



A wellbeing survey of the CSIRO Total Wellbeing Diet database during the COVID-19 pandemic

Prepared by Emily Brindal: emily.brindal@csiro.au

Executive Summary

General findings

- Survey respondents perceived the COVID-19 outbreak to be serious in Australia but more serious overseas. 91% of people were social distancing and the majority were following the guidelines on social distancing as best as possible at the time of the survey.
- The most common sources of information during this time were news sources (mostly the ABC or SBS), health department websites and government bodies.

Concerns and impacts of COVID-19

- Responses suggested people were concerned most commonly about infecting a friend, the economy and a possible recession, and how long it would take for things to go back to normal.
- We asked people what areas had been affected by the COVID-19 outbreak, and socialising and celebrating special events stood out as heavily impacted. Certainty about the future and finances, relationships with family and friends, and stress levels were also commonly impacted areas which had been impacted in a negative way.
- Exercise was commonly one of the top areas impacted, and two thirds of people felt it had been impacted in a negative way.
- Body weight and sleep were not commonly selected as top impacted areas, but for those who did feel these were impacted by the COVID-19 outbreak, the impact was overwhelming negative.

Lifestyle habits and weight gain

- About one third of people felt their diet had been worse during the restrictions. This is despite almost half saying their takeaway consumption had decreased and they were having more home cooked meals and a quarter feeling like they were eating more vegetables.
- Almost 40% of people told us they felt like they had gained weight during the COVID-19 restrictions, and close to 60% of these people had thought more about dieting to lose weight. More people who indicated that they had gained weight reported an increase in junk food intake and snacking, and that they had been doing less exercise compared to the wider group.
- Between 40 and 50% of those sampled reported increases in screen-time activities including internet shopping, reading social media, watching TV/streaming, and using their mobile phone.
- Just over 45% felt that their free time had increased. But, almost 40% felt that the quality of their free-time was worse during the COVID-19 outbreak.

Satisfaction with life

- On average across the sample, there was a decrease in people's total satisfaction with life, and this decrease was of the magnitude of about 14% from prior to the COVID-19 outbreak.
- Those with greater decreases in life satisfaction than the rest of the sample were extraverts, emotional eaters and people who felt they had gained weight.

Introduction

Many aspects of daily life have been impacted by COVID-19. Social distancing has had broad and wide-reaching implications which go beyond socialising, to affect the way people work, eat, exercise and wider food and financial insecurity.

The behavioural science team within CSIRO's Nutrition and Health Program were interested to understand any perceived changes to wellbeing, eating and physical activity with a specific focus on possible psychological predictors of these.

The aims of this survey were to gain a greater understanding of:

- Respondents attitudes towards COVID-19 and how serious they perceived the virus to be;
- Respondents general concerns around COVID-19 and the areas of their life that had been impacted most by the outbreak;
- Any changes in lifestyle behaviours, weight and emotional wellbeing that have occurred as a result of the restrictions.

Method

A survey was developed by the CSIRO behavioural science team using a mix of pre-existing validated scales and some questions specifically developed for this survey. The survey protocol was approved by the CSIRO Health and Medical Research Ethics Committee (2020_026_LR).

The study survey was emailed to approximately 280,000 subscribers on the Total Wellbeing Diet database as well as promoted on the Total Wellbeing Diet social channels. An explanation of the study was provided in the email, with an invitation to participate and a link through to the survey. The survey took about 10-15 minutes to complete depending on branching logic and the individual's speed.

Survey data were analysed at a group level using descriptive statistics (frequencies, means and percentages). Some subgroup analysis was conducted to understand whether certain personality types reported different impacts of COVID-19 on their health and wellbeing. The survey also contained open ended questions which were analysed, and some examples used to highlight key themes in subgroups of respondents.

A total of 47,915 people opened the study survey email, of which 4313 people started the survey (defined as completion of at least the first 5 survey items) and 3745 completed the survey (answered the final question). All available data were used for each item and therefore respondent numbers were reported for each analysis.

