Aim
The aim of this project is to get a repeated insight into the perceptions of the population - the "psychological situation". This should make it easier to organize communication measures and reporting in order to offer the population correct, helpful knowledge and to prevent misinformation and action. For example, attempts are also made to classify behavior that is heavily discussed in the media, e.g. discrimination against people who appear to come from badly affected countries such as China or Italy, or so-called hamster purchases. We want to find out how often such behavior actually occurs and which factors can possibly explain this behavior. The aim of this page is to help authorities, media representatives and the general public to assess the psychological challenges of the COVID-19 epidemic and, at best, to cope with them. All data and conclusions are to be regarded as provisional and are subject to constant change.

Information about COVID-19 and the outbreak
Important: Here you will NOT find any information about COVID-19 and the actual outbreak.
If you are looking for that, please click here:
- Republic of Turkey Ministry of Health (https://hsgm.saglik.gov.tr/tr/covid19)
- Türk Klinik Mikrobiyoloji ve İnfeksiyon Hastalıkları Derneği (KLİMİK) (https://www.klimik.org.tr/koronavirus/)

1. Summary
1.1 Results of the current wave
The study data were published by combining the results of two weeks (17.07.-31.07.2020) since only 669 participants could be reached with snowball technic. The data are collected between every Thursday and Saturday.

Psychological situation
Half of the population assesses their likelihood of developing COVID-19 very high and 20% is unsure. Around 45% consider the illness to be dangerous, a fifth is unsure. 20% report that they think of corona frequently or continuously, and 70% find the corona virus rather worrying or worrying; 60% find the coronavirus scary. People who are younger, who perceive the coronavirus as close and rapidly spreading, and when a confirmed case of COVID-19 has occurred in a circle, perceive a rather higher probability of illness. People who perceive as media hype, have the coronavirus especially have a lower risk perception.

Knowledge and behavior
Overall, the population is relatively well informed about transmission routes and incubation times, and effective protective behavior is also very well known. Over 90% know that hand washing, social distancing and cough / sneeze hygiene must be observed. Approx. 20% think that staying at home with illness and disinfectants does not protect against infection. On a subjective level, the respondents also
feel rather good about COVID-19 and protection options informed. However, perceived and real knowledge about COVID-19 are only very weakly connected, the feeling of knowing how to protect yourself and actually taken, effective protective behavior are not related. That means people who think a lot about

Knowing COVID-19 or effective protective behavior does not protect you better. For example, around 90% of the population know that crowds should be avoided, around 80% do so. People who have greater trust in the health sector, have taken more effective protective action. People who have the possibility of getting sick, have exhibited less protective behavior. If a suspected or confirmed case was known in own geographic environment, this had no effect on increased protective behavior, actionism, increased risk perception or crisis preparations. Overall, the psychological proximity of the coronavirus and the trust in Ministry of Health seems to be a more important aspect and drives risk perception and protective behavior.

**Individual crisis preparation**

There are no any relationship between preparations for the crisis and age, gender, education, perceived proximity, confirmed case in the district, probability of getting sick, knowledge of COVID-19, trust in the authorities, media and health sector or media hype.

**Outbreak management: trust, responsibility and acceptance of the measures**

Confidence in the authorities and the health sector is rather high, in the media rather less. The population has the most confidence that the Ministry of Health, Turkish Medical Association and hospitals are dealing with the situation well and correctly.

Crisis management measures include: quarantine people while visiting outbreak areas and forcing infected people to isolate themselves. An evaluation of cell phone data without consent to follow up contact chains of infected people and restricting internet access to prevent fake news from spreading are viewed with skepticism.

2 conclusions

**Implement protective behavior!**

The people who trust in the Ministry Health and Medical Professional Organizations, take effective protective measures. It is important that the Ministry of Health maintains his attitude.

**Manage risk perception**

As reasons why they are rather not susceptible, it has been stated more often that they are young. This assumption could stand in the way of an increased protective behavior and it should be clarified that the perceived quality of one's own immune system offers little protection against the virus.

**Panic Buying**

Panic Buying appear to be not connected the variables that are assessed (age, gender, education, perceived proximity, confirmed case in the district, probability of getting sick, knowledge of COVID-19, trust in the authorities, media and health sector or media hype.)
3 Method

3.1 Sample

The subjects are invited via an online. Every two week, a representative distribution of the N = 1000 respondents between 18-74 years is targeted. Wave 1 interviewed only 669 people.

