</td>
<td>3.3%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Type of community respondent lives in
Large city (> 100,000 inhabitants) 29.3% 14.6%
Suburb near a large city 26.0% 20.3%
Small city or town 31.6% 39.4%
Rural area 13.0% 25.8%

Highest degree or level of education respondent has completed
Some High School 0.3% 7.2%
High School 11.7% 51.6%
Bachelor’s degree 42.9% 19.4%
Master’s Degree 26.7% 7.3%
Ph.D. or higher 5.9% 1.2%
Other. 12.3% 13.3%

The comparison clearly shows that our sample is not representative of the residents of the State of Wisconsin, which is not surprising since it is a "convenience sample" recruited through social media, rather than a "probability sample" recruited through a survey institute. On average, the average member of our sample is younger, more female, more highly educated, and is more likely to live in either Milwaukee or Madison (the only cities with more than 100,000 inhabitants). The results of this report should thus be interpreted with caution.

The results presented below are "unweighted," i.e., each observation counts equally. In later editions of this report we will also present weighted results, which make the conclusions more generalizable to all residents of the State of Wisconsin.

Readers should also be aware that, as mentioned earlier, we are currently collecting data from a national "probability sample," i.e., a sample that is representative of all US residents. This sample will contain a "probability sub-sample" of Wisconsin, i.e., a part of the total sample that is representative of Wisconsin residents.

In addition to getting better information about race and ethnicity and socio-economic status in the randomized survey, we will also implementing a similar snowball survey via social media in Spanish, Chinese, Hmong, and Vietnamese, so that communication efforts can be informed by and responsive to these groups.

**Results**

1) **The primary outcome variable - Self-reported social distancing:**

Our primary outcome variable was the question: "Do you currently practice social distancing (in other words: do you deliberately increase the physical space between
you and people to avoid spreading illness)? [1 = "No, not at all" and 5 = "Yes, very much"). Here is a distribution of the responses:

Not a single respondent chose response option 1. However, nearly two thirds of our respondents chose response option 5, reporting that they engage in "very much" social distancing.

B) Self-reported social distancing by sociodemographic characteristics

In the tables below we report the mean response to the question on self-reported social distancing as function of age, gender, race/ethnicity, type of community, and education.

