The Effects of Organizational Climate on Adherence to Guidelines for COVID-19

Prevention and Organizational Identification: A Three-Wave Study

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Abstract

During the current pandemic, it is essential that people follow the COVID-19 guidelines (e.g., physical distancing). Organizations substantially affect their employees' behavior in a wide range of areas, but can they also affect how strictly employees adhere to COVID-19 guidelines? To answer this question, the present study examined the impact of an *organizational climate for preventing infectious diseases* (OCID) on employees' adherence to COVID-19 guidelines both at work and in their private life. Using a three-wave longitudinal online survey with $N = 304$ UK based workers, our results show that OCID during the lockdown in April 2020 (T2) was positively linked to adherence to COVID-19 guidelines at work one month later (T3). We also found a relationship between OCID (T2) and adherence in one's private life (T3) that was fully mediated through adherence at work (T3). Furthermore, we found that a pre-pandemic health climate (T1) was positively linked to our novel measure of organizational climate (T2). Finally, our study revealed that OCID (T2) and a pre-pandemic health climate (T1) contribute to stronger organizational and team identification (T3). These results highlight the key role organizations play in mitigating the current pandemic.

Keywords: organizational climate, COVID-19 prevention, organizational identification, work to private spillover, health behavior

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Until a vaccine becomes available, public health measures and adherence to COVID-19 guidelines (particularly physical distancing and hygiene routines) are of utmost importance to prevent the spreading of the new coronavirus (SARS-CoV-2) (Cowling & Aiello, 2020; Gibson Miller et al., 2020; Van Bavel et al., 2020; West et al., 2020; Wilder-Smith & Freedman, 2020). While politicians and media are considered to be crucial factors to communicate health measures and promote effective behavior (McCloskey & Heymann, 2020; Van Bavel et al., 2020; West et al., 2020; Wilder-Smith & Freedman, 2020), little is known about the impact organizations could have on their employees' adherence to the COVID-19 guidelines. In reaction to the pandemic, organizations had to adapt quickly to the novel situation by changing their policies and work routines (Nicola et al., 2020). But what is the impact of organizations on their employees' behavior in the time of the COVID-19 pandemic? Can organizations affect their employees' adherence to COVID-19 guidelines both at work and in their private life, and can organizations that react effectively to the pandemic foster a stronger bond with their employees?

The present study aimed to answer these questions using a longitudinal design with three waves of measurement, one of which was pre-pandemic. We introduce the new construct of organizational climate for preventing infectious diseases (OCID), which is defined as employees' shared perceptions of organizational efforts to prevent the spreading of the new coronavirus. Previous literature has shown that organizational climate is a useful framework to understand how organizational measures can alter individual behavior (Griffin & Curcuruto, 2016; Kuenzi & Schminke, 2009; Schneider et al., 2013). Building on this line of research, we hypothesized that OCID is positively related to employees' adherence to COVID-19 guidelines both at work

and in private. Additionally, we investigated antecedences (pre-pandemic organizational health climate) and further consequences (organizational identification and team identification) of OCID.

What We can Learn from Organizational Climate Research and Why it Should Matter During the Pandemic

Organizational climate is a key attribute of organizations (Glick, 1985), defined as "shared perceptions of and the meaning attached to the policies, practices, and procedures employees experience and the behaviors they observe getting rewarded and that are supported and expected" (Schneider et al., 2013, p. 362). Climate is linked to and shaped by specific measures (e.g., management practices) that organizations take to evoke desired behavior in their employees (Schneider et al., 2013). According to *signaling theory* (Connelly et al., 2011), such measures can signal to employees that their organization values certain types of behavior. *Social exchange theory* (Emerson, 1976) proposes that employees who perceive certain behaviors as being valued by their organization are more likely to adopt or maintain such behaviors as they expect a positive social return (i.e., reward) (Baran et al., 2012; Schulz et al., 2017).

Previous research confirms the impact of organizational climate on behavioral outcomes, such as safety behavior (Clarke, 2006; Griffin & Curcuruto, 2016; Zohar & Luria, 2005) and health (Loh et al., 2019; Schulz et al., 2017; Sonnentag & Pundt, 2016). Studies in hospitals also found that organizational climate can prevent the spread of infectious diseases (Larson et al., 2000; Moore et al., 2005; Rozenbojm et al., 2015). These results provide evidence for the idea that organizations can alter their employees' behavior through climate, and it hence seems reasonable to suggest that these effects of organizational climate also apply to behavior during the current COVID-19 pandemic.

