

# Influencing a Nation: How a Leader's Interpersonal Emotion Regulation Influences Citizen Compliance via Trust and Emotions During a Global Pandemic

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During crises like the COVID-19 pandemic, it was necessary for political leaders to influence citizens to comply with public health measures and restrictions. These health measures (e.g., physical distancing, staying at home) had substantial negative effects on individuals' lives and thus were sometimes met with defensive, noncooperative responses. To influence citizens' compliance with public health guidance and nationally imposed restrictions, political leaders needed to effectively motivate them through their public communications. We argue that while negative emotions may have discouraged citizens from deviating from public health restrictions, other factors such as citizens' trust in political leaders played a role as well. We investigated whether the perception of the interpersonal emotion regulation (IER) strategies used by government leaders in ministerial briefings impacted citizens' compliance intentions via either negative affect or perceived trustworthiness. Across three studies based in Western Europe (Studies 1 and 2 survey, Study 3 experimental), we consistently found that a leader's affect-improving IER strategies increased compliance intentions via perceived trustworthiness but not via negative affect. Affect-worsening IER strategies demonstrated either no effect or an indirect worsening effect on the compliance intentions of citizens. Our findings highlight the importance of IER strategies in ministerial briefings and perceived trustworthiness of political leaders in motivating citizens to comply with public health restrictions during a pandemic.

*Keywords:* leader, trust, interpersonal emotion regulation, COVID-19, compliance

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Effective management of crises, such as the COVID-19 pandemic, requires world leaders to influence citizens to comply with public health measures and restrictions. However, the very restrictions that governments had to place on citizens to safeguard lives (e.g., restricting mobility and economic trade) were perceived as threats to citizens' goals, values (e.g., freedom), and identity and thus, were sometimes met with defensive, noncooperative responses (Williams, 2007). The critical influence of leadership during crisis is well established (Bligh et al., 2004), and recent evidence suggests leadership communications have indeed impacted death rates during this pandemic

(Sergent & Stajkovic, 2020). Communication incorporating sentiments of compassion and caring (Post et al., 2019; Sergent & Stajkovic, 2020), meaning making (Montiel et al., 2021), and shared solidarity (Haslam et al., 2021) are critical to addressing the emotional needs of citizens and reducing noncooperative responses during crises.

However, the current literature on leader communication strategies is fragmented and the growing importance of leader communication demands a more integrative approach that captures these disparate influences on mass political behavior. Moreover, there is

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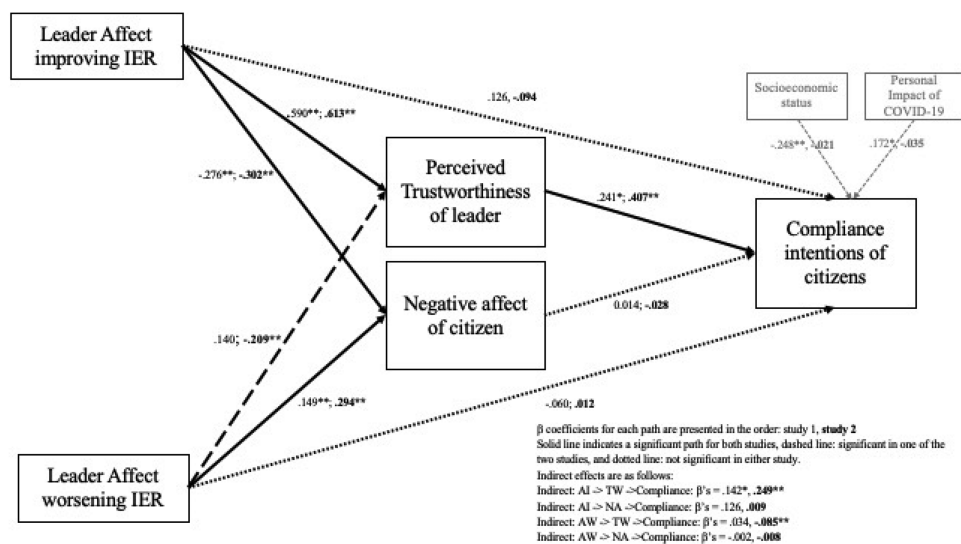
a lack of theoretical insight regarding the psychological mechanisms that translate a leader's political rhetoric into followers' compliance intentions (Montiel et al., 2021). Specifically, the literature is unclear regarding what strategies work best and why. Drawing on the emotions as social information (EASI; van Kleef, 2009) and interpersonal emotion regulation (IER; Madrid et al., 2016; Niven et al., 2009) literatures as overarching theoretical lenses, we consider the impact of the communication strategies employed by national leaders in pandemic communication on citizens' compliance intentions.

In this paper, we focus on *extrinsic* IER which refers to episodes where an individual attempts to regulate another's emotions, in contrast to *intrinsic* IER where an individual initiates social contact to regulate their own emotions (Zaki & Williams, 2013). Extrinsic IER (which we refer to simply as IER for the remainder of the paper) is a deliberate goal-directed process, through which a leader can manage followers' affective states through particular strategies, in the service of higher-order goals (e.g., altering behavior; Niven, 2017). While the importance of IER strategies by leaders has been established (e.g., Madrid et al., 2019; Vasquez et al., 2020), the focus of the extant literature is largely on followers' affective outcomes within proximal working relationships which makes it difficult to provide guidance to more distal political leaders on which strategies will have the greatest impact on citizen behavior. In a crisis, trust in a leader is paramount, given the relevance of leaders' actions for citizens' well-being and survival. While IER research has recognized the importance of trust outcomes (Little et al., 2012; Niven et al., 2012), how trust functions as a response to IER has received little systematic or theoretical attention. A central challenge for IER research, therefore, is to investigate how distal leaders can harness IER to influence follower behaviors and uncover the key psychological mechanisms underpinning this relationship.

Leaders are active managers of the emotions of the collective (Pescosolido, 2002), employing affect-improving and/or affect-worsening strategies to influence followers' intentions (Niven et al., 2009). Integrating theory from psychosocial theories of threat and trauma response (Hobfoll et al., 2007) with IER theory (Madrid et al., 2016; Niven et al., 2009), we contend that in a threatening context, appropriate application of IER strategies can reduce a follower's negative emotions and enhance perceptions of leader trustworthiness. Threat is construed as a discrepancy between an expectation or desire and the current circumstances that undermine either physical (i.e., bodily harm) or psychological well-being (e.g., self-esteem; Jonas et al., 2014). Notably, defensive reactions to threats are elicited not by the threat stimulus itself but rather by the associated negative affectivity it causes (Xu & McGregor, 2018), hence the importance of considering relational behaviors that may alter affect. Thus, leader IER strategies aimed at improving follower affect can be considered threat-reducing behaviors that maximize citizens' perceptions of psychological safety and emotional support and dampen negative affect (Williams, 2007). Conversely, affect-worsening strategies are likely to be perceived as threat-enhancing behaviors that amplify citizens' negative emotions and consequently differentially impact compliance intentions.