<table>
<thead>
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<th>Age</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
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<tr>
<td>18 to 19</td>
<td>4.00</td>
<td>212</td>
<td>.954</td>
</tr>
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<td>20 to 29</td>
<td>4.26</td>
<td>3546</td>
<td>.825</td>
</tr>
<tr>
<td>30 to 39</td>
<td>4.52</td>
<td>6877</td>
<td>.688</td>
</tr>
<tr>
<td>40 to 49</td>
<td>4.56</td>
<td>6428</td>
<td>.655</td>
</tr>
<tr>
<td>50 to 59</td>
<td>4.59</td>
<td>4601</td>
<td>.637</td>
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<td>60 to 69</td>
<td>4.72</td>
<td>3298</td>
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<td>70 and over</td>
<td>4.73</td>
<td>930</td>
<td>.539</td>
</tr>
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<td>Total</td>
<td>4.53</td>
<td>25892</td>
<td>.687</td>
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<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
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</thead>
<tbody>
<tr>
<td>Men</td>
<td>4.48</td>
<td>3610</td>
<td>.720</td>
</tr>
<tr>
<td>Women</td>
<td>4.54</td>
<td>22513</td>
<td>.681</td>
</tr>
<tr>
<td>-------------</td>
<td>------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Other</td>
<td>4.51</td>
<td>162</td>
<td>.707</td>
</tr>
<tr>
<td>Total</td>
<td>4.53</td>
<td>26285</td>
<td>.687</td>
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<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arab/Middle Eastern</td>
<td>4.39</td>
<td>18</td>
<td>.979</td>
</tr>
<tr>
<td>Asian/Asian American</td>
<td>4.58</td>
<td>300</td>
<td>.662</td>
</tr>
<tr>
<td>Black/African American</td>
<td>4.53</td>
<td>72</td>
<td>.671</td>
</tr>
<tr>
<td>Hispanic/Latina/o/x</td>
<td>4.60</td>
<td>245</td>
<td>.674</td>
</tr>
<tr>
<td>Native American/American</td>
<td>4.63</td>
<td>59</td>
<td>.667</td>
</tr>
<tr>
<td>Pacific Islander/Native</td>
<td>4.44</td>
<td>9</td>
<td>1.014</td>
</tr>
<tr>
<td>Hawaiian</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>White/Caucasian</td>
<td>4.53</td>
<td>24810</td>
<td>.686</td>
</tr>
<tr>
<td>Other</td>
<td>4.39</td>
<td>69</td>
<td>.861</td>
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<tr>
<td>Total</td>
<td>4.53</td>
<td>25582</td>
<td>.687</td>
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<table>
<thead>
<tr>
<th>Type of community</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
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<tbody>
<tr>
<td>Rural</td>
<td>4.50</td>
<td>3418</td>
<td>.729</td>
</tr>
<tr>
<td>Small town</td>
<td>4.48</td>
<td>8324</td>
<td>.730</td>
</tr>
<tr>
<td>Suburb</td>
<td>4.56</td>
<td>6864</td>
<td>.662</td>
</tr>
<tr>
<td>Large city</td>
<td>4.59</td>
<td>7737</td>
<td>.634</td>
</tr>
<tr>
<td>Total</td>
<td>4.53</td>
<td>26343</td>
<td>.687</td>
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</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
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</thead>
<tbody>
<tr>
<td>Some High School</td>
<td>4.15</td>
<td>85</td>
<td>.970</td>
</tr>
<tr>
<td>High School</td>
<td>4.40</td>
<td>3074</td>
<td>.798</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>4.52</td>
<td>11319</td>
<td>.688</td>
</tr>
<tr>
<td>Master degree</td>
<td>4.62</td>
<td>7058</td>
<td>.602</td>
</tr>
<tr>
<td>PhD or higher</td>
<td>4.64</td>
<td>1548</td>
<td>.591</td>
</tr>
<tr>
<td>Total</td>
<td>4.54</td>
<td>23084</td>
<td>.679</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Political Affiliation</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very liberal</td>
<td>4.62</td>
<td>8223</td>
<td>.624</td>
</tr>
<tr>
<td>Somewhat liberal</td>
<td>4.54</td>
<td>8880</td>
<td>.667</td>
</tr>
<tr>
<td>Neutral</td>
<td>4.44</td>
<td>5026</td>
<td>.750</td>
</tr>
<tr>
<td>Somehwat conservative</td>
<td>4.43</td>
<td>2807</td>
<td>.736</td>
</tr>
<tr>
<td>Very conservative</td>
<td>4.53</td>
<td>1148</td>
<td>.752</td>
</tr>
<tr>
<td>Total</td>
<td>4.53</td>
<td>26084</td>
<td>.686</td>
</tr>
</tbody>
</table>
We conducted inferential statistics to examine whether the observed differences were likely due to random variation or not. With samples of our size (N = 26,505), p-values are relatively uninformative. We decided instead to classify effects as "statistically meaningful" when their size exceeded $r = .10$.

Given this criterion, age ($r = .19$) and education ($r = .11$) were reliably related to self-reported social distancing behavior. These relationships are small, and neither variable explains a large amount of variance in the outcome variable (< 4%). There was no statistically meaningful association between self-reported social distancing behavior on the one hand and gender ($r = .03$), race/ethnicity ($r = -.01$), political affiliation ($r = -.09$), and type of community ($r = .06$).

**C) Correlates of social distancing**

Here are the correlations between self-reported social distancing and the key variables in Part 1 of the Survey

1) How effective is social distancing for you? $r = .36$
2) How effective is social distancing for others? $r = .27$
3) How many friends practice social distancing? $r = .27$
4) How many people like you practice social distancing? $r = .23$
5) People you care want you to do social distancing $r = .26$
6) How likely are you to get infected? $r = -.07$
7) Negative health consequences for you if infected $r = .15$
8) Other negative consequences for you if infected $r = -.02$
9) Knowledge about COVID-19 coronavirus $r = .??$
10) Don't know exactly what social distancing means $r = -.18$

Individuals who practice social distancing are more likely to believe that social distancing is effective (1 and 2) and that there are strong social norms around social distancing (3, 4, and 5). Although the perceived risk of getting infected is not related to self-reported social distancing (6), the perceived negative consequences if infected are (7). Respondents' knowledge about the number of infected people showing symptoms and about the infection risk from those who do and who do not have symptoms was unrelated to self-reported social distancing (9). Interestingly, those who do not practice social distancing very vigorously report that they don't really know which behaviors are alright and which ones are not (10).