However, for several reasons, previous studies on organizational climate have not covered the scope of the current situation. First, this is the first time that almost every organization has been required to develop a climate that not only affects their very specific job-related forms of behavior, for example, safety, but is vital to maintain business or to reopen after the shutdown ends (Nicola et al., 2020). Second, during the current pandemic, the desired outcome behavior is the same for every form of organization, meaning that international guidelines and national regulations apply to all organizations. Individual behavior of employees can thus be measured by independent, international, and concrete standards. This is important as specific individual outcomes are understudied in organizational climate research (Kuenzi & Schminke, 2009). Third, previous studies on preventing infectious diseases have exclusively focused on single types of behavior like wearing face protection or handwashing (Larson et al., 2000; Moore et al., 2005; Rozenbojm et al., 2015). As informational, social, and individual processes are crucial in the current situation, the ongoing pandemic demands more fundamental changes in several domains of behavior, for example, everyday social interactions (Van Bavel et al., 2020; West et al., 2020).

Examining the effects of organizational climate on employees' behavior during the pandemic allows existing models to be tested and new conclusions to be drawn in organizational psychology (Rudolph et al., 2020). Specifically, it can help to better understand how organizations and, in particular, organizational climate can be a health promoting factor for employees, and in terms of 'flattening the curves' for society as a whole. The COVID-19 pandemic is probably the most publicly (and globally) recognized event in the last decades. In most countries there are ubiquitous reminders of behavioral guidelines (e.g., signs, media messages) and therefore we might expect that awareness of the public guidelines is already very

strong (Park et al., 2020). Hence, to test whether an organizational climate that values safety and support in times of the pandemic has an impact beyond the ubiquitous reminders represents a very strong test of organizational climate.

To address these issues, we developed a new construct of an organizational climate for preventing infectious diseases (OCID). This new measure includes aspects of safety climate, communication processes, instrumental support, and management decisions. We assessed the lagged effects of OCID on adherence to COVID-19 guidelines of employees at work and in private life. During the current pandemic, organizations might encourage their employees to follow COVID-19 guidelines when they signal a perceptible effort and the importance in preventing the coronavirus through organizational measures (Connelly et al., 2011; Törner, 2011). Employees might not only strive towards the desired prevention behavior because their behavior is valued by others but, moreover, because they expect a positive (social) return by their organization (Baran et al., 2012; Emerson, 1976; Schulz et al., 2017). Building on these arguments, we predicted OCID to be positively related to COVID-19 prevention behavior at the workplace and hypothesize:

H1: OCID predicts employees' adherence to the COVID-19 guidelines at work.

Can OCID Generalize to Behavior in Private Life?

A further important limitation of organizational climate research is that it typically focuses on behavior at the workplace and often neglects the impact of organizational climate on behavior outside the organization's boundaries (for exceptions, see below). But, for many health related behaviors and especially during the coronavirus-pandemic, behavioral changes in all domains of life are essential (Van Bavel et al., 2020; West et al., 2020). A few studies from different fields of organizational climate research provide preliminary evidence for spillover

effects from work climate to safety (Naveh & Katz-Navon, 2015; Wu et al., 2017), health (Sonnentag & Pundt, 2016) and pro-environmental behavior outside work (Hicklenton et al., 2019). However, it has to be noted that the design of all earlier studies was either cross-sectional (Hicklenton et al., 2019; Sonnentag & Pundt, 2016; Wu et al., 2017) or spillover effects were reported in retrospective after one year (Naveh & Katz-Navon, 2015). More importantly, previous literature has not investigated whether spillover effects from organizational climate to private life behavior were mediated through behavior at work. Previous theoretical work emphasizes that work and private behavior are interconnected through certain habits, scripts and styles (Edwards & Rothbard, 2000). Hence, it is plausible that during the pandemic certain behaviors that are fostered at the workplace (e.g., regular handwashing due to signs in the bathroom) turn into habits or scripts and, thus, are transferred into one's private life. Therefore, we applied a lagged design to investigate an indirect effect of OCID to adherence to COVID-19 guidelines in employees' private life through adherence to COVID-19 guidelines at the workplace and hypothesized:

H2: OCID is indirectly related to adherence to COVID-19 guidelines in the private life of employees through the adherence to COVID-19 guidelines at work.

