

Differences and similarities between the impact of the first and the second COVID-19-lockdown on mental health and safety behaviour in Germany

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ABSTRACT

Background Governmental restrictions of daily life are key elements in reducing the transmission of COVID-19, but they have also put a strain on people's mental health. Preventive policies differ all over the world as well as over different periods of time, and depend mostly on current infection rates. In Germany, there were two periods of restraint of varying severity, during which the government used different combinations of containment and mitigation measures to protect risk groups and to lower the number of hospitalizations.

Methods In two online studies, we aimed to determine differences and similarities in COVID-19-related fear, generalized anxiety, depression and distress levels, as well as in the adherence to safety behaviour between the first lockdown in March and April and the second lockdown in November.

Results This study showed continued high psychological burden and even increased levels of depression symptoms, as well as less safety behaviour in the second phase of restrictions.

Conclusions The results hint at a prolonged negative impact on people's mental health and their safety behaviour despite lesser restrictions in the second lockdown, which may be interpreted as pandemic fatigue and hence strengthens the argument for a low-threshold access to psychological care.

Keywords COVID-19, lockdown, pandemic fatigue, mental health, depression

Introduction

The outbreak of the COVID-19 pandemic crucially defined the year 2020. To reduce the transmission of this now infamous strain of corona viruses, many countries announced preventive policies. These 'non-pharmaceutical interventions' (NPIs) varied between countries and had different effects on the spread of the virus.¹ In Germany, the first educational institutions were closed on Friday, 13 March 2020. Two days later, German borders were partially closed, followed by a contact ban prohibiting gatherings of more than two people in public spaces on 22 March. This abrupt and unprecedented 'lockdown' was deemed necessary to protect risk groups and avoid capacity overload in hospitals.² Thus, everyday life changed massively: many parents had to provide home schooling while simultaneously working from

home, whereas sports and cultural facilities, department stores and restaurants were closed. Visits in hospitals and nursing

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homes were prohibited and visits to friends and families were strongly discouraged. These measures had a strong impact, not only on public life and the economic development, but also on people's mental health.^{3,4} Recent research suggests increased prevalence of generalized anxiety, depression symptoms, psychological distress and COVID-19-related fear in the German population during the first lockdown^{5,6} with a peak 1 day after the announcement of the lockdown.⁷

After the expected drop in infection numbers at higher temperatures,⁸ a majority of the restrictions were gradually removed until late summer 2020. During the July and August holiday season, the infection rate slowly increased again, rapidly peaking in October. Instead of a complete second lockdown, the German government opted for a set of less rigorous strategies in mid-October aiming to reduce the negative impact on the country's educational and economic activity. As infection numbers increased, governmental authorities reacted with further restrictions, commonly called 'lockdown-light', including travel prohibitions, contact bans regarding gatherings of >10 people from a maximum of two different households in public spaces, and the closure of public institutions such as cultural and sports facilities. In contrast to the first lockdown in March and April, wholesale and retail sectors, as well as schools and child day-care facilities remained open in October and November. These efforts have left Germany's economy visibly less unsettled.⁹ Also, less strain was imposed on peoples' everyday life and functioning.

Hence compared to the first lockdown, peoples' mental health should potentially suffer less from fewer psychological burdens, i.e. from less overall uncertainty and economic stress, while experiencing higher levels of social buffering. With these proposed lower levels of fear, anxiety, depression and stress during the second lockdown, a feeling of putative security may lead to a decrease in adherent and dysfunctional safety behaviours, such as those recommended by the WHO.¹⁰

Methods

To test these assumptions, this study compared data from two cross-sectional studies collected in Germany. The surveys had comparable sets of items and were used to capture the critical and acute periods from 15 March to 4 April and from 2 November to 22 November. For the presented analyses, data were used from each respondent completing the survey within the first 20 days of each lockdown. Respondents indicated their subjective levels of COVID-19-related fear, generalized anxiety (GAD-7),^{11,12} depression (PHQ-2),¹³ distress (Distress Thermometer),¹⁴ adherent and dysfunctional safety behaviour. Adherent safety behaviour includes more

frequent handwashing, disinfectant use and measures to avoid an infection with COVID-19, whereas dysfunctional safety behaviour includes buying more hygiene products, canned foods and groceries with the intention to store them for a longer time.¹⁰ We applied multiple robust regressions to compute and evaluate differences between the first and the second lockdown, while also controlling for different distributions of gender, age, community size, education and presence of a mental disease.