**D) The motivators - Messages likely to lead to behavior change**
Respondents were asked if they would engage in more social distancing if they were to learn new information or otherwise become aware of certain facts. Given that individuals who already do a maximum of social distancing, cannot possibly do more social distancing, we excluded respondents who chose response option 5 on the question about how much social distancing they were currently practicing.

<table>
<thead>
<tr>
<th>Would do more social distancing if high infection risk</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would do more social distancing if health consequences</td>
<td>9670</td>
<td>4.27</td>
<td>1.040</td>
</tr>
<tr>
<td>Would do more social distancing if it helps older members</td>
<td>9662</td>
<td>4.37</td>
<td>.989</td>
</tr>
<tr>
<td>Would do more social distancing if it helps my family</td>
<td>9656</td>
<td>4.49</td>
<td>.928</td>
</tr>
<tr>
<td>Would do more social distancing if it helps public health</td>
<td>9654</td>
<td>4.39</td>
<td>.956</td>
</tr>
<tr>
<td>Social distancing is consistent with caring about others</td>
<td>9664</td>
<td>4.66</td>
<td>.684</td>
</tr>
<tr>
<td>I personally know someone who would suffer serious consequences if infected</td>
<td>9670</td>
<td>92%</td>
<td>---</td>
</tr>
</tbody>
</table>

The results suggest that messages about the high risk of becoming infected or the likely negative health consequences when infected will be relatively ineffective. Instead, messages that appeal to people’s responsibility, their desire to care for others, and the importance of making sacrifices for their family and older members of the community have the potential to change people’s social distancing behavior.

Interestingly, the pattern of results was virtually identical when we limited the analyses to respondents who chose response options 2 and 3 on the question about how much social distancing they were currently practicing. There was consistently the highest agreement with the item "Practicing social distancing is consistent with the fact that I generally care about other people."

E) The barriers - What prevents people from practicing more social distancing?

Like in the previous analyses we excluded respondents who chose response options 5 on the question about how much social distancing they were currently practicing.

<table>
<thead>
<tr>
<th>Would not know how to keep busy</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would not know how to keep busy</td>
<td>9684</td>
<td>2.12</td>
<td>1.241</td>
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</tbody>
</table>
The most important barrier that respondents report is it is difficult for them to practice more social distancing given their work, family, and other obligations. Some individuals cannot do more social distancing even if they wanted to (e.g., health care providers). Such structural barriers cannot be addressed in a behavior change campaign, except maybe provide people with advice how to set up an office at home and work effectively from home.

Besides that, respondents report psychological barriers. They fear that their mental health issues might get worse or that they would not know how to keep busy if they were to practice more social distancing. A successful behavior campaign has to effectively address these barriers, for example by giving advice on activities they can do in their home or ways to prevent mental health issues from worsening.

F) The distribution channels – How to reach people?

Like in the previous analyses we excluded respondents who chose response options 5 on the question about how much social distancing they were currently practicing. We thus focused uniquely on individuals who currently do not yet fully comply with recommendations on social distancing.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>9695</td>
<td>4.01</td>
<td>1.489</td>
</tr>
<tr>
<td>Instagram</td>
<td>9534</td>
<td>1.39</td>
<td>1.666</td>
</tr>
<tr>
<td>Reddit</td>
<td>9468</td>
<td>.38</td>
<td>1.104</td>
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<td>Snapchat</td>
<td>9500</td>
<td>.91</td>
<td>1.404</td>
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<td>Twitter</td>
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<td>.63</td>
<td>1.264</td>
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<td>YouTube</td>
<td>9499</td>
<td>1.39</td>
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<td>TikTok</td>
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</tr>
<tr>
<td>Podcasts</td>
<td>9468</td>
<td>.94</td>
<td>1.520</td>
</tr>
</tbody>
</table>

The best way to reach the individuals whose behaviors we want to change is through Facebook and, to a lesser extent, through Instagram and YouTube.
G) Coding of the responses to the open-ended questions

As mentioned above, all participants responded to open-ended questions about social distancing. We analyzed only the responses of participants who indicated that they currently did not engage in the recommended social distancing. We first identified major themes in a random subset of participant responses and then coded all responses on whether they referred or not to each of these themes. For feasibility reasons we limited ourselves to the first 2000 respondents.