3.2 Measurements

Demographic data. Age, gender, education, size of residence and living city the number of own children, people in their own household, single parent status, professional independence, occupation in the health sector as well mental and chronic illnesses are queried.

Knowledge of COVID-19. There was perceived knowledge (how do you rate your knowledge of the novel corona virus? No knowledge at all (1) - a lot of knowledge (7), Krawczyk et al, 2013, symptom knowledge and general knowledge about COVID-19 with items for the correct name , Treatment, transmission route and incubation time asked (eg: How long is the incubation time […] of the novel coronavirus? Approx. 3 days / approx. 7 days / approx. 14 days / don't know).

Risk perception. Assessment of probability (how high do you estimate your probability that you will become infected with the novel corona virus? Extremely unlikely (1) – extremely probable (7)), severity (how do you rate an infection with the novel coronavirus for yourself? completely harmless (1) - extremely dangerous (7)) and susceptibility (how susceptible do you estimate to be for an infection with the novel coronavirus a? not susceptible at all (1) - very susceptible (7)) to the coronavirus infection as dimensions of risk perception (Brewer et al. 2007).

Protective behavior. Questions about the usefulness and actual application (Liao et al. 2011, Steel Fisher et al. 2012) of the recommended preventive measures (7-11 points, e.g. covering the mouth when coughing, physical distance). These were adjusted weekly and also contained items for distraction (1-11 items, e.g. drinking ginger tea) in order to search for irrelevant protective behavior (actionism).

Self-efficacy. For the assessment of protective measures (How safe or unsafe do you feel when asked which protective measures are suitable to avoid infection with the novel corona virus? Very unsafe (1) - very safe (7), Bandura 2006) and self-efficacy in use (In the current situation, avoiding an infection with the novel corona virus is… extreme for me difficult (1) - extremely easy (7), Renner & Schwarzer, 2005).

Affective assessment. The outbreak situation is assessed on 7-level semantic differentials (6-7 items, e.g. scary - not scary, slowly spreading - quickly spreading, Bradley & Lang, 1994).

Sources of information. Trust and frequency of use for various media (11-22 items, e.g. private television, websites of health facilities). General information searches were also requested (never - very often).

Trust in institutions. Query for 11-12 institutions and decision-makers who change every week (e.g. own doctor, the Ministry of Health, the media, very little trust (1) - very much trust (7), (0) no answer possible, Pearson & Raeke, 2000, Schweitzer et al., 2006).

Acceptance of measures to fight pandemics. Acceptance of political decisions that are up for discussion (11-14 items e.g. all major events should be canceled do not agree at all (1) - fully agree (7))
**Crisis behavior.** In 7-10 items, behavior is queried that is adapted weekly to the public discussion (e.g. buying large amounts of food and toilet paper, working from home - I have already done that (1), I plan to do that (2) or I do not intend to do that (3)).

**False reports.** With an open response format, the subjects are asked to report false reports (have you come across information about the newly emerged coronavirus that you are not sure whether it is correct or incorrect?), 3-5 answers are possible. Additional dimensions are collected selectively.

**Risk perception of influenza.** In waves 2 and 3, the questions for probability, severity and susceptibility (Brewer et al. 2007) are also asked for influenza.

**Outbreak-related fears.** From wave 3, 9 items (e.g. due to the current corona situation, how many worries are you worried that society will become more selfish? Very little worries (1) - very many worries (7)) are crisis-specific fears.

**Conspiracy thinking.** the tendency to believe conspiracy theories (e.g. there are many very important things happening in the world that the public is never informed of is true (1) - true (7)) (Bruder et al. 2013).

**Resilience.** In all waves, resilience is conveyed using the Brief Resilience Scale (e.g. I don't need much time to recover from a stressful event. I totally disagree (1) - totally agree (5), Smith et al, 2008) and Corona-specific items (e.g. during the pandemic, I know that I will not let myself down. I totally disagree (1) - fully agree (7))

**Life satisfaction.** With one item (How satisfied are you currently - all in all - with your life? Completely not satisfied (1) - completely satisfied (7)), life satisfaction was surveyed from wave 4 onwards.

### 3.3 Implementation

The online survey is opened to participants from Thursday to Sunday midnight. All subjects actively consent to data processing. On the basis of the socio-demographic data, subjects are filtered out who are under the age of 18 or whose quota (age / gender distribution or federal state) has already been completely fulfilled. Test subjects who are admitted to the survey receive instructions and, if necessary, a brief explanation about the novel coronavirus and the current outbreak. The subjects then answer the respective questionnaire.