Results

Figure 1 illustrates the marginal differences in the regression models. Contrary to our initial hypotheses, depression symptoms increased during the 'lockdown-light' in November. In a similar fashion, neither generalized anxiety, distress nor COVID-19-related fear increased or decreased. Yet, in line with our assumptions, prevalence of adherent safety behaviour as well as dysfunctional safety behaviour was significantly lower.

Conclusions

This study showed continued high psychological burden, rising depression symptoms and less safety behaviour in the second lockdown despite lesser restrictions. Possible reasons for such developments are manifold and any mechanistic explanation would need direct causal evidence. One factor influencing these results may be the onset of 'pandemic fatigue', describing general mental exhaustion with pandemic ongoings and demotivation to follow recommended safety behaviours.¹⁵ This phenomenon may act as a destructive counteraction to governmental efforts to 'flatten the curve', i.e. reducing the spread of infections, which relies heavily on public adherence to restrictions. An explanation for the results could be paucity of positive reinforcement: People were more precluded from social contacts and sports compared to the summer following the first lockdown, which possibly provided a sense of relief and reward for the restraint shown in March and April.

Recent economic history may corroborate such a pattern: The economic repercussions of the COVID-19 crisis were still clearly evident in the German stock index DAX until June 2020.⁹ Although the government was beginning to loosen restrictions, economic insecurity continued until mid-summer. Such economic shocks have been shown to easily protract over longer periods of time.^{16,17} Here, a bidirectional effect may be possible: Increasing fear may influence consumption behaviour negatively and economic