Our paper makes three important contributions to the literature. First, we elucidate the mechanisms underlying how leader IER is related to compliance intentions. While an emerging body of COVID-19-related research has identified that leaders whose relational behaviors focus on the affective experience of citizens can leverage compliance (McGuire et al., 2020), little is known about *how* these strategies influence compliance intentions. We introduce and test a conceptual model (see Figure 1) centered on IER to explain how political leaders can act as "a stabilizing force, when citizens are in need of support and protection" (Hasel, 2013, p. 268). Building on

**Figure 1**  
*Model With Proposed Relationship Between Leader IER Strategy and Citizen Compliance Intentions, Mediated by Leader Trustworthiness and Negative Affect*



*Note.* Solid arrow indicates a proposed positive relationship, and dashed arrow indicates a proposed negative relationship. IER = interpersonal emotion regulation.

transnational COVID-19-related evidence that supportive messaging (in contrast to controlling messaging) is associated with citizen compliance with protective guidance (*Psychological Science Accelerator Self-Determination Theory Collaboration, 2022*), we isolate the underlying psychological mechanisms (negative affect vs. perceived trustworthiness) of a political leader's use of IER strategies to influence collective compliance intentions with insightful implications for future crisis communication strategies. Importantly, although the focus of IER might suggest that the key mechanism underlying its impact is affect, our research suggests trustworthiness as the critical underlying mechanism in crisis contexts.

Second, we contribute to the literature on political leader communication by integrating IER as a theoretical lens from which to understand this, as yet fragmented, literature. Thus, we build on past research that investigates the rhetoric of political leader speeches and the focus on identifying the presence or absence of statements (*De Castella et al., 2009; Moss & Sandbakken, 2021; Vignoles et al., 2021*) to offer insights into how different strategies can be compared in terms of their impact on citizen behavior. The use of IER provides not alone an overarching theoretical frame from which to understand the relative impact of different strategies but is also instructive in identifying leader communication strategies that are discrete and implementable (*Legood et al., 2021*).

Finally, our research contributes to the IER literature by expanding the applicability of IER research to the crisis management context and by shifting the focus from proximal relationships to the more distal contextual level of national leadership. Little if any previous research has considered the consequences of IER in distal relationships, but rather has focused on much closer relationships (e.g., with friends, partners, work colleagues). Our research shows that the perceived IER behavior of a public figure, who citizens have no personal relationship with, still has important implications.

**Interpersonal Emotion Regulation**

IER is a controlled, goal-directed process (*Niven et al., 2009*) and is distinct from a range of related processes including social support, interpersonal influence, prosocial behavior, and empathy in so far as the primary focus and motive of IER is altering another's emotion (*Dixon-Gordon et al., 2015*). IER strategies describe the efforts undertaken to achieve this alteration and can be classified according to their primary motive of affect improving or affect worsening (*Niven et al., 2009*). While affect-improving strategies provoke

positive feelings in the target or reduce negative affect, affect-worsening strategies elicit the opposite response.

Within each primary motive (affect improving or worsening), IER strategies can be further delineated into their primary means which may be engagement or relationship oriented (*Niven et al., 2009; see Table 1*). Engagement-oriented primary means directly addressing the emotional state and thoughts of the target. In contrast, relationship-oriented primary means focus on the target's relationship with the agent, and the social ties between the agent and target are the catalyst for altering emotions (*Niven et al., 2009*). In terms of affect-improving IER, *positive affective engagement* strategies directly try to improve the way the target feels about a situation (*Niven et al., 2009*), with a focus on "helping the person to enhance his/her sense of competence or efficacy" (*Horowitz et al., 2001, p. 50*). Although positive affect engagement strategies have received relatively limited research attention, evidence from the self-regulation literature suggests that they have the potential to stimulate cognitive processing, reduce negative affect, and improve positive affect (*Horowitz et al., 2001; Pasupathi, 2003*).

In contrast, *negative affective engagement* strategies directly try to worsen the way the target feels about a situation (*Niven et al., 2009*). In a crisis, affect-worsening strategies might entail leaders aiming to involve followers with the situation by amplifying the fear associated with the threat of the crisis. Past research has demonstrated that political leaders frequently use fear-arousing content in political rhetoric about crisis situations, such as terrorism, and have raised the possibility that such content may be selectively deployed by a prime minister to serve a particular political purpose (*De Castella et al., 2009*). Indeed, attempts to manage citizens' affective, cognitive, and behavioral responses in this way have been the hallmark of many governments' crisis communications (*Oltermann, 2020*), albeit with varying effectiveness. For example, in the context of political leader communication regarding terrorism, *De Castella and McGarty (2011)* found that fear content in political rhetoric was not associated with significant changes in public fear of terrorism, but did coincide with a decline in approval for the political leaders.

Relationship-oriented IER strategies also take different forms depending on whether the aim is to improve or worsen affect (*Niven et al., 2009*). *Acceptance* aims to improve the affect of the target and involves behaviors that communicate validation of the target. Examples of such strategies include giving the target attention, making them feel valued, distracting them, or being friendly to the target (*Niven et al., 2009*). Such strategies focus on the social ties between

**Table 1**  
*Classification of Interpersonal Emotion Regulation Strategies*

IER	Motive	
	Affect improving	Affect worsening
Primary means	<p>Positive engagement</p> <p>Attempts to involve the target with his or her situation or affect to improve the target's affect.</p> <p><i>Examples:</i> affective engagement, cognitive engagement</p> <p>Relationship oriented (acceptance)</p> <p>Attempts to improve the affect of the target involving behaviors that communicate validation of the target.</p> <p><i>Examples:</i> humor, attention (distracting, valuing)</p>	<p>Negative engagement</p> <p>Involving the target with a situation or affective state to worsen his or her affect.</p> <p><i>Examples:</i> affective engagement, cognitive engagement</p> <p>Relationship oriented (rejection)</p> <p>Worsening the affect of the target by engaging in behaviors that communicate snubbing the target or rejecting their feelings.</p> <p><i>Examples:</i> reject target's feeling (confrontational/ nonconfrontational), put own feelings first</p>

*Note.* IER = interpersonal emotion regulation. Adapted from "A Classification of Controlled Interpersonal Affect Regulation Strategies," by K. Niven, P. Totterdell, and D. Holman, 2009, *Emotion, 9*(4), pp. 498–509 (<https://doi.org/10.1037/a0015962>). Copyright 2009 by the American Psychological Association.

individuals (Niven et al., 2009), allowing the follower to feel accepted and valued. Evidence suggests these relationship-oriented strategies can increase positive affect (Pasupathi, 2003) and feelings of emotional proximity (Horowitz et al., 2001). In contrast, *rejection* involves behaviors that communicate snubbing of the target, such as rejecting the target's feelings (either confrontationally by being rude or nonconfrontationally by ignoring the target) or *putting one's own feelings first*. Thus, rejection is a relationship-oriented means to worsen affect (Niven et al., 2009).