### 4 Psychological situation

The perception of risks is important for human decision-making, and emotions such as fear or the feeling of being threatened also play a role in behavior. Control beliefs are also relevant - if I want to protect myself, then I have the relevant knowledge, I am sure that I can protect? The following graphics first show the current status and the change in the relevant variables.

Below is explored to what extent these variables are also related to effective protective behavior, preparedness (see section “What influences behavior”) and behavior changes related with pandemic.

#### 4.1 Risk perception

The following three graphs show various aspects of risk perception over the course of the surveys.
4.2 Corona and Emotions

The following three graphics show various emotional aspects of the course of the surveys.

Dominance of the topic
For me, the new type of coronavirus is

Fear

For me, the new type of coronavirus is

Worry

For me, the new type of coronavirus is
4.3 Real and felt knowledge

Correct knowledge and the feeling of being able to protect yourself are important factors influencing protective behavior. The following graphics show the current status and the change in self-assessed and actual average knowledge, the safety with regard to protective behavior and the perception of the measures.

**How do you rate your level of knowledge about the novel coronavirus?**

Means and 95% confidence intervals (1: very poor knowledge 7: very good knowledge)

**Actual knowledge**

Correct knowledge of the participants about the treatment options and incubation period;

Means and 95% confidence intervals
4.4 Feeling prepared and being prepared

How safe or insecure do you feel about the question of which protective measures are suitable to avoid infection with the new type of coronavirus?

Means and 95% confidence intervals (1: Not at all, 7: Very much so)

In the current situation, avoiding infection with the novel coronavirus is for me ...

Means and 95% confidence intervals (1: Extremely easy  7: Extremely difficult)
I think that the measures currently being taken are greatly exaggerated

Means and 95% confidence intervals (1: disagree 7: agree)

Proportion of people who correctly identified all effective protective measures
5 What influences risk perception

In response to the changing situation, the population's perception of risk is likely to change too. Risk is recorded as the likelihood of falling ill, the severity of the disease and one’s own vulnerability. This examines which factors are related to risk perception. Demographics are also examined as influencing factors: Perception of Corona - Corona is perceived as close, as rapidly spreading, as media hype; We also examine the influence of trust in the media, the health sector and the authorities as influences on risk perception.

The analysis of the probability shows that people who are younger, who perceive the coronavirus as close and spreading rapidly have a higher perception of the probability of illness. The analysis of the degree of severity shows that people who are older, have a lower level of education and who perceive the coronavirus as close and as a media hype tend to have a higher perception of the degree of severity.

The susceptibility analysis shows that people feel more vulnerable when they perceive the virus as close, as media hype, spreading rapidly. Besides, the people who are older, have a higher perception of the degree of susceptibility. As soon as several measurement times are available, the change over time is also considered.

Interpretation: The results of a linear regression analysis are shown. Influencing factors in bold are significant and have a statistically significant influence. For values with a positive sign, this means: higher values for this influencing factor lead to greater risk perception. That means for values with a negative sign: higher values on this influencing factor lead to less risk perception.

Table:

<table>
<thead>
<tr>
<th></th>
<th>Possibility 1</th>
<th>Severity 1</th>
<th>Susceptibility1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>CI-</td>
<td>CI+</td>
</tr>
<tr>
<td>Perceived proximity</td>
<td>-0.381</td>
<td>-0.471</td>
<td>-0.307</td>
</tr>
<tr>
<td>Media hype</td>
<td>0.057</td>
<td>-0.013</td>
<td>0.132</td>
</tr>
<tr>
<td>Transmission rate of the detected virus</td>
<td>0.246</td>
<td>0.153</td>
<td>0.337</td>
</tr>
<tr>
<td>Age</td>
<td>-0.014</td>
<td>-0.024</td>
<td>-0.005</td>
</tr>
<tr>
<td>Confirmed illness in the</td>
<td>0.128</td>
<td>-0.149</td>
<td>0.406</td>
</tr>
</tbody>
</table>
6 What influences behavior

6.1 Protective behavior

Protective behavior is recorded as a percentage: hand washing, wearing a face mask, keeping 2 meters distance. Here it is examined which factors influence the protective behavior. (You can find an overview of the individual protective measures under "Data in detail")

The current analysis shows (see table): People who have greater trust in Ministry of health and Medical professionals Organizations, take more protective behavior. **Having the possibility of getting sick** is related with considering COVID-19 as an unserious illness and less protective behavior: The results of a linear regression analysis are shown. Influencing factors in bold are significant and have a statistically significant influence. For values with a positive sign, this means higher values for this influencing factor lead to more protective behavior. That means for values with a negative sign: higher values on this influencing factor lead to less protective behavior.

