Title:
Changes in alcohol consumption since the outbreak of the SARS-CoV-2 pandemic in Europe: a study protocol

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Abstract (257 words):

Introduction: In 2020, public and private life in Europe has been undergoing drastic changes due to the outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). To contain the spread of the virus, many national governments have introduced measures to limit physical contact, which are also likely to affect health-related behaviours such as alcohol use. The objective of this study is to investigate changes in alcohol consumption during the SARS-CoV-2 pandemic. This project resulted the collaboration and commitments of public health scientists from more than 20 research institutions from all over Europe.

Methods and analysis: A cross-sectional online survey is being conducted, which consists of five sections covering the following topics: (i) sociodemographics; (ii) the AUDIT-C; (iii) perceptions of measures employed to contain the pandemic; (iv) changes in personal alcohol consumption; and (v) changes in the personal use of other substances. Weights will be applied to ensure that the convenience sample reflects the population distributions of the participating countries. Regression analyses will be used for data analyses and hypothesis testing.

Ethics and dissemination: The questionnaire was translated into 21 languages to facilitate distribution in as many European countries as possible. The target population is adults aged 18 years or over. Participation is voluntary and fully anonymous: respondents can select not to answer any of the questions and opt to terminate participation in the survey at any time. As the survey is fully anonymous, ethical approval by a research ethics committee is not needed. The survey was approved by the Data Protection Officer of the Technische Universitaet Dresden.

Strengths and limitations of this study:

• Strength 1: The study will allow us to examine changes in alcohol consumption during the outbreak of the SARS-CoV-2 in Europe.
• Strength 2: Changes in alcohol consumption can be studied across countries and vulnerable subpopulations can be identified.
• Strength 3: Specific hypotheses about the impact of distress and affordability/availability on alcohol consumption can be tested.
• Limitation 1: It is a cross-sectional study.
• Limitation 2: The study relies on a convenience sample.
• Limitation 3: The assessment of alcohol use is restricted due to the use of survey methodology, based on self-report, which has been shown to underestimate true consumption, with susceptibility to recall and social desirability biases.

Keywords:
1. Introduction
Since the beginning of 2020, large parts of the world have faced drastic changes. Previously inconceivable political actions were implemented, such as local and national lockdowns, where public life was severely restricted. These extreme measures were introduced to limit physical contact and possibilities for infection in response to the outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a virus first reported in China at the end of 2019 and still spreading globally at the time of this study. In Europe, these measures have been restricting public and private life to an extent never seen before with previous global health crises (for an overview, see e.g. [1,2]). Efforts have focussed on containing the spread of the virus in order to mitigate excess burden on healthcare systems and to ensure that medical care can be made available for all infected individuals. However, the extensive measures do not only have an impact on the rate of the virus’s transmission itself, but could also have implications for health-related behaviours such as alcohol use, and thus, indirectly, for public health.

Public health crises and alcohol use
To date, little is known about the impact of public health crises on alcohol use, with only a few studies having studied during the SARS outbreak in the early 2000s [3,4]. These investigations related to the SARS pandemic revealed an increase in alcohol use after one year after that crisis ended [3], and an increased risk in reporting symptoms of alcohol use disorders, particularly in affected groups, such as hospital employees, in the following three year period [4]. The authors found increased psychological distress due to uncertainty and social isolation as potential mechanisms that led to changes in alcohol use in Beijing and Hong Kong. Similar changes in alcohol consumption have been reported after the occurrence of natural disasters such as hurricanes [5,6] and the 9/11 terrorist attacks in the US [7].

Quite the opposite outcome has been observed when considering economic crises (for a systematic review, see [8]), which likewise have tangible effects on public health (see, for example, [9]): unemployment and income reductions as a result of economic crises may lead to diminished affordability of alcohol and therefore to a decline in alcohol consumption [8].

Importantly, when examining the consequences of crises on public health and alcohol use, it is indispensable to differentiate between short-term and long-term effects [10], as they could be quite contrary.