In our paper, we examined the distinctive effects of leader affect-improving and affect-worsening strategies in communications regarding national responses to the COVID-19 pandemic. We propose that affect-improving and affect-worsening IER will exert differential influences on citizens' compliance intentions via the mechanisms of trustworthiness and affect. In the first two studies, we focus on citizens' real-time perceptions of affect-improving and affect-worsening IER used by government leaders in ministerial briefings regarding pandemic-related public health restrictions. Following this, in the third study, we move to examine specific engagement and relationship-oriented IER strategies more discretely using an experimental design.

### Theoretical Model and Hypothesis Development

Emerging research has clearly demonstrated that political leaders use rhetoric in their speeches to communicate with citizens regarding the COVID pandemic restrictions (Montiel et al., 2021). Applying an IER lens, we analyze the way in which these communications include strategies to manage the emotions of citizens and the mechanisms through which compliance behaviors of citizens are influenced (see Figure 1). Compliance is defined as a person's acquiescence with a request (Cialdini & Goldstein, 2004), a behavior driven by affective and cognitive processes (Forgas, 2008). Our model (see Figure 1) draws on EASI (van Kleef, 2009) to theorize about the mechanisms underlying the relationship between leader IER and compliance by considering the dual influences of emotion at work. In its original form, EASI specifies the impact of the emotional display through two important pathways, the influence or contagion of emotion itself (e.g., you are afraid, so I feel afraid) and a more cognitive inferential process whereby emotions are connected to goals, characteristics, attitudes, and intentions (e.g., you are afraid, so you must care; van Kleef, 2009). In previous applications to the IER literature (e.g., Madrid et al., 2019), scholars have argued that team leader displays of IER operate through similar mechanisms. In the context of perceived IER use by government leaders, we build on this work to propose that the impact of IER strategies on decisions to comply with pandemic measures operates through two underlying mechanisms: citizen negative affect and perceptions of leader trustworthiness.

Contexts of threat and uncertainty increase the salience of negative affective states in decision making (Bar-Anan et al., 2009) and enhance the likelihood that those who experience negative affect will evaluate the request and the requester negatively (Forgas & George, 2001). Thus, reducing citizens' negative affect is central to eliciting compliance with restrictive public health measures. In a workplace context, previous work demonstrates that leader use of affect-improving IER elicits positive affect that influences follower task performance while affect-worsening IER elicits negative affect (Vasquez et al., 2020). Similarly, and in line with the direct emotional pathway specified by EASI (van Kleef, 2009), we contend

that the use of affect-improving strategies by a political leader that targets a resolution of a crisis will downregulate citizens' negative affective states. Conversely, the use of affect-worsening strategies may increase uncertainty and threat and amplifies fear as citizens engage in the social appraisal of the leader and the emotions they display. Thus, we propose:

*Hypothesis 1:* (a) Affect-improving IER strategies will be negatively related to and (b) affect-worsening strategies will be positively related to citizens' negative emotions.

Drawing further on EASI, we argue that leader IER will also exert an influence through a more cognitive inferential process (van Kleef, 2014) whereby the use of IER signals to citizens that government leaders possess particular characteristics. Of specific importance in this crisis context is perceptions of leader trustworthiness, which previous work has demonstrated can be influenced by IER (Post et al., 2019). Trustworthiness refers to a perception of the characteristics of another party based on an evaluation of their ability, benevolence, and integrity (Mayer et al., 1995). In line with EASI, we propose that a leader's choice of IER strategies is likely to offer signals to citizens regarding their state of mind and commitment to the welfare of the population in what van Kleef (2009) described as a window to the mind of the expresser.

Affect-improving strategies can credibly signal perceptions of leader trustworthiness by demonstrating that a leader is motivated to perceive and manage emotional information and to execute an effective psychosocial response to threat for citizens. Affect-improving strategies signal to a citizen that the leader is attempting to resolve the discrepant experience between the current circumstances and what citizens desire (i.e., safety and security). Affect-improving strategies may be perceived as benevolent, emotionally supportive actions (Niven et al., 2012), aimed at protecting citizen welfare. Thus, affect-improving strategies can strengthen affective attachment to the threat regulator (i.e., leader) and signify that the leader is a resource that will help navigate the threat. Conversely, affect-worsening strategies may signal that a leader has little interest in helping citizens manage negative events, which is likely to result in a less favorable evaluation of the leader trustworthiness (Little et al., 2016):

*Hypothesis 2:* (a) Affect-improving IER strategies will be positively related to and (b) affect-worsening IER strategies will be negatively related to perceptions of leader trustworthiness.

Using the logic of EASI (van Kleef, 2009), we propose that citizens' negative affect and perceptions of political leader trustworthiness are critical mechanisms through which IER strategies influence compliance. Past research has indicated that trust is a key factor in compliance (Siegrist & Zingg, 2014) and serves as a crucial antecedent for extra effort behaviors (Mayer et al., 1995). In the face of uncertainty regarding the proper course of action, trust can become a salient cue for decision making (Earle et al., 2007). In line with this, recent COVID-19 research across 19 European countries indicated that in high-trust regions, compliance with mobility restrictions was significantly higher than in low-trust regions (Bargain & Aminjonov, 2020).

Although trust in a leader is critical to that leader's capacity to secure compliance with their policies (Haslam et al., 2021), less is known about its effects on compliance with health measures (Bargain & Aminjonov, 2020). Compliance with the COVID-19 public health restrictions required personal interests to be sacrificed

for the sake of the collective. While leaders can serve as belief managers (Gächter & Renner, 2018), communicating that compliance is a desired behavior to reduce threat, citizens may not be willing to accept the restrictive measures if they do not trust the political leader. Trust has been shown to increase feelings of obligation and a willingness to accept decisions from leaders (Tyler et al., 1997). Thus, in the COVID-19 context, we contend that compliance can be conceived of as a reciprocal trust action (Serva et al., 2005).

Reciprocal trust implies an active process of trust exchange that results when one party observes the actions of another and reconsiders attitudes and subsequent behaviors based on those observations (Serva et al., 2005). Adopting this perspective, demonstrative concern for citizens arising from affect-improving strategies results in perceptions of leader trustworthiness; in turn, citizens react by reciprocating through compliance with restrictive measures. Conversely, affect-worsening strategies may imply that the leader is not prepared to share the burdens of citizens, thus exerting a corrosive influence on trustworthiness, reducing the obligation to reciprocate, and undermining compliance intentions. As such, we expect that affect-improving strategies will be positively related to and affect-worsening strategies negatively related to compliance intentions via perceived trustworthiness.

*Hypothesis 3:* The relationship between IER strategies and compliance intentions will be mediated by perceived leader trustworthiness.