Respondents were asked what someone could say to them that would make it more likely that they practice more social distancing. The themes mentioned most frequently in the responses were: (a) information about COVID-19, (b) information about social distancing, and (c) feasibility of social distancing (see Table below).

Respondents were also asked why it was difficult to practice social distancing. The most common challenges mentioned were (a) difficulty with work, (b) mental health issues, and (c) the need for having social interaction.

When asked what benefits they would personally derive if they were to do more social distancing, participants mentioned most frequently (a) reducing the risk of infection to self and others, and (b) an opportunity to spend time for personal development, family, and other tasks.

Table. Themes and Sub-Themes Provided by Participants in Response to the Question "What could someone say to you that would make it more likely that you practice more social distancing?"

<table>
<thead>
<tr>
<th>Theme and Subtheme</th>
<th>Description of theme</th>
<th>Exemplar Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about COVID-19:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severity</td>
<td>Statistics on the number of confirmed, hospitalized and seriously ill cases; death rates.</td>
<td>“I think there needs to be as much emphasis on the rates of those that become seriously ill &amp; need hospitalization as those that actually die.” “It is a matter of life and death.”</td>
</tr>
<tr>
<td>Transmission</td>
<td>Information on how COVID-19 spreads, the likelihood of asymptotic transmission</td>
<td>“COVID can be spread by asymptomatic individuals and can survive on inorganic surfaces.”</td>
</tr>
</tbody>
</table>
Information about social distancing:

**Clarity and Specificity**
What social distancing means, specific examples of specific behaviors and actions

“Specifically, what activities you can and can’t do (i.e., can you have a friend over? Can I pick up a pizza?)”

**Effectiveness**
Information on why social distancing matters, and evidence that improves its impact

“You will save X number of lives by practicing social distancing.”

“Explain the exponential increase of cases when social distancing is in place vs when is not, maybe through graphics.”

**Personal Relevancy:**

**Risk/Exposure**
The high infection risk or becoming infected or infecting others

“That my area has more cases and we're at higher risk of community spread, or that I am at higher risk of complications if I got it.”

“You could be affecting your father or grandchild.”

**Feasibility**
Reference to issues (i.e., work, finance) that make social distancing feasible

“You will be paid the full amount on all the contracts you had that have been annulled due to the virus.” (I need money, and my work is the one place where I don't really practice social distancing effectively currently.)

“I will bring you all the supplies you need so that you don't have to go out at all.”

H) Topic modeling of the responses to the open-ended questions

We analyzed the same responses as in the previous section, but this time using three types of computational techniques, the word count method, the structural topic model, and the dictionary method.

When asked about what someone could say to them to get them to do more social distancing, the respondents mentioned topics related to health information about the benefits of social distancing, directions for working at home, and the threats to their local communities.
Individuals from different demographic categories differed in their answers about the type of messages that would get them to practice more social distancing. Men prefer receiving additional health information such as explaining benefits of social distancing on controlling for the pandemic, while women prefer hearing others address work-related concerns such as directions for working at home. Members of non-white racial groups, which constituted 6% of the sample, said they would engage in more social distancing if the communication addressed their concerns about local threats such as the number of positive cases and death rate.

When asked about what the barriers are for doing social distancing, our survey respondents frequently mentioned that their current work/job makes it hard for them to do social distancing and that they need to complete daily life task such as grocery shopping. They also pointed out that they were social animals and liked their friends. Moreover, some mentioned the mental/health issues that could result from social distancing.

When asked about what the potential benefits that they could derive from social distancing, our survey respondents reported that social distancing helps reduce the chance of getting infected and allows them to spend more time with families.