Preliminary data on the effects of the corona pandemic
Europe became the focus of the SARS-CoV-2 pandemic in the end of March 2020, leading to a wide range of immediate actions to contain the spread of the virus. These included local lockdowns and border closings throughout Europe [1,2]. By the end of April, the first outcomes of the ongoing pandemic on economic growth and individuals’ behaviour were recorded. In Germany, for example, the number of people who applied for financial support from the government in April increased by 25% compared to the same month of the previous year [11]. In Spain the unemployment rate in early 2020 rose by about 50% compared to the previous year (status: April 2020) [12]. In an online survey conducted in Germany and the UK, among others, 28% and 33% of participants, respectively, stated that they had lost income due to the SARS-CoV-2 pandemic [13]. Economic growth in Europe as measured by the gross domestic product (GDP) has declined by 3.8% during the first quarter of 2020 as compared to the previous quarter [14].

In most European countries, drastic restrictions, also affecting the availability of on-premise alcohol sales have been implemented, including closures of restaurants and bars for several weeks [1,2]. However, bans on off-premise sales were rarely imposed. Furthermore, there have been widespread cancellations of small- and large-scale public events, during which (often heavy) alcohol consumption is a common activity (e.g. dance parties, soccer matches), which may contribute to decreases in the overall alcohol consumption. Initial survey research from France and England showed mixed results, where some individuals reported an increase and others a decrease in their alcohol consumption since the lockdown [15,16].

As severity of measures to contain the spread of the virus differed between jurisdictions, so did their impact on public and private life. Further, compensation for loss of income and (psychosocial) support varies greatly across
countries and individuals, thus, experienced distress during the crisis is likely to differ largely between individuals within and between countries. Taking these considerations into account, the following hypotheses will be tested.

**Hypotheses**

The overall alcohol consumption will decrease during the pandemic, due to decreased affordability and availability (Hypothesis 1). Furthermore, we hypothesize that people with higher income will not change their use, while people with lower income will tend to decrease their use, due to reduced affordability for lower income groups (Hypothesis 2). Lastly, patterns of change further depend on the level of distress associated with SARS-CoV-2. Independent of income levels, we hypothesize that people experiencing distress associated with SARS-CoV-2 will be more likely to increase their use than those who are not distressed (Hypothesis 3).

2. Methods and analysis

**Study design and sample**

We are conducting a brief online survey including questions related to: sociodemographic characteristics; perception of existing measures to contain the SARS-CoV-2 pandemic; the Alcohol Use Disorder Identification Test-Consumption (AUDIT-C) [17]; and changes in alcohol use in the past month. Additionally, questions on changes in substance use other than alcohol are asked. The survey is designed to take a maximum of 10 minutes to complete, and is available in 21 languages (for a complete list, see Appendix A). Participants can complete the survey in any of the languages provided, irrespective of their location. The current country of residence is recorded in a separate question.

The target population is adults aged 18 years or older. There are no further inclusion or exclusion criteria.

The English version of the questionnaire can be seen in Appendix B. It served as a translation template, which was developed in English, translated into the different languages by native speakers of the respective languages, and validated by ECAS colleagues working in the alcohol field.

The survey is conducted using the open source survey tool LimeSurvey [18]. Anonymity of respondents is ensured by not collecting data such as the referral URL, HTTP cookies, internet protocol (IP) address, or the exact time of completing the survey. The survey can be accessed via the main study centres’s website (https://www.covid19-and-alcohol.eu) and corresponding websites from collaborating institutes. Sampling procedures will differ between countries, as we use a decentralised snowball technique to reach as many people as possible (resulting in a convenience sample). Amongst the channels used for dissemination of the surveys were alcohol research and policy networks, social media, web pages, press releases, and institutional or interest group mailing lists. The data collection phase started on 24 April 2020 for the majority of countries and continues until 30 June 2020 at first and may extend, depending on the progression of the pandemic.

**Primary outcome measure**

Changes in alcohol consumption since the outbreak of SARS-CoV-2 is the primary outcome of this study. Changes in alcohol consumption are recorded using three items covering changes according to the AUDIT-C alcohol use dimensions, i.e. changes in (a) the frequency of drinking occasions, (b) the quantity of alcohol intake during a drinking occasion, and (c) the frequency of heavy episodic drinking during the past month. In items following the AUDIT-C, respondents are asked to indicate whether they drink much less, drink slightly less, drink slightly more, or drink much more than a month previously, or if their drinking did not change since the past month. For the main hypothesis as stated above, the primary outcome variable has two levels indicating a decrease or increase drinking. Additionally, respondents are asked whether they feel content with the changes in their alcohol consumption during the past month.