Affective states are motivational systems, and the reduction of negative affect can mobilize energy, organize, and motivate cognition constructively to exert behavioral change (Izard, 2002). The high levels of experienced negative affect associated with COVID-19 (Zacher & Rudolph, 2021) may have increased defensive reactions such as denial of the danger and disregard of compliance communications (Witte, 1992). Heightened levels of anxiety can impair executive functions and diminish cognitive resources (Shields et al., 2016). We argue that reducing negative affect through affect-improving strategies would enable citizens to process COVID-19-related information and in doing so, enhance their willingness to comply. Evidence from literature on persuasion supports this by demonstrating how individuals are more strongly influenced by the communication of emotions when they are operating in conditions where thorough processing of information is more likely (van Kleef et al., 2015). Given that the COVID-19 pandemic was associated with higher rates of depression, worry, and lower rates of subjective well-being (Zacher & Rudolph, 2021), attempts to exacerbate negative affect through affect-worsening strategies are likely to have a negative impact on willingness to comply with public health measures. Therefore, we propose:

*Hypothesis 4:* The relationship between IER strategies and compliance intentions will be mediated by citizens' negative affect.

## Overview of Studies

Across three studies, we investigated the effectiveness of political leader's IER in motivating compliance with COVID-19 national restrictions among citizens in real ministerial speeches of the national leader of Ireland (Study 1, Study 3) and the United Kingdom (Study 2). In the first study, we conducted a real-time survey of Irish citizens' reactions to a ministerial speech announcing national restrictions to investigate the influence of perceived IER strategies from the leader

on participants' perceptions of leader trustworthiness, negative affect, and compliance intentions during COVID-19. In Study 2, we replicated this with a real-time survey of U.K. citizen's reactions to their national leader's speech regarding national restrictions at approximately the same time and level of restrictions. Studies 1 and 2 examined the simultaneous influence of perceived affect-improving versus affect-worsening strategies (see Figure 1) in real time. In the third study, we wanted to look at specific IER strategies in isolation. To do so, we experimentally manipulated exposure to a single IER strategy used in a real ministerial briefing. This allowed us to move beyond the dualistic categorization of affect-improving and affect-worsening IER strategies and investigate in a more nuanced way specific affective engagement and relationship-oriented improving and worsening IER strategies (see Table 1) and how they may differentially relate to affect, trust, and compliance.

## Transparency and Openness

All studies received approval from the University of Limerick Research Ethics Committee before the collection of data. We report how we determined our sample size, any exclusions, and all measures in the study. Data, materials, and analysis syntax are available at: <https://doi.org/10.5281/zenodo.7537715>. Data were analyzed using Statistics Package for the Social Sciences (SPSS) (Version 26) and Mplus (Version 8.1.8). The studies were not preregistered.

## Study 1

Past research indicates that individuals generally rely on multiple regulatory strategies to manage a given emotional response (Brans et al., 2013; Geisler et al., 2019). Thus, in this first study, we focused on how perceptions of political leaders' affect-improving versus affect-worsening IER strategies, as a whole, influenced citizens' compliance intentions via negative affect and trustworthiness. In this study, we focused on the impact of a full ministerial briefing and participants' perceptions of the IER strategies utilized in the briefing.

## Method

### Sample and Procedure

An invitation to participate was distributed via social network platforms and university alumni listservs, and to those indicating they were Irish residents registered on the online research platform Prolific, 388 participants agreed to take part. To determine the appropriate sample size, we used two approaches. First, we determined the minimum sample size required apriori using G\*Power (Faul et al., 2007, 2009). Setting the power to .8, the  $\alpha$  error probably to .05, with four tested predictors (two IER strategies and two mediators), a sample size of 85 was required for a medium effect size ( $f^2 = .15$ ) and 602 for a small effect size ( $f^2 = .02$ ) when conducting a linear multiple regression. However, this does not consider the indirect or mediated effect. Using the simulations conducted by Fritz and MacKinnon (2007) to determine the required sample size for mediated effects using bias-corrected bootstraps, our sample size was sufficient to detect small to medium effects on the  $a$  and  $b$  paths (medium effects on both the  $a$  and  $b$  path would require a sample size of 71, a small effect on one path and medium effect on the other path would require a sample size of 391–400, see Fritz &

MacKinnon, 2007, table 3, p. 237). Thus, our sample size could determine small to medium direct and indirect effects.

On May 1, 2020, a national ministerial briefing by the Taoiseach of Ireland (the Premier) was broadcast<sup>1</sup> announcing a further 2-week extension of national COVID-19 restrictions. Directly after the broadcast ended, the 388 potential participants who had signed up for the study were sent a link to the survey via email and text message, and a posting of the survey on Prolific. The survey was closed on May 5, 2020. After eliminating nonresidents ( $n = 83$ ) and those who had not watched the ministerial briefing ( $n = 33$ ), our final sample comprised 272 respondents (186 = female, 84 = male, 2 = non-binary). The average age was 40.62 years ( $SD = 13.19$ ), ranging from 18 to 77 years, and represented a geographical spread across the country (respondents represented 23 of the 26 counties in the Republic of Ireland, with 31.4% from Dublin, 9.9% from Limerick and the remainder spread across 21 counties); 75.9% of respondents had a bachelor's degree or higher.

### Measures

Citizen perceptions of leader IER strategies were assessed using the adapted version of the Emotion Regulation of Others Scale (Niven et al., 2011) by Madrid et al. (2019), identifying government leader and citizens (rather than team leaders and team members). This scale captures citizen perceptions of leader affect-improving (six items, e.g., "Makes citizens see the positive";  $\alpha = .84$ ) and affect-worsening IER (six items, e.g., "Talked about shortcomings in citizens' actions";  $\alpha = .73$ ) strategies on a 1 (*not at all*) to 5 (*a great deal*) scale. The items can be found in the [online supplemental materials](#).

*Perceived trustworthiness of the leader* ( $\alpha = .95$ ) was assessed using the 17-item Mayer et al. (1995) measure of ability (six items), benevolence (five items), and integrity (six items) trustworthiness perceptions. The items were edited to reflect a focus on leadership (e.g., for benevolence: "This leader is very concerned about my welfare") with agreement with each statement captured on a 5-point Likert scale anchored by 1 (*strongly disagree*) to 5 (*strongly agree*). The components were combined into an overall assessment of perceived trustworthiness.

*Negative affect* ( $\alpha = .91$ ) was measured using the Discrete Emotions Questionnaire (Harmon-Jones et al., 2016), assessing five negative emotions (four items per emotion): anger, disgust, fear, anxiety, and sadness. Participants responded with reference to how they felt listening to the leader's speech on a visual analog scale (Snippe et al., 2018) ranging from 0 (*not at all*) to 100 (*an extreme amount*). We created a mean score for the five negative emotions which we divided by 10 so that the range of scores (0–10) was similar to the study's other measurement scales. Visual analog scales have been demonstrated to be modestly more reliable than radio button item format in assessing emotional states (Marcus et al., 2017).

*Compliance intentions* ( $\alpha = .73$ ) were assessed with six items capturing the World Health Organization (WHO) guidelines as implemented in Ireland at that point. Participants were asked to indicate to what extent they would act in accordance with the restrictions (e.g., stay within 5 km of your home, physical distancing) from 1 (*not at all*) to 5 (*always*). This variable was log transformed (log 10) as responses were not normally distributed (compliance intentions were relatively high,  $M = 4.40$ ;  $SD = .624$ ).

