

Corona Survey Findings
by David, Alex, and Diane
Overview of the Survey

Please read each question and respond by clicking on the button for how you're feeling *right now*.

	Not at all	Somewhat	Moderately	A lot	Extremely
1. How down/depressed/unhappy are you feeling now?					
2. How anxious/stressed are you feeling now?					
3. How angry/annoyed/irritated are you feeling now?					
4. How hopeless/discouraged are you feeling now?					

Please note that the following questions ask about your positive feelings, as opposed to negative feelings, *right now*.

	Extremely	A lot	Moderately	Somewhat	Not at all
5. How happy/joyful are you feeling now?					
6. How satisfied are you with your relationships right now?					

Now please read each question and indicate how you were feeling *just before* learning about the covid 19 virus.

The six questions were repeated.

Then people were asked about gender, whether they are therapists, and whether they have received or given teletherapy, followed by several "text box" questions about how they are coping, what they think about teletherapy, and when they first heard about the spread of the corona virus.

In the summary of the results, t1 = time 1, prior to the pandemic, and t2 = time 2, the current time.

The four negative mood variables, depression (dep), anxiety (anx), anger (ang), and hopelessness (hopeless), range from 0 to 100.

0 = not at all, 25 = mild, 50 = moderate, 75 = severe, and 100 = extreme.

Dep_t1 and t2 = feelings of depression at times 1 and 2.

Anx_t1 and 2 = feelings of anxiety at times 1 and 2.

Ang_t1 and 2 = feelings of anger at times1 and 2.

Hopeless_t1 and 2 = feelings of hopelessness at times1 and 2.

The two positive mood variables, happiness (happy) and relationship satisfaction (RSAT), also range from 0 to 100. For happiness, 0 = not at all happy, and 100 =

extremely happy. For relationship satisfaction, 0 = not at all satisfied), and 100 = completely satisfied.

Happy_t1 and 2 = feelings of happiness at times1 and 2.

RSAT_t1 and 2 = relationship satisfaction at times1 and 2.

David sent a post to people who receive his WordPress blogs, inviting them to complete the survey (<https://feelinggood.com/2020/03/26/corona-survey-how-are-you-feeling-now/>). 452 individuals opened and viewed the invitation, and 205 individuals completed the survey. However, the blog was also posted on Facebook, LinkedIn, and Twitter. The survey was administered at Survey Monkey <https://www.surveymonkey.com/r/CVS-1>

Data were collected in SPSS and analyzed in AMOS (Analysis of Moment Structures) using Direct FIML (direct full information maximum likelihood). Hypotheses were tested with nested tests.

For ease of reviewing the findings, we are not including the tables with means and standard errors of men and women at both time points, but include charts illustrating the findings. Detailed information is available if anyone is interested.

The Results of the Survey

1. How many of the 205 respondents were women?

62 % women, 38% men

184 respondents reported their gender.

2. How many were therapists?

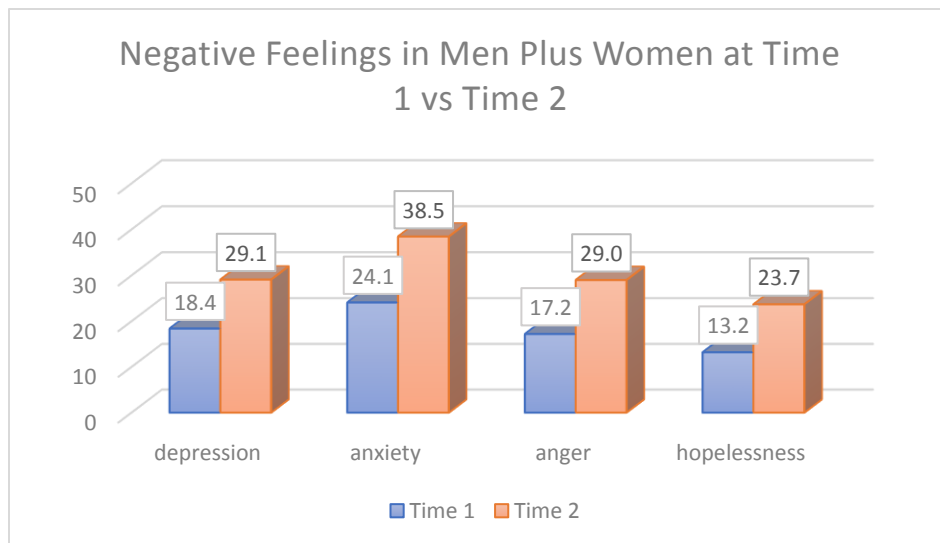
37% therapists, 63% not therapists

187 respondents responded to this survey question.