**Secondary outcome measures**

As a secondary outcome, changes in the use of substances other than alcohol are recorded. This includes changes in the frequency of smoking, cannabis use, and other illegal substance use. The same answer options as for changes in
alcohol consumption are provided, with an additional category enabling the participants to indicate that they do not consume the substance in each case.

**Covariates**

Affordability of alcohol is indicated by the monthly net household income of the participant, weighted according to the number of persons living in the household. The household net income is first assessed before the outbreak of SARS-CoV-2. A second item asks for the proportional change in the household net income since the outbreak of SARS-CoV-2 (‘strong increase’, ‘moderate increase’, ‘small increase’, ‘no change’, ‘small decrease’, ‘moderate decrease’, ‘strong decrease’, ‘I do not know’).

The perceptions of measures to contain the SARS-CoV-2 pandemic at the individual level is assessed by asking whether respondents have experienced restrictions in public or private life; whether they themselves or a person close to them has been diagnosed with SARS-CoV-2; and whether they have experienced negative consequences concerning their occupational or financial situation (using four levels: not at all, to some degree, to a substantial degree, to a very high degree). Respondents are also asked whether they perceive the ongoing situation related to the spread of SARS-CoV-2 as stressful, which was the key item to indicate the experience of distress. The reference period for all questions is the past month.

Past-year alcohol intake is estimated using responses to the AUDIT-C [17], which asks for the past-year frequency of drinking occasions, number of standard drinks on a usual drinking occasion, and the past-year frequency of heavy episodic drinking (i.e. drinking six or more standard drinks in one occasion). Standard drinks are introduced to the participants using pictograms; with examples of beer, wine and spirits corresponding to one and two standard drinks in each country are provided (see Appendix B). In the majority of translations, a standard drink is defined as 11 grams of pure alcohol based on the average of the most widely used definitions in Europe (i.e. 10 and 12 grams) [19]. In countries where a different standard drink definition is employed and publicly known, this has been used, applicable to: the Czech version (16 grams), the Danish and the Swedish version (12 grams), the Slovenian version (10 grams) and the UK version (8 grams) [19]. For the UK, the Irish and the Finnish version, an additional beverage was included, since the proportion of beverages other than beer, wine and spirits exceeded 5% of the total annual per capita consumption in those countries [20].

**Data analyses**

The study outcomes will be initially analysed across countries. Thus, all individuals who will participate by 30 June 2020 constitute the sample. Regarding the hypothesis testing, the following considerations apply: the hypotheses needing the highest sample size will be hypothesis 2, which predicts decreases of alcohol consumption mainly for people with lower socioeconomic status. Using conservative assumptions, a logistic regression of the binary response variable decrease of alcohol consumption on the binary independent variable low socioeconomic status with a sample size of 14,005 observations (of which 67% are in the group \(X = 0\) and 33% are in the group \(X = 1\)) achieves 90% power at a 0.05 significance level to detect a change in the probability of the dependent variable from the baseline value of 5% to 7.3%. This change corresponds to an odds ratio of 1.5. Further it is assumed that the other covariates in the model correlate with the independent variable to 0.8 (shared variance of 64%). These sample size calculations are based on Hsieh and colleagues [21]. Given that the survey achieved 30,740 in the first 3 weeks, we believe the sample size necessary to test the hypotheses will be achieved.

In addition, we will be able to describe percentages by +/- 5% in a country, of we achieve \(n = 402\) observations for this country [22].

Data will be evaluated exclusively for persons who have completed the questionnaire—i.e. not for those who aborted the survey early. Data will be checked for consistency and plausibility, and a cleaned data file will be compiled.

A weighting procedure will be applied to ensure the convenience sample reflects the population distribution of the participating countries with respect to gender, age, and socioeconomic status (SES). The respective distributions will be obtained from Eurostat for the latest available year [23]. For this purpose, educational attainment will be used as a proxy indicator for SES [24].
In order to test the first hypothesis, we will measure, whether the number of decreases in alcohol consumption outweigh the number of increases (test of proportions within one sample). Regression analysis will be used to test the other hypotheses. Change in alcohol consumption constitutes the primary outcome variable, which will be modelled via logistic and multinomial logistic regression. All regression models will be at minimally adjusted for gender, age, and country.