Antecedences of OCID

While organizations have multiple climates that exist simultaneously, there is little research and theory on the issue of multiple climates and their interplay (Kuenzi & Schminke, 2009; Schneider et al., 2013). In the current situation, it would be essential to know whether other types of organizational health climate that existed prior to the current pandemic could have promoted the implementation of an effective OCID – a specific climate that has never been implemented before. If organizations had already established a health-promoting climate in

advance to the outbreak of the pandemic, they might be more aware of the importance of employees' health and the role of the organization to promote it, and thus, may be more inclined to implement an effective OCID (Kuenzi & Schminke, 2009; Schneider et al., 2013). Moreover, following our previous reasoning on climate, signaling theory, and social exchange theory, it is conceivable that a pre-pandemic health climate signaled the value of health to employees and, therefore, the employees were more likely to recognize and respond to a newly implemented climate (Connelly et al., 2011; Emerson, 1976; Schulz et al., 2017; Törner, 2011). Both arguments point towards a positive effect that a pre-pandemic health climate has on the climate of preventing infectious diseases. In the present study we used the construct of *Organizational Health Behavior Climate* (OHBC; (Sonnentag & Pundt, 2016) to examine a pre-pandemic health climate. OHBC offers a measurement of the "shared perceptions of an organization's approach to employee health behaviors" (Sonnentag & Pundt, 2016, p. 261). In conclusion, we hypothesize:

H3: The level of pre-pandemic health behavior climate is positively related to the level of OCID during the coronavirus pandemic.

Affective Consequences of OCID

Research on organizational climate typically focuses on the relationship between climate and the target behavior, while neglecting further consequences or 'side effects' of organizational climate (Kuenzi & Schminke, 2009). Therefore, in most cases, organizational climate literature does not investigate possible affective outcomes. Although the potential link between organizational climate and organizational identification was proposed a long time ago (Ashforth & Mael, 1989), the link between these two constructs has largely escaped the attention of researchers. Organizational identification reflects the degree to which employees perceive themselves as belonging to and define the self as a part of an organization (Ashforth & Mael,

1989; Haslam & Ellemers, 2006). When people share a group membership, they strive and behave in line with it (Haslam et al., 2009). During the coronavirus pandemic, high organizational identification could help organizations overcome hindrances and master challenges (Van Knippenberg, 2000) and additionally foster mental and physical health during the current pandemic (Jetten et al., 2012, 2020; Steffens et al., 2017). There are a few reported positive effects of communication climate (Bartels et al., 2007), ethical climate (DeConinck, 2011; Pagliaro et al., 2018; Teresi et al., 2019) as well as a diversity climate (Hofhuis et al., 2012) on organizational identification. However, these studies are sparse and are limited by their cross-sectional nature. As a consequence, we currently have no comprehensive understanding of how organizational climate and organizational identification are interconnected. In the present study, we used a lagged design to examine whether OCID is related to organizational identification and team identification. Furthermore, as proposed by Sonnentag and Pundt (2016), we also investigated whether a (pre-pandemic) health climate (OHBC) shows effects on organizational identification. Building on preliminary findings showing a positive link between organizational climate and organizational identification (DeConinck, 2011; Hofhuis et al., 2012; Pagliaro et al., 2018; Teresi et al., 2019), we hypothesize:

H4a: OCID predicts organizational identification.

H4b: A pre-pandemic health climate predicts organizational identification.

Moreover, we assume that the positive relationship between organizational climate and identification will also be evident on a team level. Preliminary evidence shows a promising link between these constructs (Bartels et al., 2007; M.-Y. Cheng & Wang, 2015; Hofhuis et al., 2016; Tangirala & Ramanujam, 2008). We hypothesize:

H5a: OCID predicts the level of team identification.

H5b: A pre-pandemic health climate predicts the level of team identification.

Present Study

The present study advances the literature on organizational climate in several important ways. First, we introduce a new type of organizational climate, the *organizational climate for preventing infectious diseases*. Second, we put a special emphasis on the understudied subject of climate spillover effects. That is, we examine the transmission of desired behavior at work to desired behavior in private life. Third, we examine whether an existing health climate contributes to the development of a new organizational health-related climate. Fourth, we examine the interplay between organizational climate and organizational and team identification.