All sample characteristics were based on 3745 respondents. Respondents were predominantly female (85.7%) and born in Australia (79.4%). The mean age was 56.4 years (SD 12.6). Most were married (59.2%), had obtained a university degree (56.8%) and/or had no children living at home (65.4%). A small percentage worked in health (13.1%) and/or academia (14.4%).

Results

COVID attitudes and reported impacts

90.9% of the sample (n 4234) described themselves as currently socially distancing. Interestingly, 2.5% reported that they were taking no precautions. Only 11 people (<1%) indicated that they had been personally diagnosed with COVID-19 whereas 528 (/4235, 12.5%) knew people with a confirmed diagnosis of COVID-19.

29.1% (1193/4099) rated the COVID-19 outbreak in Australia as extremely serious whereas 89.2% (3653/4097) rated the severity of the outbreak outside of Australia as extremely serious.

Most of the sample also reported that they had been following guidelines on social distancing or isolating as closely as possible (69.3%; 2838/4096).

The most common sources of information about COVID-19 were news sources (71.8% of respondents), health department websites (65.1%), government bodies (63.9%), scientists (38.2%) and doctors (37.1%). Among the news sources, government news outlets (e.g. ABC and SBS) were most commonly used (84.5%) followed by commercial news outlets (58.8%).

Impacts on working arrangements

- 56.1% of 4235 respondents were currently working, of which 63.9% were working fulltime (1518/2375).
- 63.3% of respondents were working from home at the time of the survey (1503/2375), and 30.2% (454/2375) worked from home to some degree prior to the COVID-19 outbreak.
- For most people, their working hours had stayed the same (52.6%; 1249/2375) or increased (26.7%, 634/2375).

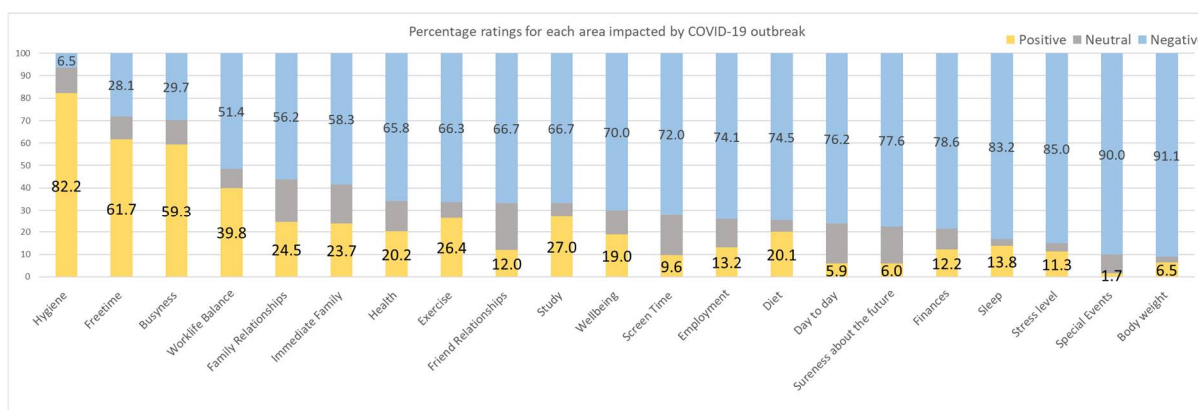
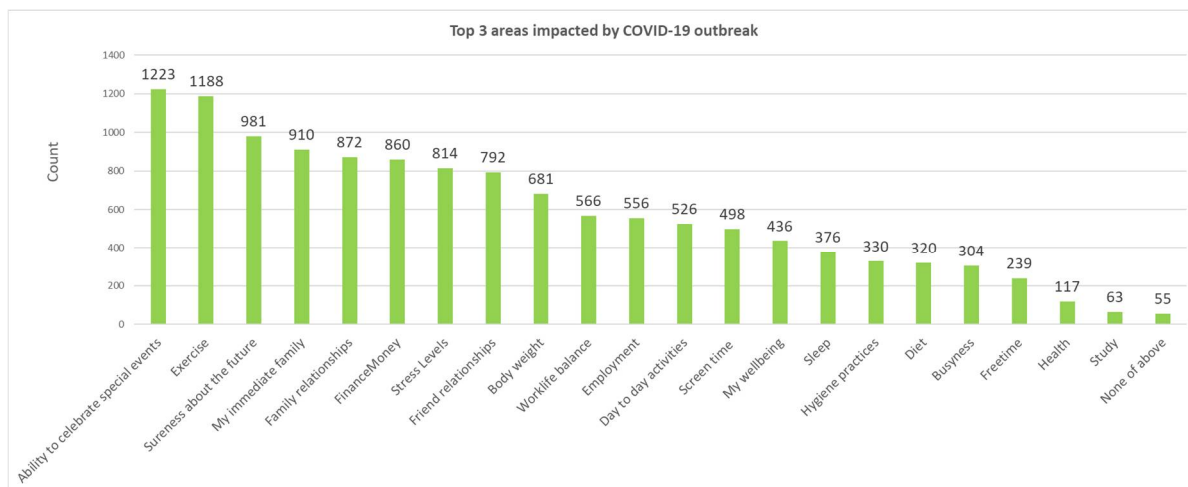
Concerns around COVID