**Control Variables.** Drawing on the recommendations regarding the usage of control variables by Bernerth and Aguinis (2016) and

more recently, Wysocki et al. (2022), we considered a range of potential variables that might be theoretically and/or empirically important to control for. In our analyses, we controlled for two factors. We expected that individuals who had been personally impacted by COVID-19 may hold different compliance intentions than others. As such, we controlled for the personal impact of COVID-19, assessed via participant response to six items regarding whether they or their loved ones had been tested, diagnosed, hospitalized, or among the fatalities (in the case of loved ones) and whether their family or friends were in a vulnerable category or worked in a healthcare setting (*no* = 0; *yes* = 1). Answers were summed to give an overall assessment of the personal impact of COVID-19.

Second, we controlled for socioeconomic status (SES) with the McArthur scale of subjective social status (Adler et al., 2000), as prior research has shown that SES influences health and illness (Smith, 2004). We also asked individuals two items pertaining to their political orientation (left vs. right wing, liberal vs. conservative) and two items regarding how important politics was to the individual, but as neither of these were correlated with any of the variables in our model, we did not include them as control variables.<sup>2</sup>

### Results

Before testing our hypotheses, we conducted confirmatory factor analyses using Mplus Version 8.3 (Muthén & Muthén, 1998–2012). The hypothesized five-factor measurement structure (as outlined in Figure 1) fit the data adequately,  $c^2_{715} = 1,187$ ,  $p < .01$ , root-mean-square error of approximation (RMSEA) = .06, comparative fit index (CFI) = .887, standardized root-mean-square residual (SRMR) = .07. The model fit was adequate as the ratio of the  $c^2$  to the degrees of freedom was  $< 3$ , the confidence interval for the RMSEA was in the range of .06–.08, the SRMR was  $< 0.8$ , but the CFI was a little lower than the recommended  $\geq 0.95$  (Schreiber et al., 2006).

Table 2 presents descriptive statistics and bivariate correlations for all variables. Both SES and the personal impact of COVID-19 on the participants were correlated with compliance intentions so we included them as control variables, although the pattern of results remains the same whether we include them or not. Results without the control variables included can be found in Table S1 in the [online supplemental materials](#).

We tested our conceptual model (Figure 1) by conducting a path analysis using Mplus Version 8.3, with affect improving and affect worsening as the predictors, negative affect and perceived trustworthiness as the mediators, and compliance as the outcomes. To examine parallel mediation, we used maximum likelihood estimation with 10,000 bootstrap simulations to create 95% bias-corrected confidence intervals around our indirect effects (Preacher & Hayes, 2004, 2008). Results are reported in Table 3. In line with Hypothesis 1a and 2a, we found that perceptions of affect-improving IER strategies were positively associated with perceived trustworthiness ( $\beta = .590$ ;  $p < .01$ ) and negatively associated with negative affect ( $\beta = -.276$ ;  $p < .01$ ). However, they did not have a direct effect on compliance intentions. Affect-worsening strategies were not associated with perceived

<sup>1</sup> <https://www.youtube.com/watch?v=NtYYCEg8LAE>.

<sup>2</sup> We checked for the impact of political orientation in Study 2 also and conducted a model in each study which included it as a control variable, but as it did not change the pattern of findings, we present models without it.

**Table 2**  
Means, Standard Deviations, and Correlations Between Study Variables

#	Construct	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1.	Emotion regulation of other—extrinsic affect improving	3.67 <b>2.72</b>	.762 <b>.823</b>	—	-.183**	.651**	-.355**	.195**	.086	-.032	.043	-.038
2.	Emotion regulation of other—extrinsic affect worsening	1.29 <b>1.43</b>	.394 <b>.520</b>	-.551**	—	-.326**	.355**	-.119*	.063	-.097	-.066	-.009
3.	Trustworthiness	4.21 <b>2.97</b>	.680 <b>1.04</b>	.692**	-.554**	—	-.452**	.359**	-.023	-.027	.090	-.150**
4.	Negative affect	21.82 <b>3.37</b>	19.95 <b>2.24</b>	-.331**	.340**	-.338**	—	-.172**	-.159**	.028	-.087	.108
5.	Compliance intentions	4.40 <b>3.99</b>	.624 <b>.918</b>	.259**	-.281**	.284**	-.085	—	-.118*	-.051	.015	-.077
6.	Gender (dichotomized)	—	—	-.109	.101	-.048	-.113	-.030	—	-.130*	.033	-.057
7.	Age	44.59 <b>33.87</b>	12.21 <b>11.45</b>	.144	-.027	.134	-.117	.093	.041	—	-.088	.039
8.	Socioeconomic status	6.96 <b>5.49</b>	1.50 <b>1.51</b>	.060	-.102	.083	-.128	-.192**	-.042	.082	—	.037
9.	Personal impact of COVID-19	1.42 <b>1.15</b>	.769 <b>.818</b>	-.054	.010	-.070	.055	.175*	-.037	-.045	.016	—

Note. Study 1 below the diagonal, Study 2 above the diagonal, and Study 2 means and *SD*s in bold. Study 1 *N* = 186–191; Study 2 *N* = 300–303.  
\* Correlation is significant at the .05 level (two tailed). \*\* Correlation is significant at the .01 level (two tailed).

trustworthiness or compliance intentions. Their impact on negative affect was less clear, as the unstandardized effect was nonsignificant ( $B = 1.76$ ,  $p = .812$ ) while the standardized effect was significant ( $\beta = .149$ ;  $p < .05$ ). This can occur on occasion as the ratio for parameter estimate to its standard error, and therefore confidence interval, can differ for raw and standardized coefficients, and standardized standard errors are not rescaled raw standard errors.<sup>3</sup> As this tends to occur when confidence intervals are close to zero, we took a conservative approach. Interpreting the unstandardized effect, we conclude conservatively that the affect-worsening strategies were not substantially related to negative affect. Thus, Hypotheses 1b and 2b were not supported. Perceived trustworthiness ( $\beta = .241$ ;  $p < .05$ ), but not negative affect, was positively related to compliance intentions. Finally, there was a significant indirect effect from affect-improving IER to compliance intentions via perceived trustworthiness ( $\beta = .014$ ;  $p < .05$ ), in partial support of Hypothesis 3. Hypothesis 4 was not supported.

## Discussion

The findings of Study 1 demonstrated that perceptions of leader affect-improving IER strategies during a full ministerial briefing were positively related to intentions to comply with COVID-19 restrictions via perceived trustworthiness but not via negative affect. In contrast, perceptions of leader affect-worsening IER strategies had neither a direct nor indirect effect on compliance intentions. This is the first study to demonstrate that the perceptions of IER strategies of a nation's leader can influence citizens' compliance intentions.