3. Have levels of depression, anxiety, anger, and hopelessness intensified since the corona virus pandemic?

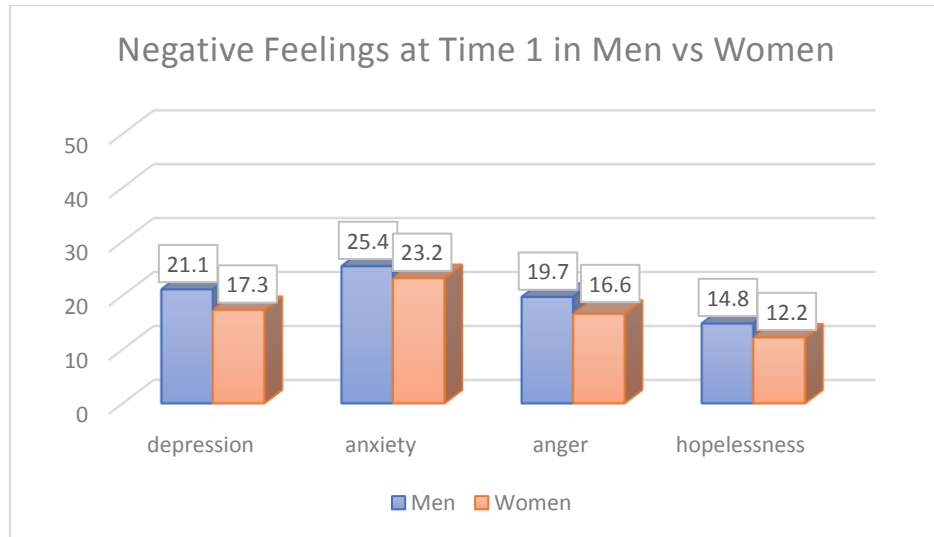
The changes in depression, anxiety, anger, and hopelessness were large and highly significant in the combined group of men and women.

If these changes reflect the population as a whole, it would seem to indicate a large increase in the need for mental health services and treatment, since the “volume” of negative feelings like depression, anxiety, anger and hopelessness has increased tremendously.

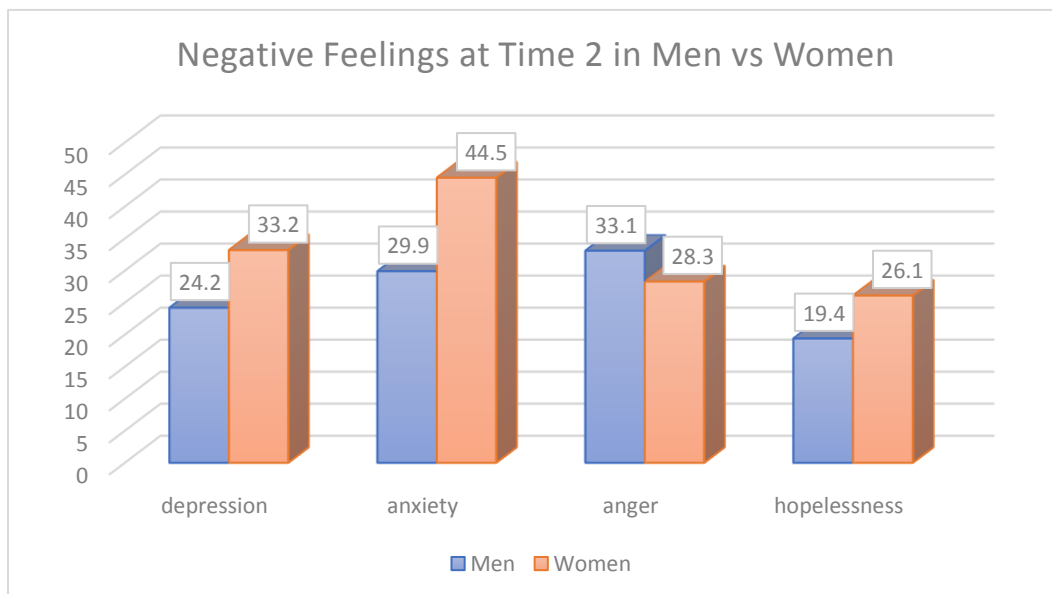


4. How did the negative feelings compare in men vs. women prior to the pandemic and at the current time?

Prior to the pandemic, there were no statistically significant differences in the means and variances of the four mood variables in men (N = 71) vs. women (N = 113) [chi-square (184) = 9.00 (8 df), p = .34], as you can see below.



At the current time, there are significant differences in the depression, anxiety, and hopelessness between men and women [chi-square (205) = 18.59 (6 df), p = .005], with higher levels in women.