<table>
<thead>
<tr>
<th>Protective Behavior</th>
<th>Beta</th>
<th>Cl-</th>
<th>Cl+</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.000</td>
<td>-0.009</td>
<td>0.009</td>
<td>0.957</td>
</tr>
<tr>
<td>Gender (female/male)</td>
<td>-0.065</td>
<td>-0.294</td>
<td>0.164</td>
<td>0.578</td>
</tr>
<tr>
<td>Educational status (university / high school and below)</td>
<td>-0.023</td>
<td>-0.362</td>
<td>0.316</td>
<td>0.896</td>
</tr>
<tr>
<td>Inhabitants size (501,000 and above)</td>
<td>-0.108</td>
<td>-0.267</td>
<td>0.050</td>
<td>0.181</td>
</tr>
<tr>
<td>Confirmed disease in the area of residence (none)</td>
<td>-0.141</td>
<td>-0.299</td>
<td>0.017</td>
<td>0.079</td>
</tr>
<tr>
<td>Possibility of getting sick</td>
<td>-0.182</td>
<td>-0.248</td>
<td>-0.115</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>The severity of the disease</td>
<td>-0.038</td>
<td>-0.108</td>
<td>0.032</td>
<td>0.289</td>
</tr>
<tr>
<td>Knowledge level</td>
<td>0.238</td>
<td>0.222</td>
<td>0.857</td>
<td>0.235</td>
</tr>
<tr>
<td>Trust in Government</td>
<td>0.023</td>
<td>-0.028</td>
<td>0.075</td>
<td>0.371</td>
</tr>
</tbody>
</table>
6.2 Precautionary purchases ("hamster purchases")

There is a lot of media coverage about “hamster purchases”. This examines the factors that are related to whether people have bought a) food as a precaution or b) everyday objects such as toothpaste. It was found that the likelihood of buying both items (such as toothpaste and food as a precaution) is not related with variables that are shown at the table.

Interpretation: The results of a binary-logistic step-by-step regression analysis (best statistical model) are shown. Odds ratio make a statement about the extent to which the presence or absence of a feature A (e.g. perceived proximity) is related to the presence or absence of a further feature B (e.g. hamster purchases). Influencing factors in bold are significant and have a statistically significant influence. Values above 1: higher values on this influencing factor lead to more buying behavior. Values below 1: smaller values on this influencing factor lead to less buying behavior. Variables in the model: age, gender, education, confirmed cases in the district, probability of falling ill, knowledge of COVID-19, trust in the authorities, trust in the health sector, trust in the media, perceived proximity, speed of spread of the virus and media hype.

<table>
<thead>
<tr>
<th>Trust in Media</th>
<th>0.007</th>
<th>-0.053</th>
<th>0.067</th>
<th>0.811</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in Ministry of Health</td>
<td>0.104</td>
<td>0.038</td>
<td>0.169</td>
<td><strong>0.002</strong></td>
</tr>
<tr>
<td>Trust in Medical Professional Organizations</td>
<td>0.072</td>
<td>0.012</td>
<td>0.133</td>
<td><strong>0.019</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panic Buying</th>
<th>OR</th>
<th>CI-</th>
<th>CI+</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived proximity</td>
<td>0.994</td>
<td>-0.116</td>
<td>0.105</td>
<td>0.921</td>
</tr>
<tr>
<td>Media hype</td>
<td>0.917</td>
<td>-0.176</td>
<td>0.003</td>
<td>0.059</td>
</tr>
<tr>
<td>Transmission rate of the detected virus</td>
<td>0.912</td>
<td>-0.21</td>
<td>0.025</td>
<td>0.124</td>
</tr>
<tr>
<td>Age</td>
<td>1.009</td>
<td>-0.003</td>
<td>0.021</td>
<td>0.159</td>
</tr>
</tbody>
</table>
6.3 Behavior Changes

Behavior changes such as doing exercise, consumption of alcohol and unhealthy dieting are examined. The analysis shows (see table): There is no relationship between doing exercise and the variables that are shown at the table below. People who have more trust in Ministry of Health, have consumed less alcohol. People who are older, female and have a high risk perception to be ill, consume less unhealthy food.