- Approximately 4090 people completed the COVID concerns questionnaire items. Of 14 possible concerns listed, those with the highest concerns (selected "to a great extent") were: infecting a friend (32.1% of respondents), economic recession (39.9%) and how long it will take for things to go back to normal (36.1%).
- Most people felt that they would directly infect 1-2 people (1519/4095) or 3-5 people (1336/4095) if they contracted the virus.
- When asked who could fall seriously ill if they contracted the virus, 55.7% of respondents indicated their parents (2293/4117), 47.5% themselves (1956/4117) or 37.2% their other family (1942/4117). A small group were concerned about their pets (160/4117).

Negative impacts of COVID

- Exercise and social events were most impacted by the COVID-19 outbreak. 90% of respondents rated the impact on social events as negative whereas 66.3% rated the impact as negative for exercise.
- Stress levels, sleep and body weight were rated major areas of impact by a much smaller percentage of respondents. However, the impacts on these areas were rated predominantly negative (>80%).

- The areas which were selected as mostly positively impacted were only selected by small numbers of people (hygiene, free time and busyness).
- Most people indicated that the major areas in their life that were impacted by the COVID-19 outbreak were impacted in a negative way.



Social connections were most severely impacted with over three quarters of the sample viewing their social connections as being worse or a lost worse.

- Exercising and physical activity was the next most negatively impacted area with close to half the sample indicating this had been negatively affected by the COVID-19 outbreak.
- 41% of respondents reported that their mental wellbeing was worse to some degree and 36% reported their diet was worse to some degree.

	Worse	A lot worse	Total: Worse to some degree
Social connections (n 3937)	44.1%	33.4%	77.5%
Exercising/physical activity (n 3936)	29.8%	17.3%	47.1%
Mental wellbeing (n 3937)	29.8%	11.2%	41.0%
Free time (quality) (n 3937)	26.2%	11.7%	37.9%
Diet (n 3933)	24.6%	11.2%	35.8%
Sleep (n 3936)	22.6%	9.5%	32.1%
Free time (amount) (n 3937)	11.3%	6.8%	18.1%

Changes to lifestyle behaviours and weight

Changes in dietary intake

- 53% of respondents reported to have decreased their takeaway food intake, which appeared to have been replaced with home-cooked meals (45% of respondents reported an increase).
- Almost an equal number of respondents reported to increased and decreased their junk food intake (31-32% of the respondents).

Changes in body weight

- 40.6% of respondents thought more about dieting to lose weight. This is similar to the percentage who reported that they had gained weight during the COVID-19 outbreak (38.9%, 1531/3934).
- Among those that had self-reported weight gain during the COVID-19 outbreak (n 1531), 58.4% had thought more about dieting and 14.3% had considered starting an exercise program more than before the COVID-19 outbreak.
- Amongst those who reported a weight gain (n 1531), 61.4% reported an increase in junk food intake and 63.7% reported an increase in snacks. This was much higher than the rest of the group. 64.7% of those who gained weight reported exercising less. Changes in these behaviours may have been key to their perceived weight gain.
- By contrast, amongst those who perceived they had lost weight during the COVID-19 outbreak (n 729), 74.8% reported eating *less* junk food, 56.7% increased their vegetable consumption, 41.1% increased their fruit intake and 60.0% were eating less snacks. 51.3% of those who had lost weight reported thinking of starting a diet to lose weight more.