Method

Sample and Procedure

We recruited our sample via Prolific (www.prolific.co), a UK-based participant panel provider for recruiting participants for behavioral research (Palan & Schitter, 2018). Sampling was restricted to the pool of employees living in the UK. The survey was administered via the online survey tool SoSci Survey (Leiner, 2019). Inclusion criteria were (a) working at least part-time (19.5 hours per week), and (b) working for an organization or comparable institutions. The study consisted of three waves. The first wave (T1) took place on January 24th, 2020, several weeks before the pandemic reached the UK. Four hundred participants were recruited. The second wave (T2) was conducted between April 20th and 25th, 2020 ($N = 343$) after the pandemic hit the UK, and while coronavirus-related lockdown regulations were in effect to slow down the spread of the virus. The third wave (T3) was conducted between May 18th and 22nd, 2020, one week after the partial relaxation of the lockdown.

For our final analyses, we included only participants who took part in all three waves and fulfilled our pre-screening criteria ($N = 304$). There was no evidence for attrition bias regarding sex, age, or income. The final sample included 181 female (59.5 %), 121 male (39.8 %) and 2 diverse (0.7 %) participants. Mean age was 41.44 ($SD = 11.67$) years. Participants worked for an average of 34.19 hours per week ($SD = 10.27$).

Measures

Organizational Climate for Preventing Infectious Diseases

We developed a new seven-item measure to assess the organizational climate for preventing the spread of the new coronavirus (see Appendix A for the questionnaire). We adapted existing scales (Zohar & Luria, 2005) to coronavirus-specific measures on a six-point scale (e.g., “My organization offers support and provides me with equipment to deal with the circumstances resulting from the coronavirus pandemic.”, 1 = *absolutely not true*, 6 = *absolutely true*). A Confirmatory Factor Analysis (CFA) found a one-factorial structure that provided a good fit to the data ($N = 304$; $\chi^2 = 1390.220$, $df = 21$, $p < .001$, Comparative Fit Index (CFI) = .99, Root mean square error of approximation (RMSEA) = .044, Standardized root mean square residual (SRMR) = .024, $\alpha = .91$). OCID was assessed both at the second and the third wave of measurement (please keep in mind that the first wave was conducted in January 2020, that is, several weeks before the pandemic reached the UK).

Adherence to COVID-19 Guidelines

Building on the WHO guidelines (World Health Organization, 2020), we asked participants both at the second and third wave to indicate how strictly they adhered to the COVID-19 guidelines at work ($\alpha = .79$, e.g., “I do everything to reduce health risks for my co-workers”, see Appendix B) and in their private life ($\alpha = .83$, e.g., “I reduce social contacts in

private to the bare minimum”, see Appendix C). Both measures used a five-point Likert scale (1 = *much less than I should*, 5 = *as often as I should*).

Pre-Lockdown Organizational Health Behavior Climate

To assess the health-related organizational climate prior to the pandemic, we used the construct of organizational health behavior climate (OHBC). At the first wave, participants reported OHBC using all 24 items from Sonnentag and Pundt’s (2016) questionnaire (e.g., “Management in this organization shows an interest in healthy nutrition”; 1 = *absolutely not true*, 6 = *absolutely true*; $\alpha = .87$).

Organizational and Team Identification

Organizational identification (e.g., “I identify myself with my organization”) and team identification (e.g., “I feel committed to my work team”) were assessed with four questions on a seven-point scale (1 = *strongly disagree*, 7 = *strongly agree*) (Postmes et al., 2013). Both scales showed very good internal consistency (organizational identification: $\alpha = .96$; team identification: $\alpha = .94$).

Results

We used the lavaan package (Rosseel, 2012) in R (R Core Team, 2020) to conduct a path analysis for testing all hypotheses in one simultaneous model. T2-OCID was used to predict adherence to T3-COVID-19 guidelines at work (Hypothesis 1). Additionally, the indirect effect of T2-OCID on T3-adherence to guidelines in employees’ private life through T3-adherence at work (Hypothesis 2) was tested. T1-OHBC was tested as a predictor of T2-OCID (Hypothesis 3). Finally, T1-OHBC and T2-OCID were used to predict T3-organizational identification (Hypothesis 4a and 4b) and T3-team identification (Hypothesis 5a and 5b). All hypotheses were

tested at $p < .05$ (one-tailed). We report unstandardized coefficients. Correlations means and standard deviations of all study variables are displayed in Table 1.