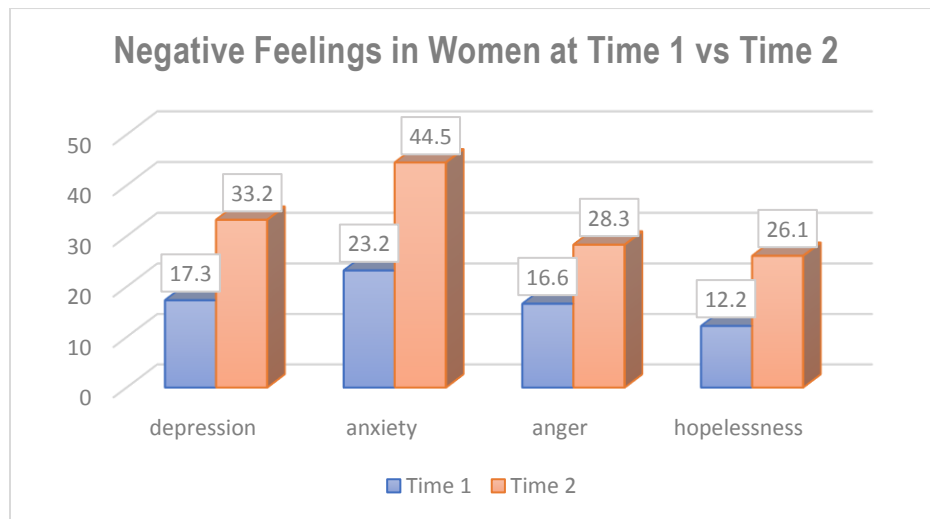


However, anger levels between genders do not differ at the current time [chi-square (205) = 2.46 (2 df), p < .29] because anger has increased substantially in men since the

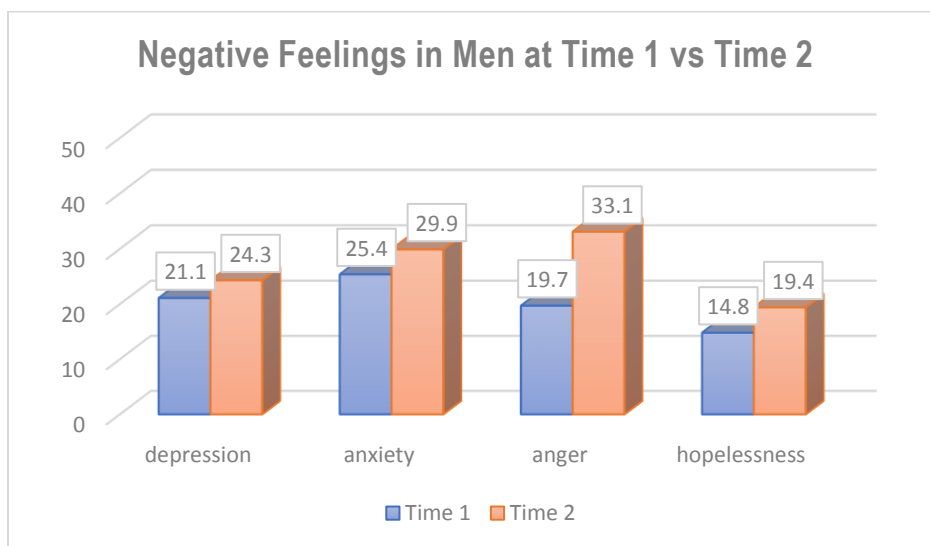
start of the pandemic (19.7 vs 33.0, for an increase of 68%), but depression, anxiety, and hopelessness have not increased significantly in men.

5. How much have the negative feelings changed in men and women since the start of the pandemic?

In women, the means and variances of all four negative feelings have increased dramatically since the beginning of the pandemic [chi-square (113) = 86.41 (8 df), $p < .00000 \dots 1$].



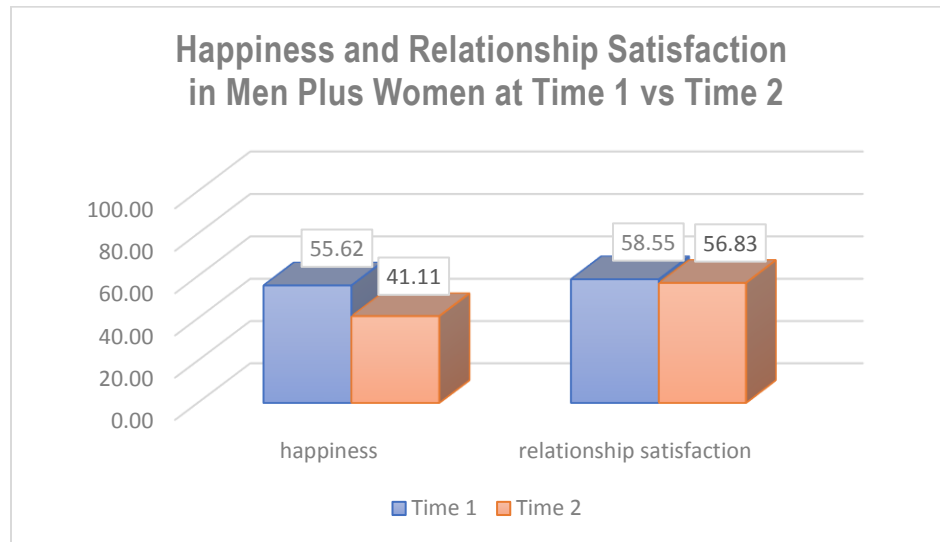
In men, the means and variances of depression, anxiety, and hopelessness have not increased significantly [chi-square (71) = 6.22 (6 df), $p = .40$]. anger has increased substantially [chi-square (71) = 15.79 (2 df), $p < .00000 \dots 1$].