**Patient and Public Involvement**

The surveys use fixed standard questions, and researcher-led outcome measures, to ensure comparability across countries and to other studies; however, the public (including patient populations) are very heavily involved in the recruitment and data collection in this study. The survey links have been disseminated on both European and national levels via a snowballing technique, as used by many crowd-sourcing initiatives – the dissemination materials and messages for social media invite those reached to contribute to the research by a) participating and b) passing on the link.

Throughout the course of the SARS-CoV-2 pandemic in Europe, the impact of the disease and lockdown conditions on different aspects of Europeans’ behaviour and mental health, including the influence of socioeconomic status and the experience of distress, have been constant questions and concerns raised in the general and professional media. These questions form part of the study hypotheses and the survey has been designed to attempt to address these aspects, while still remaining accessible for different health literacy levels and short enough to allow a large number of responses.

The study website will include regular update reports (in simple graphic formats) showing the numbers of responses across countries, to encourage public interest and further dissemination. In addition, participants will be informed that findings will be available on the website. The methods and findings of the study will be published in open access journals which will be linked and easily accessible from the study website, alongside a plain text summary of the findings in each paper. In addition, the cleaned and fully anonymous data sets of the study will be publicly available after the initial study analysis, allowing replication or further interpretation by any visitor to the website.

**3. Ethics and dissemination**

This study has not undergone formal ethical review as the survey has been designed to be completely anonymous. Neither can we nor any third person identify a person based on the data collected. The survey was further approved by the TUD Data Protection Officer (see Appendix C) with regards to the EU General Data Protection Regulation 2016/679.

Participation in the study is completely voluntary, participants can omit a response to any question, and/or terminate the survey at any time.

Data will be stored on local, password-protected and fully encrypted computers at the study center (TU Dresden, Germany) during the period of the project. After completion of the project, the cleaned data file will be made publicly accessible; i.e. the study data will be published in a public repository making the data openly accessible, interoperable, and re-usable (FAIR principles issued by the European Union). Through these means, we ensure that our analyses will be reproducible and that the data can be used for other purposes than those described, increasing the merit of this study. Lastly, study results will be published under an open access license to allow for a widespread use and reference to our findings.

**4. Limitations**

There are several limitations of this study. First, the study is a cross-sectional study, and can therefore not fully establish causality. Second, no probability sampling has been applied; the convenience sample leads to limitations in terms of representativeness, which will be addressed by weighting. However, for testing a priori established hypotheses, there has been a long-standing debate if representativeness is necessary [25]. Third, assessment of
alcohol intake and changes in alcohol use are self-reported, and therefore may be affected by recall bias, as respondents must distinguish between past-year and past-month consumption [26], and by effects of social desirability bias, as individuals tend to represent themselves in a positive light as moderate drinkers [27]. Fourth, survey-based alcohol assessment is generally characterised by under-reporting; i.e. the proportion of ‘real consumption’ accounted for by a survey, compared to more reliable aggregate consumption data, is usually lower than 60% [28]. Fifth, the national measures taken to contain the SARS-CoV-2 pandemic changed over time, partially weekly or even more frequent. Moreover, it is conceivable that these measures may have a direct impact on alcohol use, e.g. due to uncertainty that can arise from frequent policy changes. However, in order to preserve the anonymity of our respondents, no exact times of participation were recorded. For this reason, answers can only be assigned to political actions on a weekly basis.

5. Conclusion
During this unprecedented public health crisis, increasing alcohol use in more disadvantaged groups may require specific measures to mitigate additional alcohol-attributable burden and head-off imminent health inequities. The proposed survey will contribute to identify vulnerable groups to increasing alcohol use. Thus, the study findings are expected to shed light not only on the unintended effects of restrictive measures to contain the spread of SARS-CoV-2 on alcohol consumption, but also on our understanding of important drivers of substance use (distress, affordability and availability) and their interaction.

6. Ethical approval:
None (see ‘Ethics and dissemination’ for an explanation).

7. Reference list


8. Authors’ contributions
CK – Conceptualized the survey and study design, wrote and revised the original draft.
JM – Conceptualized the survey and study design, reviewed and edited the study protocol.
JR – Conceptualized the survey and study design, reviewed and edited the study protocol, supervision.
FB – Project administration and revision of the study protocol.
TG – Supervision.