## Study 2

In Study 2, we replicated our first study but with a different government leader and with citizens of a different country (the United Kingdom). In the same manner as Study 1, we focused on the impact of a full ministerial briefing and participants' perceptions of the IER strategies utilized in this briefing.

## Method

### Sample and Procedure

We collected data from 366 citizens of the United Kingdom via Prolific. This sample size had the power to detect small and medium direct and indirect effects (Fritz & MacKinnon, 2007), using the same calculations outlined in Study 1. On May 10, 2020, a national ministerial briefing by the Prime Minister of the United Kingdom was broadcast<sup>4</sup> announcing further national restrictions to curb the spread of COVID-19. Directly after the broadcast ended, we posted a survey on Prolific, restricted to citizens of the United Kingdom, and all responses were collected on the evening of the speech. After eliminating nonresidents ( $n = 34$ ) and those who had not watched the ministerial briefing ( $n = 28$ ), our final sample comprised 303 respondents (223 = female, 78 = male, 1 = nonbinary, 1 = prefer not to say). Most respondents currently lived in England ( $N = 255$ ), with the remainder living in Scotland ( $n = 30$ ), Wales ( $n = 13$ ), or Northern Ireland ( $n = 5$ ). The average age was 33.87 years ( $SD = 11.45$ ), ranging from 18 to 65; 89.8% of respondents had a bachelor's degree or higher.

### Measures

*Perceived leader IER strategies* (affect improving  $\alpha = .859$ ; affect worsening  $\alpha = .806$ ), *perceived trustworthiness of the leader* ( $\alpha = .975$ ), and *negative affect* ( $\alpha = .911$ ) were assessed using the same measures as Study 1.

*Compliance intentions* ( $\alpha = .975$ ) were assessed with six items capturing the WHO guidelines as implemented in the United Kingdom at that point in time. Participants were asked to indicate to what extent they would act in accordance with the guidelines issued by the WHO and their government (e.g., refrain from visiting

<sup>3</sup> Please see <http://www.statmodel.com/discussion/messages/11/4331.html?1426677590> for a discussion of this issue and recommendations.

<sup>4</sup> <https://www.youtube.com/watch?v=CtQ7osi32jk&t=27s>.



family members and friends, avoid public spaces) from 1 (*not at all*) to 5 (*always*). This variable was log transformed (log 10) in the same fashion as in the previous study.

**Control Variables.** We controlled for SES and the extent to which individuals had been personally impacted by COVID-19, using the same measures as those in Study 1.

## Results

Confirmatory factor analyses using Mplus Version 8.3 (Muthén & Muthén, 1998–2012) indicated that the hypothesized five-factor measurement structure (as outlined in Figure 1) fit the data adequately,  $\chi^2_{15} = 1,400$ ,  $p < .01$ , RMSEA = .056, CFI = .926, SRMR = .079. Table 2 presents descriptive statistics and bivariate correlations for all variables. We present our findings with the same control variables as used in Study 1 included, but also analyzed the model without the control variables and the results remained the same (see Table S1 in the online supplemental materials).

We tested our conceptual model (Figure 1) using the same path analysis process in Mplus as Study 1 (see Table 3). Replicating our findings from Study 1, and in line with Hypotheses 1a and 2a, we found that perceptions of leader affect-improving IER strategies were positively associated with perceived trustworthiness ( $\beta = .613$ ;  $p < .01$ ) and negatively associated with negative affect ( $\beta = -.302$ ;  $p < .01$ ) but did not have a direct effect on compliance intentions. In contrast to Study 1, but in line with Hypotheses 1b and 2b, affect-worsening strategies were negatively associated with perceived trustworthiness ( $\beta = -.209$ ;  $p < .01$ ) and negative affect ( $\beta = .294$ ;  $p < .01$ ). Perceived trustworthiness ( $\beta = .407$ ;  $p < .01$ ), but not negative affect, was positively related to compliance intentions. We reconfirmed the significant indirect effect from affect-improving IER to compliance intentions via perceived trustworthiness ( $\beta = .249$ ;  $p < .01$ ) but also found a significant indirect effect of affect-worsening IER on compliance intentions via trustworthiness ( $\beta = -.085$ ;  $p < .01$ ). Thus, we found full support for Hypothesis 3 in this study but in line Study 1, did not find support for Hypothesis 4.

## Discussion

The findings of Study 2 confirm and extend those of the first study, providing further evidence that the perception of affect-improving IER strategies during a full ministerial briefing was positively related to intentions to comply with COVID-19 restrictions via perceived trustworthiness but not via negative affect. In contrast to the previous study, but in line with our predictions, perceptions of leader affect-worsening IER strategies had an indirect worsening effect on compliance intentions via trustworthiness.

### Study 3

In Study 3, we wanted to delve more deeply into the unique impact of specific IER strategies in isolation. Beyond the dualistic categorization of affect-improving and affect-worsening IER motives, specific means of IER can be distinguished, characterized by their focus on affective engagement and relationship-oriented means of improving or worsening a target's emotions (see Table 1). These distinct strategies may be differentially related to affect, trust, and compliance. Little research to date has examined this, but there is merit to doing so. For example, positive affective

engagement strategies that target direct resolutions to the problem may communicate a sense that the leader feels the threat is manageable and reduce the discrepant experience between citizens' safety goals and their current situation. The use of positive affective engagement such as by providing concrete assistance can reduce anxiety associated with threatening situations while those that advise citizens on measures to safeguard themselves and their families can restore a sense of agency and control (Hobfoll et al., 2007).

Relationship-oriented affect-improving strategies which emphasize the value of attachment to important social groups (Hobfoll et al., 2007), or reframe COVID-19 as a shared problem (e.g., "we're all in this together"), rather than an individual problem, address citizens' need for social integration and collective efficacy in a time of crisis. Leader communications that modify the way in which the crisis is perceived can potentially resolve the threat posed by a crisis like COVID-19 changing the affective reactions of citizens (van Kleef & Côté, 2022). Conversely, using negative affect engagement strategies, such as trying to worsen the way the target feels about the situation, may exacerbate citizens' negative affect by undermining a sense of safety. Appeals using fear may produce unintended consequences such as denial, avoidance, defensiveness, anxiety, increased risk behavior, and a feeling of lack of control (Stolow et al., 2020).

As there is little past research on these distinct IER strategies, we do not propose specific hypotheses. However, as engagement strategies target emotions directly they might be expected to have a stronger impact on the negative affect pathway. In contrast, relationship-oriented strategies function by communicating about the target's relationship with the regulator and so, might be expected to have a stronger impact on the trust pathway which is a relational pathway. We investigated such nuances regarding specific IER strategies in the third study. We assessed differences across the experimental conditions in negative affect, perceived trustworthiness and compliance, and also tested our model to further examine the replicability of our findings from Studies 1 and 2. We used an experimental design in which specific IER strategies were extracted into audio clips from a real ministerial briefing. We focused on three IER strategies identified in these audio clips, which included one affect-worsening strategy (*negative affective engagement*), and two affect-improving strategies, *positive affective engagement* and an *acceptance* strategy (relationship oriented). Ideally, we would have added an example of a *rejection* strategy (e.g., rejecting a target's feelings) to have a relationship-oriented affect-worsening strategy but given the context of our research, which used real ministerial briefings during the COVID pandemic, it was not surprising that this category was not evident in the ministerial briefing. We randomized participants to a single condition (exposure to one specific IER strategy only) to examine the impact of a specific IER strategy on negative affect, perceived trustworthiness of the leader, and compliance intentions.