6. Have the feelings of Happiness and Relationship Satisfaction changed since the pandemic?

In the combined group of men and women, the means and variances of happiness have decreased substantially since the beginning of the pandemic [chi-square (205) = 46.59 (2 df), $p < .00000 \dots 1$], but the means and variances of relationship satisfaction have not changed [chi-square (205) = 1.77 (2 df), $p = .41$].

Further analyses showed that there were no gender differences in happiness or relationship satisfaction before the pandemic or now.



Open-Ended Questions: The People Behind the Numbers

Dr. Diane Schiano led the discussion of initial results of four open-ended questions in our survey. Analysis of this kind of data, known as “qualitative analysis”, tends to involve multiple iterations of questions that go deeper into people’s experience, looking for patterns among a variety of responses that can be explored more systematically in further studies. So, our findings are more suggestive than statistical in nature. These results are summarized below:

1. About how long ago did you first learn about the covid 19 virus?

Most people first learned of the virus in late January, when China was in lockdown. It then took some time for the news to “hit home” and be taken seriously. As one person wrote:

"I remember hearing about it [the corona virus] when it first started in China, but I wasn't overly concerned. I felt like it was a bad flu and would likely blow over. Then I watched the news unfold, particularly in Italy, and realized how serious

this is. Once they started shutdowns in California, I realized how serious and close to home this is."

2. What are your primary concerns?

The most commonly stated concerns centered around fear of getting seriously ill or dying, especially for vulnerable loved ones (such as an aged parent), but also for oneself, for first responders and for the world at large.

Other concerns centered around:

- a. how to endure this crisis period personally (financially, and in terms of mental health).
- b. fears of whether and when we will ever "get back to normal" in terms of our economy and way of life.

3. What are you doing to cope?

Overwhelmingly, the most common responses concerned connecting with friends, family and loved ones.

Other common ways to cope include:

- a. trying to keep busy doing work or projects.
- b. setting up routines or schedules for the day—especially with children at home.

4. What do you think of telehealth (online, video or phone) therapy?

Most people hadn't used telehealth therapy sessions, and some were just starting to during this crisis. Overall, the great majority of people thought of it as a good idea under the circumstances, if not ideal.

Many therapists are starting to use regular telehealth sessions or were planning to. Therapists noted that this can be "draining" for the therapist, and may require some skill development to utilize well.

One of the authors (DB) agrees that teaching in a virtual environment can also be "draining," since people are less responsive on Zoom sessions. So, you sometimes feel like you are talking into a vacuum, without the normal laughter and "life" you experience in a live environment.

Summary of results

Negative feelings have changed significantly since before the pandemic, especially in women. In women, the increases in depression, anxiety, anger, and hopelessness were 92%, 92%, 70%, and 114% respectively. In men the increase in anger was 68%.

Happiness dropped by 26% in men and in women, but relationship satisfaction did not change in either gender.

Discussion

The corona virus has caused substantial changes in negative and positive feelings, but these changes have not had any causal effects on how close people feel to others. This indicates that social distancing has not diminished feelings of closeness or intimacy in men or in women, which is encouraging.

At the same time, the levels of negativity are alarmingly high, especially in women. The average depression, anxiety, anger, and hopelessness are in the moderate range, which is the level of most individuals seeking treatment. However, our sample is not likely to reflect levels in the general population, since our sample included therapists, patients, and the general public alike.

There's an interesting theoretical implication as well. Some experts have argued that depression has a negative causal effect on relationships, but this is clearly not consistent with the current data. Our survey results also confirm and extend the findings from my previous report published in JCCP that depression does not have meaningful causal effects on relationship satisfaction, and that relationship satisfaction does not have meaningful causal effects on depression.

Burns, D. D., Sayers, S. S., & Moras, K. (1994). Intimate Relationships and Depression: Is There a Causal Connection? *Journal of Consulting and Clinical Psychology*, 62(5): 1033 - 1042.

Link to UN report on domestic violence surge: <https://www.npr.org/sections/coronavirus-live-updates/2020/04/06/827908402/global-lockdowns-resulting-in-horrifying-surge-in-domestic-violence-u-n-warns>