Members of the European Study Group on Alcohol use and Covid-19 (ESAC) reviewed and approved the study protocol and contributed to the intellectual content of the project.

9. Funding
JR acknowledges funding from the Canadian Institutes of Health Research, Institute of Neurosciences, Mental Health and Addiction (Canadian Research Initiative in Substance Misuse Ontario Node grant number SMN-13950).

10. Conflicts of interests
CK – none for the work of this protocol.
JM – none for the work of this protocol.
JR – none for the work of this protocol.
FB – none for the work of this protocol.
TG – Grant from Novartis unrelated to the protocol.
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Although an independent initiative, the project findings will contribute to the DEEP SEAS service contract (Developing and Extending Evidence and Practice from the Standard European Alcohol Survey - www.deep-seas.eu) with the Consumers, Health, Agriculture and Food Executive Agency (Chafea) acting under the mandate from the European Commission (DG Santé). The information and views set out in this report are those of the authors and do not necessarily reflect the official opinion of the Commission/Chafea. The Commission/Chafea do not guarantee the accuracy of the data included in this study. Neither may the Commission/Chafea nor any person acting on the Commission’s/Chafea’s behalf be held responsible for the use which may be made of the information contained therein.

The authors would like to thank Astrid Otto, Kim Bloomfield and Amy O'Donnell for English copy-editing.
12. Appendix

Appendix A – List of available versions (status: 18th May 2020)

English
Albanian*
Catalan
Czech
Danish*
Dutch
Finnish*
French
German
Greek
Hungarian
Icelandic*
Irish (Republic of Ireland)*
Italian
Norwegian*
Polish
Portuguese
Russian
Slovak
Slovenian*
Spanish
Swedish*
Ukrainian

*These surveys started at a later date than 24th April 2020.
Appendix B – English survey

Instructions & Consent

Welcome to this brief survey of about 10 minutes on your personal experiences and drinking behaviour during the spread of SARS-CoV-2 (i.e., corona virus). The aim of this pan-European survey is to link your alcohol intake to experiences regarding the current SARS-CoV-2 pandemic. With the outbreak of SARS-CoV-2 in Europe, political actions by national governments led to changes in daily and public life in many places, including possible changes in alcohol consumption. Since the current pandemic is an unprecedented situation with hitherto unknown consequences for everyday life, this questionnaire investigates its implications particularly with regard to drinking.

This survey resulted from the collaboration of epidemiological scientists from multiple research institutes in Europe, including the Technische Universität Dresden (Germany) and the Hospital Clínic de Barcelona (Spain) [add the institution of the cooperation partner].

We are interested in capturing as wide a range of views as possible and would greatly appreciate your participation through this survey. For filling in the survey, it does not matter whether you currently drink or how much you drink alcohol. Please note that this survey includes personal questions, e.g. regarding your usual alcohol consumption or regarding the restrictions in place to contain the current pandemic.

Filling in the survey should take no more than 10 minutes of your time.

Your participation in the study is completely voluntary and you can refuse to respond to any questions or stop the survey altogether at any time. Your name or any other information that identify you as a person will not be recorded or associated in any way with your responses.

You may contact the principal investigator of the survey Jürgen Rehm by sending an email to juergen.rehm@tu-dresden.de. For questions concerning data protection, please contact the data protection officer of the Technische Universität Dresden Jens Syckor by sending an email to informationssicherheit@tu-dresden.de.

☐ Yes, I agree to participate
☐ No, I do not agree to participate

<p>| Sociodemographics |
|---|---|---|
| Please specify your gender. | ☐ 1 – Male | ☐ 2 – Female | ☐ 3 – Other |
| Please specify your age. | ________ years |
| Please specify the country where you currently live. | Austria | Greece | Portugal |
| | Albania | Hungary | Romania |
| | Belgium | Iceland | Russia |
| | Bosnia-Herzegovina | Ireland | Serbia |
| | Bulgaria | Italy | Slovakia |</p>
<table>
<thead>
<tr>
<th>Croatia</th>
<th>Latvia</th>
<th>Slovenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyprus</td>
<td>Lithuania</td>
<td>Spain</td>
</tr>
<tr>
<td>Czechia</td>
<td>Luxembourg</td>
<td>Sweden</td>
</tr>
<tr>
<td>Denmark</td>
<td>Malta</td>
<td>Switzerland</td>
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<tr>
<td>Estonia</td>
<td>Moldova</td>
<td>Turkey</td>
</tr>
<tr>
<td>Finland</td>
<td>Netherlands</td>
<td>Ukraine</td>
</tr>
<tr>
<td>France</td>
<td>Norway</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Germany</td>
<td>Poland</td>
<td>Other (please specify)</td>
</tr>
</tbody>
</table>