Interpretation: The results of a linear regression analysis are shown. Influencing factors in bold are significant and have a statistically significant influence. That means for values with a positive sign: higher values on this influencing factor lead to more crisis preparation. For values with a negative sign, this means: higher values on this influencing factor lead to less crisis preparation.

Table:

<table>
<thead>
<tr>
<th></th>
<th>Exercise</th>
<th>Alcohol</th>
<th>Unhealthy Diet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>CI-</td>
<td>CI+</td>
</tr>
<tr>
<td>Perceived proximity</td>
<td>1.011</td>
<td>-0.098</td>
<td>0.12</td>
</tr>
<tr>
<td>Media hype</td>
<td>0.990</td>
<td>-0.098</td>
<td>0.079</td>
</tr>
</tbody>
</table>
Discriminatory behavior

Individual cases were reported in the media in which people of Chinese or Italian descent were discriminated against. It was therefore recorded whether the respondents consider temporary discrimination in the event of an outbreak to be appropriate. The following graph shows the mean agreement with the statement "In the event of an outbreak, it is appropriate to temporarily discriminate against a certain group of people (e.g. Chinese, Italians) based on their country of origin" over time. In general, it does not seem appropriate to the population to temporarily discriminate against others based on their origin in the event of an outbreak.

**Discriminate appropriateness**

Means and 95% confidence intervals (Rated on a scale from 1 (disagree) to 7(agree))
7 Sources of Information

7.1 Use

How often do you use the following sources to find out more about the novel coronavirus?

**Grafik Frequency of use of the information sources**

Means and 95% confidence intervals

Rated on a scale from 1 (never) to 7 (very often).

Current wave of surveys (17.07-31.07.2020)
The ratings for the information sources employer and health insurance company were not mandatory.

7.2 Reliability

Reliability: How reliable do you think the following sources are regarding the novel coronavirus?

Grafik: Reliability of information sources

Means and 95% confidence intervals

Rated on a scale from 1 (never) to 7 (very often). Current wave of surveys (17.07-31.07.2020)

7.3 Relevance

Relevance: mathematical product of usage and reliability

Grafik: Relevance of the information sources

Usage weighted with reliability; current wave of surveys (17.07-31.07.2020)

The ratings for the information sources employer and health insurance company were not mandatory.
The ratings for the information sources employer company were not mandatory. All of the survey participants gave reviews about the employer.

7.4 Corona as media hype

**Grafik: For me, the novel coronavirus is ...**

Means and 95% confidence intervals

8 Outbreak Management

8.1 Trust

How much trust do you have in the people and organizations below that they are able to deal with the novel coronavirus well and properly?
Grafik: Trust (1): Health Sector

Means and 95% confidence intervals
Rated on a scale from 1 (very little confidence) to 7 (very high confidence).

Grafik: Trust (2): Media

Means and 95% confidence intervals
Rated on a scale from 1 (very little confidence) to 7 (very high confidence).

Grafik: Trust (3): work environment

Means and 95% confidence intervals
Rated on a scale from 1 (very little confidence) to 7 (very high confidence).

9 Acceptance of various measures for crisis management

Grafik: Acceptance of crisis management measures

Rated on a scale from 1 (not endorsed) to 7 (strongly endorsed). Current wave of surveys

10 Dates in detail

10.1 Detail: Knowledge of COVID-19

Assessment of the participants; Single choice
Knowledge of the incubation period

Assessment of the participants; Single choice

Knowledge of effective preventive measures

10.2 Detail: know and take effective protective measures

Which of the following measures are effective preventive measures to prevent the spread and infection with the novel coronavirus? (Illustration: effective protective measures)
10.3 Detail: Ineffective protective measures and actionism

Which of the following measures are effective preventive measures to prevent the spread and infection with the novel coronavirus? (Representation: ineffective protective measures, interpreted as actionism)
Which of the following measures are effective preventive measures to prevent the spread and infection with the novel coronavirus? (Representation: ineffective protective measures, interpreted as actionism)

Knowledge of ineffective preventive measures (17.07-31.07.2020)

Ineffective preventive measures actually taken

10.4 Detail: Changes in Thoughts, Emotion and Behavior During Pandemic
Reference