## Method

### Sample and Procedure

The first author content analyzed a ministerial briefing from the Taoiseach of Ireland, which was broadcast on March 17, 2020,<sup>5</sup> announcing intentions to "lock-down" the country for the first time due to rising COVID-19 cases. The first author used theory-

<sup>5</sup> <https://www.youtube.com/watch?v=hNmm5OLBx8c>.

driven content analysis (Potter & Levine-Donnerstein, 1999) and standard practices for qualitative data analysis (Miles & Huberman, 1994) and vignette experiments (e.g., Grant & Wall, 2009; Kirrane et al., 2017) to segment the briefing into specific audio clips representing distinct IER strategies in line with the taxonomy developed by Niven et al. (2009; see Table 4). Under affect-improving IER, Niven et al. (2009) distinguish between strategies focused on *positive engagement* (further categorized into affective vs. cognitive engagement) versus relationship-focused strategies such as *acceptance*, while the affect-worsening strategies are categorized under *negative engagement* (further categorized into affective vs. behavioral engagement) and relationship-focused strategies, such as *rejection* (see Table 1). These clips were subsequently coded independently by the other authors and two additional independent researchers (not involved in the project) who assessed and rated the extent to which they represented the formal definitions of specific IER strategies (Niven et al., 2009). Those that were not rated as strongly representative or where there was not acceptable interrater reliability were excluded. From the audio segments, three audio segments that most clearly represented distinct IER strategies were chosen. Interrater reliability for these was 80% or above in all cases.

The three IER strategies identified included one affect-worsening strategy (*negative affective engagement*), and two affect-improving strategies, *positive affective engagement* and an *acceptance* strategy (relationship oriented), but there was not an example of a *rejection* strategy (e.g., rejecting a target's feelings; a relationship-oriented affect-worsening strategy) so we could not include this category. The audio clips ranged from 60 to 90 seconds in length.

Participants were recruited via Prolific. We restricted the sample to U.K. residents (i.e., residents from a different country to the government leader) to reduce apriori opinions regarding the leader which may have influenced responses. We asked participants if they recognized the voice in the audio clips (the Irish Taoiseach or prime minister), and only 2.3% (14 people) indicated that they did. However, these individuals did not demonstrate significant differences in any of the study variables, nor demographic variables such as age and

educational attainment compared to those who did not recognize the leader and so, we retained them. The final sample comprised 312 participants (37 were excluded due to failed attention checks), 58% female, 41.7% men, .3% nonbinary;  $M_{\text{age}} = 39.86$  years,  $SD = 12.58$ ; range 18–75 years. Assuming power of .8, alpha error probability of .05, and three groups, G\*Power (Faul et al., 2007, 2009) estimated that the sample size was sensitive enough to detect an effect size ( $f^2$ ) across groups of .03 ( $f = .176$ ), which constitutes a small effect (Cohen, 1988).

Following the provision of informed consent, participants provided demographic information and responded to questions regarding the personal impact of COVID-19 on them. Participants were then randomly assigned to one of three conditions reflecting one of the IER strategies and were instructed to listen to a generic introduction by the Taoiseach, contextualizing COVID-19 as a pandemic, followed by a clip with one of the three IER strategies used in the ministerial briefing. After listening to the clip, participants were asked to complete a survey capturing their affective reactions to the audio clip, perceptions of the trustworthiness of the leader, and their intention to comply with the COVID-19 restrictions as a result of listening to the audio clip.

### Measures

*Perceived trustworthiness* ( $\alpha = .95$ ) and *negative affect* ( $\alpha = .91$ ) were assessed using the same measures as Study 1.

*Compliance intentions* were assessed using six items that reflected the advice issued by the WHO regarding COVID-19 in March–April 2020 and reflected the behaviors being asked of individuals in Europe at that point in time. Participants indicated the extent to which the leader's address inspired them to act in accordance with the guidelines on a slider scale from 0 (*not at all*) to 100 (*always*). We divided the mean score for the six items by 10 and log transformed the data as responses were not normally distributed. Sample items included “comply with hygiene regulations (e.g., regularly and thoroughly clean my hands),” “refrain from visiting family members and friends,” “maintain social distancing” ( $\alpha = .95$ ).

**Table 4**

*Interpersonal Affect Regulation Strategy Conditions Identified in the Ministerial Briefing in Study 3 (Based on Niven et al., 2009)*

Type of strategy	Prototype	<i>M</i> ( <i>SE</i> )	Example quotes from the ministerial briefing
<b>Affect-improving strategies</b>			
Positive engagement: affective engagement ( <i>N</i> = 103)	Having a supportive conversation with the target	Trustworthiness	“We will always put your life and your health before all other concern ... all resources we have, both financial and human, are being deployed to serve this great national effort ... for those who have lost their jobs and had their incomes cut ... you will receive income support as quickly and efficiently as possible ... we will do all we can to help you through the time ahead ...”
		Negative affect	
		Compliance	
Relationship oriented: acceptance ( <i>N</i> = 106)	Making the target feel special and cared about	Trustworthiness	“I want to send a message around the world—we are in this together viruses pay no attention to borders, race, nationality or gender—they are the shared enemy of all humanity ... we will get through this and we will prevail ... we are all in this together ...”
		Negative affect	
		Compliance	
<b>Affect-worsening strategies</b>			
Negative engagement: affective engagement ( <i>N</i> = 103)	Directly trying to worsen the way the target feels about a situation	Trustworthiness	“This is the calm before the storm, before the surge, and when it comes, and it will come, never will so many ask so much of so few ... many will be hospitalized, sadly some people will die. Corona virus is already having a deep impact on jobs and economic activity and will continue to do so ... we don't know when the emergency will end ... the damage will be significant and lasting, the bill will be enormous, and it may take years to pay it ....”
Negative affect			
Compliance			

**Control Variables.** We controlled for two factors. First, recognition of the voice of the leader (response options “Yes” or “No”), as personal knowledge of the leader may influence trust (Kramer & Lewicki, 2010) and whether participants had been personally impacted by COVID-19, using the same measure as in the previous studies.

## Results

Means, standard deviations, and intercorrelations between the study variables are presented in Table 5. Before conducting our analyses, we conducted confirmatory factor analyses using Mplus Version 8.3 (Muthén & Muthén, 1998–2012). The hypothesized three-factor measurement structure including negative affect, trustworthiness, and compliance (excluding condition as this was experimentally manipulated), demonstrated an adequate fit to the data,  $c^2_{347} = 884$ ,  $p < .01$ , RMSEA = .070, CI<sub>90</sub> [.065–.076], CFI = .928, SRMR = .06.