We also looked into the emotional aspect underlying our survey respondents’ answers to our questions on the barriers and benefits of social distancing. Overall we found that individuals who are currently doing little social distancing used fewer joy related words compared with other survey respondents. They also used fewer trust related words and more words related to disgust and sadness. Demographic categories differed with regard to the use of emotion terms. Men used more disgust related words and fewer positive words compared to women. Finally, members of non-white racial groups were more likely to use positive emotion words.

**Conclusion**

A behavior change campaign is more likely to be effective if five elements are clearly identified before the campaign material is designed (Lee and Kotler, 2016).

(1) Who is the "target audience," i.e., whose behaviors does the campaign want to change? Although many more members of the population are eventually exposed to the campaign materials, an effective campaign usually focuses on a segment of the population whose behavior change will have the biggest impact. In the present case, the target audience is young adults who are currently not yet fully complying with recommended social distances.

(2) What is the "target behavior," i.e., what exactly does the campaign want individuals to do? Ideal target behaviors are those that people can easily adopt. Although the target behavior is pretty clearly identified in the present case – pratice more social distancing
many respondents expressed wanting concrete information about which behaviors are alright and which ones are not during social distancing.

(3) What are the "barriers," i.e., why do members of the target audience currently not practice social distancing? Our results suggest that structural barriers about not being able to work at home and worries about boredom and mental health prevent individuals from practicing more social distancing. These barriers can be removed by giving people advice on how to work from home and maintain their psychological well-being while keeping their physically distance from other.

(4) What are the "motivators," i.e., the perceived benefits of the target behavior that can be highlighted during the campaign? The goal is to identify the messages that members of the target audience is going to be receptive to. According to our survey results, individuals will likely change their behavior if they are reminded that social distancing is consistent with their tendency to care about others and if the persuasive message appeals to their sens of responsibility and altruism.

(5) What are the "distribution channels," i.e., what are effective ways to reach the members of the target audience? The best campaign is ineffective if individuals whose behavior the campaign attempts to change are not exposed to the persuasive material. Our survey revealed that Facebook, Instagram, and YouTube are great media platforms to reach the members of the target audience.

In sum, the current report contains all the relevant information that social marketers, public health officials, and social influencers need to design messages that effectively change people’s social distancing behavior.
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Bibliography
Appendices

List of Appendices:

a) Qualtrics Survey
Qualtrics Survey - COVID-19 Coronavirus and Social Distancing

[Unless otherwise indicated, participants provide responses on 5-point Lickert scales with labels associated with each of the two endpoint]

This survey contains questions about your thoughts, feeling, and opinions related to the coronavirus (COVID-19). There are no right or wrong answers.

There are many mentions of social distancing in the media and elsewhere. How much have you heard about social distancing? [Nothing at all – Quite a bit]

I feel that I don't really know what it means to "practice social distancing." In other words, I don't really know which behaviors are OK and which ones are not. [Strongly Disagree – Strongly agree]

Social distancing is deliberately increasing the physical space between people to avoid spreading illness. Data suggest that staying at least six feet away from other people lessens the chances of getting infected with COVID-19.

Do you currently practice social distancing (in other words: do you deliberately increase the physical space between you and people to avoid spreading illness)? [No, not at all – Yes, very much]

How effective do you think social distancing is for you (in other words: to what extent does your social distancing behavior decrease your risk of getting infected)? [Not at all effective – Very effective]

How effective do you think social distancing is for the prevention of the spread of the coronavirus (in other words: to what extent does your social distancing behavior contribute to other people not getting sick)? [Not at all effective – Very effective]

How many of your friends and acquaintances currently practice social distancing? [None or nearly none – All or nearly all]

How many "people like you" (= people with similar socio-demographic characteristics) do you think currently practice social distancing? [None or nearly none – All or nearly all]

How much do people you care about think you should practice social distancing? [Not at all – Extremely]
How likely do you think you are to catch the coronavirus (COVID-19) in the next month? [Not at all likely – Very likely]

How serious do you think the negative health consequences will be for you if you were to get infected with the coronavirus? [Not at all serious – Extremely serious]

How serious do you think the other negative consequences will be for you if you were to get infected with the coronavirus (ex: social, financial, or work-related consequences)? [Not at all serious – Extremely serious]

Based on what you have heard or read until now, what percentage of individuals who are infected with the coronavirus show symptoms (such as coughing or fever)? [0% - 25% - 50% - 75% - 100]

Based on what you have heard or read until now, how contagious is someone who has been infected with the coronavirus and who shows symptoms (such a coughing and fever)? [Not at all contagious – Very contagious]

Based on what you have heard or read until now, how contagious is someone who has been infected with the coronavirus but who shows no symptoms? [Not at all contagious – Very contagious]

Please tell us about your media habits. In the past week, on average, about how much time have you spent each day on any of the following digital media?