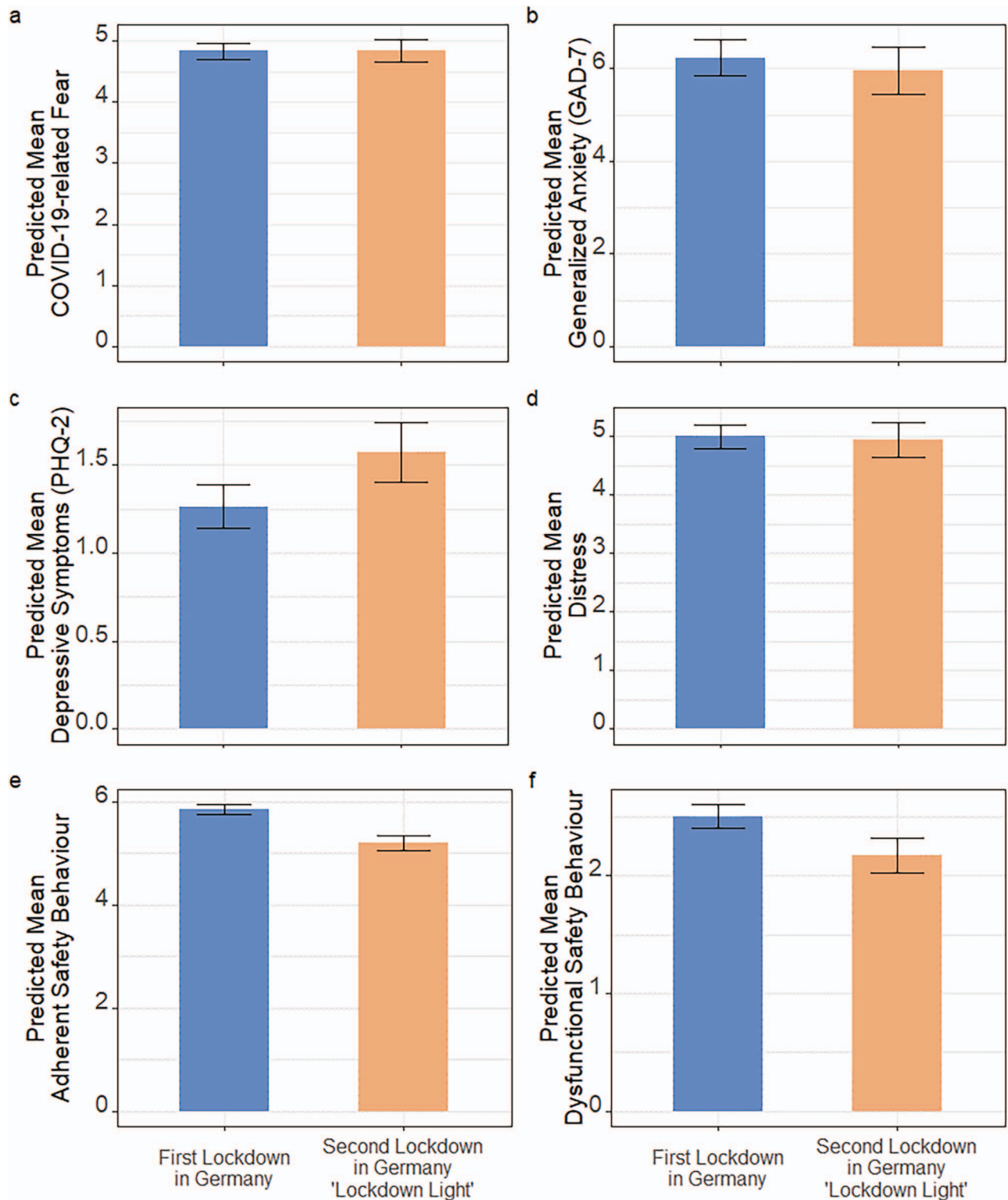


Fig. 1 Results of the impact of the spread of COVID-19 on mental health and safety behaviour during the first and the second lockdown in Germany. Self-reported levels of (a) COVID-19-related fear (1 self-generated item, 7-point-likert-scale), (b) anxiety measured by GAD-7 (Generalized Anxiety Disorder-7, 7 items, 4-point Likert Scale from 0 = never to 3 = nearly every day), (c) depression using PHQ-2 (Patient health Questionnaire-2, 2 items on a 4-point Likert Scale from 0 = never to 3 = nearly every day), (d) distress using DT (distress thermometer, visual analogue scale from 0 = no distress to 10 = extreme distress), (e) adherent safety behaviour and (f) dysfunctional safety behaviour using self-generated Likert-type items on a 7-pointlikert scale. Bars represent the predicted marginal means. Error bars represent robust 95% CIs. Overall 7288 respondents participated.

insecurity may add to COVID-19-fear resulting in continuing high anxiety symptoms in the population.¹⁸

In conclusion, this study shows increased depression symptoms and continued high psychological burden despite lesser restrictions in November. It also shows less safety behaviour despite higher infection rates. Hence, the question arises if the results promote more severe restrictions in times of a global pandemic. Besides, providing psychological emergency infrastructure for people suffering from the ongoing pandemic—especially those already burdened with mental health issues—remains crucial. As the crisis continues, further research may deliver insight to containing the spread of the disease by better understanding the reasons for decreased safety behaviour and finding ways to motivate people to adhere to recommended behaviours.

Acknowledgements

This study was supported by the Essen University Medicine Foundation. The funder had no role in the design and conduct of the study; management, collection, analysis, and interpretation of the data; preparation, review or approval of the manuscript; and decision to submit the manuscript for publication.

Conflict of interest

None declared.

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