Eating behaviours	N	Increased	Decreased
Eating takeaway foods	3935	12.7%	52.8%
Eating junk foods	3936	31.7%	31.0%
Having snacks	3935	34.2%	21.8%
Eating fruits	3935	18.9%	11.7%
Eating vegetables	3935	24.6%	9.3%
Eating home-cooked foods	3935	45.0%	4.0%
Initiating health behaviours			
Joining a boot camp/exercise program	3935	14.4%	36.6%
Thought about dieting to lose weight	3934	40.6%	10.4%
Screen/media use			
Posting to social media	3934	14.7%	18.3%
Internet shopping	3935	42.0%	12.7%
Reading social media	3934	42.5%	9.9%
Watching TV/streaming	3935	49.3%	6.7%
Using mobile phone	3935	49.2%	4.2%
Mental space			
Exercising	3935	25.8%	41.1%
Talking to friends	3934	17.6%	40.7%
Working	3934	17.8%	26.9%
Hobbies	3935	27.1%	24.4%
Having free time	3935	46.5%	16.6%
Talking to family	3934	36.3%	14.2%

Note: remainder were unsure or indicated that their behaviour was the same.

Changes in Satisfaction with Life during COVID-19

57.7% had a negative change in their self-reported satisfaction with life. Overall life satisfaction (subjective wellbeing) was rated 24.5 (SD 6.73) pre-COVID and 21.10 (SD 7.36) right now. This represents a 3.4-point average decrease on a scale with scores that range from a possible 5 to 35. Overall, this is a 13.9% decrease from their pre-COVID levels.

- Extraverts had the greatest average decrease in their wellbeing. They were significantly different to the rest of the sample ($p < .001$)
- Emotional eaters also reported higher decreases in their global wellbeing than others.
- Perceived change in weight was associated with overall changes in subjective wellbeing. People who reported weight gain, also reported a greater reduction in their life satisfaction.

Quotes from respondents

3483 entered some text in response to the question, "Briefly describe how the COVID-19 outbreak has most greatly impacted your life (Optional)"

Compared to group	Text entered
Large improvement	"Despite my respect for those who have suffered through Covid I personally have a sense of greater well being and relaxation. Although I have lost my job, my other family members have retained theirs. My most important people are living with me. I can exercise, I have my dog, my garden etc. This forced time at home has provided me time to clean up and get organised. I feel our household is productive but relaxed. In addition, I have maintained my weight loss through TWD so I'm feeling better than ever. My greatest concern pre Covid was the demise of our global environment so I am relieved to think the planet is having 'an industrial pause'. I am hoping post Covid brings a 'better normal' and we don't go back to how things were before."
Moderate improvement	"Saved money because I haven't been able to travel (had overseas trips booked), go to the theatre or to the cinema, haven't used my car as much. My super fund has taken a hit -15% when I last dared to look. Very content being at home - lots to do. Keeping in touch with friends and family online. Haven't been able to undertake my usual volunteer work. Have gained some weight due to inactivity and snacking."
Average change	"Working from home and loving it. Miss travelling to see family."
Moderate decrease	"Not able to have face to face contact with friends and more particularly family. A new little family member has been born in a different city from where we live. Nothing, but nothing beats the feel and smell of a brand new baby snuggling up with their soft hair and gentle breaths or having that newborn little one asleep on my chest. But, I cannot cross the interstate border to go to see her or to give her parents support, even though prior to her birth it was all planned. I trust that we will meet before she is sitting up and talking! we already have missed out on such an important part of her life, never to be retrieved."
Large decrease	"I used to socially interact in a meaningful, face to face, way most days of the week but after covid19 this has ended. I think the greatest impact has been social isolation"