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Less than 10 minutes a day</th>
<th>10-30 minutes a day</th>
<th>31-60 minutes a day</th>
<th>1-2 hours a day</th>
<th>2-3 hours a day</th>
<th>More than 3 hours a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

1. Facebook
2. Instagram
3. Reddit
4. Snapchat
5. Twitter
6. YouTube
7. Podcasts
8. TikTok
Please indicate to what extent you agree or disagree with the following statements. [all Strongly disagree – Strongly agree]

I would do more social distancing if I became convinced that I am at a high risk of becoming infected.

I would do more social distancing if I learned that there are serious health consequences for people like me when they get infected with the coronavirus.

I would do more social distancing if I learned that my behavior contributes to the prevention of older members of the community from becoming infected.

I would do more social distancing if I learned that my behavior contributes to the prevention of my family of becoming infected.

I would do more social distancing if I learned that my behavior would make an important contribution to addressing the current public health crisis.

Practicing social distancing is consistent with the fact that I generally care about other people.

I wouldn’t know how to keep busy if I were to do more social distancing.

I wouldn’t know how to stay connected if I were to do more social distancing.

I feel that I don’t really know how to keep myself and my loved ones safe.

Given my situation (ex: work, family, other obligations) it is difficult for me to do more social distancing.

Practicing more social distancing would increase the severity of the mental health issues that I am struggling with.

I personally know someone who is likely to suffer serious negative consequences when infected with the coronavirus. [No – Yes]

I think most people overreact to the threat caused by the coronavirus.

I think that I am less likely to get infected with the coronavirus than other people.

I have to admit that I don’t care very much about getting other people sick.

How active are you on social media? [Not at all active – Very active]

How long would you be able to tolerate social distancing? [Three days or less – About a week – About two weeks – About three weeks – About a month – Six weeks or longer]
In this part you will be asked to answer questions about yourself.

If you prefer not to answer a particular question, simply leave the answer blank and move on to the next question.

a. What is your age? ____ years old
b. With regard to race/ethnicity, what do you identify as? (check all that apply)
   i. Arab / Middle Eastern
   ii. Asian / Asian American
   iii. Black / African American
   iv. Hispanic / Latina/o/x
   v. Native American / American Indian / First Nation
   vi. Pacific Islander / Native Hawaiian
   vii. White / Caucasian
   viii. Other / None of these
c. With regard to gender, what do you identify as?
   i. Man
   ii. Woman
   iii. Other / None of these
d. How would you describe your political views on social issues? ["1 = Very liberal" to "5 = Very conservative"]
e. How would you describe your political views on economic issues? ["1 = Very liberal" to "5 = Very conservative"]
f. What type of community do you live in?
   i. Large city (> 100,000 inhabitants)
   ii. Suburb near a large city
   iii. Small city or town
   iv. Rural area
g. What state do you live in?
   i. Wisconsin
   ii. Minnesota
   iii. Illinois
   iv. Iowa
   v. Other. Please specify _________________
h. What is the highest degree or level of education you have completed?
   i. Some High School
   ii. High School
   iii. Bachelor's degree
   iv. Master's Degree
   v. Ph.D. or higher
   vi. Other. Please specify _________________
Please answer the following open-ended questions. Please do not include information that would identify yourself or others.

What could someone say to you that would make it more likely that you practice more social distancing? __________________ [Open ended]

Why is it difficult to practice social distancing? __________________ [Open ended]

What benefits would you personally derive if you were to do more social distancing? __________________ [Open ended]

What sources do you trust for information about COVID-19? __________________ [Open ended]

Public health officials are asking all Americans to practice social distancing. Thank you for your participation in the survey. [Note: the exact thank you text is different but I currently do not have access to the survey]