Please specify your monthly net household income before the outbreak of SARS-CoV-2 (i.e., corona virus).

<table>
<thead>
<tr>
<th>Income1</th>
</tr>
</thead>
<tbody>
<tr>
<td>499€ or less</td>
</tr>
<tr>
<td>500€ to 999€</td>
</tr>
<tr>
<td>1,000€ to 1,499€</td>
</tr>
<tr>
<td>1,500€ to 1,999€</td>
</tr>
<tr>
<td>2,000€ to 2,499€</td>
</tr>
<tr>
<td>2,500€ to 2,999€</td>
</tr>
<tr>
<td>3,000€ to 3,499€</td>
</tr>
</tbody>
</table>

Please specify the change in your monthly net household income since the outbreak of SARS-CoV-2 (i.e., corona virus) in your country.

<table>
<thead>
<tr>
<th>Income2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong increase (more than 50% increase)</td>
</tr>
<tr>
<td>Moderate increase (25% - 50% increase)</td>
</tr>
<tr>
<td>Small increase (below 25% increase)</td>
</tr>
<tr>
<td>No change</td>
</tr>
<tr>
<td>I do not know</td>
</tr>
<tr>
<td>I prefer not to answer</td>
</tr>
</tbody>
</table>

What is the highest school qualification you have completed?

<table>
<thead>
<tr>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
</tr>
<tr>
<td>High school</td>
</tr>
<tr>
<td>Any education beyond high school</td>
</tr>
<tr>
<td>I prefer not to answer</td>
</tr>
</tbody>
</table>
Which of these categories best describes the type of place where your main residence is located?

- A village or a farm
- A large city (more than 250,000, up to 1 million res.)
- A medium-size city (50,000 – 250,000 res.)
- A small city or town (below 50,000 res.)
- A very large city (over 1 million res.)
- A large city (more than 250,000, up to 1 million res.)

How many people are permanently living in your household, including yourself?

- ___ persons

13. AUDIT-C

The next questions are about how often you drank alcohol in the past 12 months and how much you drank usually on the days when you drank.

Examples for standard drinks

<table>
<thead>
<tr>
<th>1 standard drink</th>
<th>2 standard drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>One single measure (40% vol.), about 30 ml, e.g., Ron, Whisky</td>
<td>Two single measures or one double measure (40% vol.), about 60 ml, e.g., Ron, Whisky</td>
</tr>
<tr>
<td>A half glass or a small glass of wine (12% vol.), 125 ml</td>
<td>A regular glass of wine (12% vol.), about 250 ml</td>
</tr>
<tr>
<td>Half-pint of regular beer (5% vol.), about 250 ml</td>
<td>A pint of regular beer (5% vol.), about 500 ml</td>
</tr>
</tbody>
</table>

Code answers in terms of “standard drinks”. Please think of the past 12 months when answering the questions.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 How often did you have a drink containing alcohol in the past 12 months?</td>
<td>Never</td>
<td>Monthly or less</td>
<td>2-4 times per month</td>
<td>2-3 times per week</td>
<td>4+ times per week</td>
</tr>
<tr>
<td>2 How many standard drinks of alcohol did you drink on a typical day when you were drinking in the past 12 months?</td>
<td>1-2</td>
<td>3-4</td>
<td>5-6</td>
<td>7-9</td>
<td>10+</td>
</tr>
<tr>
<td>3 How often have you had 6 or more standard drinks of alcohol on a single occasion in the past 12 months?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
</tbody>
</table>
### 14. Perception of measures to contain the corona pandemic

With the outbreak of SARS-CoV-2 (i.e., the corona virus) in Europe, political actions by national governments led to changes in daily and public life in many places. We would like to know if and how you feel about the current circumstances. Thereby, we are interested in your personal perceptions, which may not necessarily correspond to the perception of other people or the media presentation.