Hypothesis Testing

Overall, our model provided a good fit to the data ($N = 304$; $\chi^2 = 555.517$, $df = 15$, $p < .001$, CFI = .98, RMSEA = .078, SRMR = .061. Table 2 presents the results of the path analysis. First, T2-OCID turned out to be predictive for T3-adherence to COVID-19 guidelines at work ($B = .12$, $SE = .03$, $p < .001$), hence supporting Hypothesis 1.

Second, we hypothesized an indirect effect of T2-OCID on T3-adherence to COVID-19 guidelines in private life through T3-adherence at work (Hypothesis 2). We tested the significance of the indirect effect using bootstrapping. Unstandardized indirect effects were computed for each of the 5,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardized indirect effect was .07 [95% CI: .04; .11], suggesting that the indirect effect was statistically significant and robust ($p < .001$) and, hence, supports Hypothesis 2. As predicted, T2-OCID was positively related to T3-adherence to COVID-19 guidelines at work, which in turn showed a positive relationship with T3-adherence to COVID-19 guidelines in employees' private life ($B = .59$, $SE = 0.07$, $p < .001$).

Third, we tested all hypotheses concerning further consequences and antecedences of organizational climate. Supporting Hypothesis 3, T1-OHBC was positively related to T2-OCID ($B = .48$, $SE = .05$, $p < .001$). Moreover, we found evidence that T2-OCID was positively related to both T3-organizational identification ($B = .73$, $SE = .08$, $p < .001$) and T3-team identification ($B = .53$, $SE = .08$, $p < .001$), supporting Hypothesis 4a and 5a. Similar effects were found for the relationship of T1-OHBC on T3-organizational identification ($B = .29$, $SE = .08$, $p < .001$) and

T3-team identification ($B = .15$, $SE = .07$, $p = .038$), thus supporting Hypothesis 4b and 5b.

Figure 1 presents all standardized coefficients of all our estimated paths.

Discussion

The present three-wave longitudinal study aimed to investigate the effects of an organizational climate that values safety and support in times of the pandemic on employees' adherence to COVID-19 guidelines both at work and in their private life. Furthermore, we examined whether such an organizational climate is linked to a pre-pandemic health climate as an antecedent and to organizational and team identification as a consequence. In order to test our hypotheses, we developed a novel instrument to measure organizational climate for preventing infectious diseases (OCID).

As predicted, OCID during the lockdown was related to a stricter adherence to COVID-19 guidelines at the workplace one week after the easing of the lockdown, thereby confirming Hypothesis 1. Furthermore, a mediation analysis provided evidence for Hypothesis 2, suggesting an indirect effect of OCID on adherence in private life through adherence at work. We also found that pre-pandemic organizational health behavior climate was positively related to OCID, thereby confirming Hypothesis 3. Finally, there is evidence for a positive relationship between OCID and OHBC with both organizational and team identification confirming Hypotheses 4a, 4b, 5a, and 5b.

Implications for our Understanding of Organizational Climate

Our results provide four important contributions to our understanding of organizational climate. First, by showing that organizational climate can make a difference in promoting adherence to COVID-19 guidelines, we advance organizational climate literature with a novel form of health climate. As argued before, the current pandemic can be considered a strong (i.e.,

conservative) test of the effects of organizational climate because reminders to adhere to COVID-19 guidelines are ubiquitous in everyday life.

Second, among a few other studies (Hicklenton et al., 2019; Naveh & Katz-Navon, 2015; Sonnentag & Pundt, 2016; Wu et al., 2017), our research goes one step further by investigating the impact of organizational climate not only on behavior at the workplace but also in one's private life. We observed a longitudinal spillover effect from OCID on adherence to COVID guidelines in employees' private life that was mediated by adherence to COVID guidelines at the workplace. This strengthens the assumption that organizational climate can spillover to private life and shows that organizations can positively influence the health behavior of their employees in their private life.

Third, supporting our notion that a pre-pandemic organizational health climate is linked to OCID, we extend previous research on multiple climate effects (Kuenzi & Schminke, 2009). Our findings imply that, besides general positive effects on health (Sonnentag & Pundt, 2016), investing in an effective organizational health climate can pay-off as organizations can somehow prepare themselves when they need to implement a new and related climate. Previous literature indicates that certain climates function as so called "foundation climates" meaning that when workers perceive that their organization is concerned about their well-being, they are more open to the efforts of management to focus on strategic outcomes (Schneider et al., 2013). Our current results are perfectly in line with this notion. In the current situation a pre-pandemic health climate could have functioned as some form of foundation climate meaning that OHBC was somehow a requirement to be in place for OCID to emerge more strongly.

Fourth, to the best of our knowledge, our study is the first to investigate the effect of organizational climate on organizational identification using a lagged multi-wave study design.

As predicted, we found that OCID and OHBC were both positively related to organizational and team identification. Hence, organizational climate can have a sustainable positive effect on affective outcomes and strengthen a special bond between employees and leaders (Steffens et al., 2014) and also provide an additional resource to strengthen health outcomes at work (Haslam et al., 2018; Steffens et al., 2019). Since we investigated this link between two different forms of health climate and two different forms of identification, our results show that investing in a health-climate in organizations could have positive effects beyond promotion of the desired health-related outcome. Previous research has already linked organizational climate with organizational commitment and job satisfaction (Ernsting et al., 2013; Zacher & Yang, 2016), but our strong effects should encourage future research to examine affective outcomes of organizational climate through a social identity lens.

Limitations and Directions for Future Research

Although our study provides important new insights, there are some limitations and avenues for future research that should be discussed. First of all, adherence to COVID-19 guidelines was only measured using self-reports, and, hence, cannot be underpinned with more objective data. Although there is preliminary yet non-published evidence showing a good validity of self-report measures in terms of high correspondence with actual behavior (Gollwitzer et al., 2020), future research should assess adherence to COVID-19 guidelines more objectively, for example, by measuring the used amount of disinfectants or using smartphone data for tracking movement and social contact during a lockdown (Huckins et al., 2020). Moreover, whether participants did or did not wear a face-mask was not part of our initial survey as in the early stages wearing a face mask was not part of official COVID-19 guidelines (Greenhalgh et

al., 2020; Worby & Chang, 2020). Hence, future research should also include wearing a face mask as an item when investigating adherence to COVID-19 guidelines.

Another potential limitation of our study is that our survey was conducted in the UK only in a particular time frame in a dynamically changing global crisis. For example, it would be interesting to test whether our results would generalize to a Swedish sample since as, compared to the UK and many other countries, Sweden took a much more relaxed approach to public restrictions in the COVID-19 fight.

Practical Implications During the Current COVID-19 Pandemic

The key practical implication of our study is that organizations can positively influence their employees' adherence to COVID-19 guidelines when they create an OCID that effectively integrates aspects of information and communication, providing equipment, and management values. Hence, organizations should see themselves as a vital part in preventing the coronavirus from spreading and therefore protecting society, saving lives and maintaining business. Our results should encourage organizations to implement a health climate during the pandemic as this could a) help them to prepare to implement further health promoting climates in the future and b) strengthens the identity of their employees, which has positive effects on health per se (Jetten et al., 2012, 2020; Steffens et al., 2017) but also team-climate (C. Cheng et al., 2016), job-satisfaction and turnover intentions (Van Dick et al., 2004).

Conclusion

The ongoing pandemic is a crisis with medical, economical and psychological dimensions (Zacher & Rudolph, 2020). Our results show that an organizational climate for preventing diseases matters during the current pandemic. The way in which employees perceive their organization affects how closely they adhere to the COVID-19 guidelines both at work and

in their private life. Our results should spur organizations to see themselves as a vital part in fighting the current pandemic and encourage them to take action as their efforts might not only affect the health of their employees but also strengthen affective outcomes.

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Table 1

Means, Standard Deviations, and Correlations with Confidence Intervals for all Measured Constructs.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. T2 – OCID	4.48	1.07					
2. T3 – adherence to COVID-19 guidelines at work	4.52	0.48	.22** [.11, .33]				
3. T3 – adherence to COVID-19 guidelines in private life	4.37	0.47	.18** [.07, .29]	.59** [.51, .66]			
4. T3 – Organizational identification	5.02	1.56	.59** [.52, .66]	.24** [.13, .34]	.20** [.09, .31]		
5. T3 – Team identification	5.43	1.31	.47** [.38, .56]	.22** [.10, .33]	.26** [.15, .37]	.75** [.69, .80]	
6. T1 – OHBC	2.71	1.01	.43** [.33, .52]	.07 [-.04, .18]	.04 [-.07, .16]	.40** [.30, .49]	.31** [.20, .42]

Note. T1 represents the first wave of our study from the 24th to 29th of January 2020, T2 represents the second wave of our study from the 20th to 25th of April 2020, T3 represents the third wave of our study from the 18th to the 22nd of May 2020. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. * indicates $p < .05$. ** indicates $p < .01$.