We are interested in your personal perceptions, which may not necessarily correspond to the perception of other people or the media representations.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>To some degree</th>
<th>To a substantial degree</th>
<th>To a very high degree</th>
<th>I prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In the past month, did you perceive any restrictions of public life, which were implemented to contain the spread of SARS-CoV-2 (i.e., corona virus)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>2. In the past month, did you experience any restrictions of your everyday life as a result of measures implemented to contain the spread of SARS-CoV-2 (i.e., corona virus)? For example: staying home, not going to work, avoiding public places, cancelling trips or holidays</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>3. In the past month, have you or someone close to you (i.e., a spouse, relative or close friend) been diagnosed with the SARS-CoV-2 infection (i.e., corona virus)?</td>
<td>Yes</td>
<td>No</td>
<td>I do not know</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>4. In the past month, have you experienced any negative consequences concerning your occupational or financial situation in relation to the spread of SARS-CoV-2 (i.e., corona virus)? For example: taking obligatory holidays, reduced hours of work,</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>
16. Change in alcohol consumption

The next questions are about changes in your drinking that you may have perceived in the past month. 

[Note: Only displayed if respondents consumed alcohol during the past 12 months and if they perceived restrictions since SARS-CoV-2 outbreak.]

Please think of the past month.

<table>
<thead>
<tr>
<th>Change in alcohol consumption</th>
<th>Drink much less often/ Drink much less</th>
<th>Drink slightly less often/ Drink slightly less</th>
<th>No change</th>
<th>Drink slightly more often/ Drink slightly more</th>
<th>Drink much more often/ Drink much more</th>
<th>I prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you drink alcohol less or more often in the past month?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Did your usual consumption per occasion (i.e. the volume of alcohol consumed) change in the past month?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Did the frequency of drinking occasions where you consume a high amount of alcohol (i.e., 6 or more drinks) change in the past month?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Are you content with the changes in your alcohol consumption in the past month?</td>
<td>Yes</td>
<td>No</td>
<td>I prefer not to answer</td>
<td>change4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Change in the use of other substances

The next questions are about your use of substances other than alcohol and the changes in your substance.
use that you may have noticed in the past month.

[Note: Only displayed if they perceived restrictions since SARS-CoV-2 outbreak.]

Please think of the past month.

<table>
<thead>
<tr>
<th></th>
<th>Much less often</th>
<th>Slightly less often</th>
<th>No change</th>
<th>Slightly more often</th>
<th>Much more often</th>
<th>I do not smoke / I do not consume cannabis / I do not consume illegal drugs</th>
<th>I prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Did you smoke less or more often in the past month?</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td><strong>2 Did you consume cannabis less or more often in the past month?</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td><strong>3 Did you consume illegal drugs (except cannabis) less or more often in the past month?</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>

Thank you for your participation!

Please let us know if you have any comments or feedback on the survey:

[Free text space]
Forschungsprojekt „SARS-CoV-2 PANDEMIE UND AUCH CHOLESTASIS“

Sehr geehrter Herr Prof. Rehm,

nach Prüfung des Sachverhaltes möchte ich Ihnen mitteilen, dass aus Sicht des Datenschutzes keine Einwände gegen die Durchführung des Forschungsprojektes in der vorgestellten Form bestehen, da es hier n.m. in keinem Fall zu einer Verarbeitung personenbezogener Daten i.S.d. Art. 4 Abs. 1 DS-GVO1 durch die o.g. Forschungsstelle kommt. Ich betrachte Erwägungsgrund Nr. 26 DSGVO i.d.S. für einschlägig und datenschutzrechtliche Bestimmungen kommen n.m.A. nicht zur Anwendung.

Mit freundlichen Grüßen
Matthias Herber
i.A.
stellv. Datenschutzbeauftragter der TU Dresden

1 VERORDNUNG (EU) 2016/679 DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 27. April 2016 zum Schutz natürlicher Personen bei der Verarbeitung personenbezogener Daten, zum freien Datenverkehr und zur Aufhebung der Richtlinie 95/46/EG (Datenschutz-Grundverordnung)