Table 2*Results of Path Analysis*

Model Path	<i>B</i>	<i>SE</i>	β	β 95% CI [LL, UL]
A. T1 – OHBC → T2 – OCID	0.48***	0.05	0.46	[0.38, 0.59]
B. T2 – OCID → T3 – Adherence to COVID-19 guidelines at work	0.12***	0.03	0.28	[0.06, 0.18]
C. T3 – Adherence to COVID-19 guidelines at work → T3 – Adherence to COVID-19 guidelines in private life	0.59***	0.07	0.57	[0.46, 0.72]
D. T2 – OCID → T3 – Organizational identification	0.86***	0.08	0.58	[0.71, 1.02]
E. T1 – OHBC → T3 – Organizational identification	0.29***	0.08	0.19	[0.13, 0.45]
F. T2 – OCID → T3 – Team identification	0.60***	0.08	0.47	[0.45, 0.75]
G. T1 – OHBC → T3 – Team identification	0.15*	0.07	0.12	[0.01, 0.29]

Note. T1 represents the first wave of our study from the 24th to 29th of January 2020, T2 represents the second wave of our study from the 20th to 25th of April 2020, T3 represents the third wave of our study from the 18th to the 22nd of May 2020. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

Figure 1

Standardized path coefficients and levels of significance of our path analysis.

Note. T2 represents the second wave of our study from the 20th to 25th of April 2020, t3 represents the third wave of our study from the 18th to the 22nd of May 2020. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

Appendix A: Organizational Climate for Preventing Infectious Diseases (OCID)

1. My organization offers support and provides me with equipment to deal with the circumstances resulting from the corona pandemic.
2. My organization reacted quickly when told about the safety hazards of the corona virus.
3. My organization emphasizes safety procedures over working procedures/productivity.
4. My organization reacts with wide-ranging measures against the corona virus even if these measures are costly.
5. Information material promoting prevention of the corona virus (e.g. handwashing, respiratory hygiene, wearing facemasks) are displayed in the organization and/or displayed in the intranet and/or send via E-Mail.
6. Top-Management of my organization listens carefully to workers' ideas about improving safety regarding the corona virus.
7. My organization takes reasonable and appropriate measures to protect the staff from infection during work.

Appendix B: Adherence to COVID-19 Behavior at Work

1. I reduce social contacts at work to the bare minimum.
2. When in the organization, I make sure to keep a distance of at least 1.5 meters (5 feet) between myself and my co-workers.
3. I approve home office if it is possible.
4. At work, I wash my hands according to the WHO recommendations (e.g. for at least 30 seconds).
5. At work, I clean and disinfect objects of daily use (e.g. Keyboard, Mouse, Smartphone) regularly.
6. I encourage my co-workers to follow the recommendations to keep a distance, washing hands etc.
7. I know the specific health direction that apply to my organization.
8. I do everything to reduce health risks for my co-workers.
9. I am aware about the importance of staying away from work immediately when I show symptoms like fever, cough and breathing difficulties.

Appendix C: Adherence to COVID-19 Behavior in Private Life

1. I reduce social contacts in private to the bare minimum.
2. I make sure to keep a distance of at least 1.5 meters (5 feet) between myself and other people.
3. I keep away from public places.
4. At home, I wash my hands according to the WHO recommendations (e.g. for at least 30 seconds).
5. At home, I clean and disinfect objects of daily use (e.g. Smartphone) regularly.
6. I cover my mouth and nose with my bent elbow or tissue when I cough or sneeze.
7. I encourage others to follow the recommendations to keep a distance, washing hands etc.
8. I know the directions of my national and local health authority in case I show symptoms like fever, cough and breathing difficulties.
9. I inform myself regularly about health direction in the news or on the websites of my national and local health authority.
10. I see myself as an important health-factor to prevent the corona virus from spreading.
11. I do everything to reduce health risks for myself.
12. I do everything to reduce health risks for my close social environment.