To investigate our hypotheses, we first conducted a multivariate analysis of variance to examine the differences across the three IER strategies regarding perceived trustworthiness and negative affect (Hypotheses 1 and 2), using SPSS v.25, while controlling for the impact of COVID-19 and recognition of leader. The multivariate results indicated that there were significant differences across the scenarios, Wilk's  $\lambda = .800$ ;  $F(6, 524) = 1.29$ ;  $p < .001$ ; partial  $\eta^2 = .105$ , and the between-subjects effects indicated that these were found for both trustworthiness ( $F = 6.54$ ,  $df = 2$ ,  $p < .01$ , partial  $\eta^2 = .047$ ) and negative affect ( $F = 22.85$ ,  $df = 5$ ,  $p < .01$ , partial  $\eta^2 = .148$ ). Pairwise comparisons indicated that *positive affect engagement* resulted in higher trustworthiness than the *acceptance affect-improving strategy* ( $M_{diff} = .267$ ,  $p < .05$ ) and *negative affect engagement* (affect-worsening strategy;  $M_{diff} = .358$ ;  $p < .05$ ), but the latter two strategies did not differ from each other ( $M_{diff} = .091$ ;  $ns$ ). In terms of negative affect, participants in the *negative affect engagement* condition exhibited the highest level of negative affect and were significantly higher than the two affect-improving strategy conditions (positive affect engagement:  $M_{diff} = 1.943$ ,  $p < .05$ ; acceptance:  $M_{diff} = 1.497$ ,  $p < .05$ ) which did not significantly differ from each other ( $M_{diff} = -.446$ ,  $ns$ ). Thus, we found partial support for Hypotheses 1 and 2. Means and standard deviations for each condition can be found in Table 4.

Although we did not hypothesize that the experimental conditions would have a direct effect on the intention to comply, we conducted

an additional analysis of variance to examine any potential differences, using the same control variables. The results indicated that there were no significant differences across the three experimental conditions in the intention to comply. Pairwise comparisons for all conditions for trustworthiness, affect, and intention to comply can be found in Table S5 in the online supplemental materials.

To examine whether the impact of the conditions on intention to comply with the COVID-19 restrictions was mediated by perceived trustworthiness and negative affect (Hypotheses 3 and 4), we conducted a path analysis using Mplus Version 8.3, with two dummy coded variables to dichotomize the three experimental IER conditions. We tested a model with the dummy condition variables as the predictors, perceived trustworthiness and negative affect as parallel mediators, and compliance intentions as the outcome (see Table 6). To examine parallel mediation, we used maximum likelihood estimation with 10,000 bootstrap simulations to create 95% bias-corrected confidence intervals around our indirect effects (Preacher & Hayes, 2004, 2008).

The path analysis results reaffirmed the direct effects of condition on perceived trustworthiness and negative affect demonstrated by the multivariate analysis of variance. The *positive affective engagement condition* (compared to both other conditions) was positively associated with perceived trustworthiness ( $\beta = .243$ ;  $p < .01$ ) and negatively with negative affect ( $\beta = -.435$ ;  $p < .01$ ). The *acceptance strategy* condition did not demonstrate a significant relationship with perceived trustworthiness but was significantly negatively associated with negative affect ( $\beta = -.335$ ;  $p < .01$ ). The *positive affective engagement* condition had a significant indirect effect on compliance intentions via perceived trustworthiness ( $\beta = .049$ ;  $p < .05$ ), but no other indirect paths were significant. Thus, we found partial support for Hypothesis 3, but Hypothesis 4 was not supported.

We repeated this model without the control variables included (see Table S6 in the online supplemental materials) and the pattern of results remains the same.

## Discussion

Study 3 demonstrated that specific IER strategies used in a government leader's speech regarding COVID-19 restrictions may differentially influence citizen compliance intentions. This study

**Table 5**  
Means, Standard Deviations, and Correlations Between (Study 3)

Construct	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Condition dummy: positive affective engagement	—	—	—									
2. Condition dummy: relationship oriented: acceptance	—	—	-.504**	—								
3. Trustworthiness	3.67	.68	.199**	-.038	—							
4. Negative affect	2.80	2.11	-.255**	-.107	-.047	—						
5. Positive affect	1.87	1.49	.244**	.058	.248**	-.099	—					
6. Compliance with restrictions/10	8.49	2.17	.009	-.023	.421**	.016	-.036	—				
7. Gender	—	—	.074	-.073	-.139*	-.105	.150**	-.191**	—			
8. Age	39.86	12.58	.049	-.073	.012	-.013	-.08	.109	.007	—		
9. Education	4.39	1.67	-.013	.063	.032	.003	-.023	-.062	-.048	-.164**	—	
10. Personal impact of COVID-19	1.22	1.06	-.104	.065	.026	.145*	-.019	.019	-.116*	.053	.04	—
11. Recognize leader			.01	-.057	-.096	-.048	-.091	-.002	-.126*	-.059	-.053	.035

\* Correlation is significant at the .05 level (two tailed).  $N = 312$ . \*\* Correlation is significant at the .01 level (two tailed).

**Table 6**  
*Simultaneous Path Analysis Examining the Indirect Effect of IER Strategies on Compliance Intentions via Perceived Trustworthiness and Negative Affect (Study 3)*

Construct	Trustworthiness					Negative affect					Compliance intentions <sup>a</sup>				
	<i>b</i>	<i>SE</i>	<i>p</i>	$\beta$	CI <sub>95</sub>	<i>b</i>	<i>SE</i>	<i>p</i>	$\beta$	CI <sub>95</sub>	<i>b</i>	<i>SE</i>	<i>p</i>	$\beta$	CI <sub>95</sub>
Predictor variables															
Condition dummy:	.357**	.102	.000	.243**	.001 [1.158, .557]	-1.98**	.316	.000	-.435**	.350 [-2.61, -1.37]	-.045	.023	.051	-.108*	.033 [-.098, -.005]
positive affective engagement (PAE)															
Condition dummy:	.100	.106	.346	.070	.000 [-.110, .307]	-1.49**	.314	.000	-.335**	.000 [-2.10, -.853]	-.059*	.030	.049	-.144*	.013 [-.126, -.007]
relationship oriented: acceptance (AA)															
Trustworthiness (TW)											.138**	.041	.001	.480**	.000 [.060, .219]
Negative affect (NA)											.003	.005	.560	.050	.558 [-.006, .013]
Control variables															
Personal impact of COVID-19											.013	.013	.313	.057	.306 [-.012, .040]
Recognize leader											.033	.046	.474	.070	.478 [-.050, .132]
Indirect effects											.049*	.020	.014	.117**	.002 [.019, .101]
PAE → TW → Compliance											-.005	.009	.567	-.013	.566 [-.026, .011]
PAE → NA → Compliance											.014	.014	.336	.033	.332 [-.012, .045]
AA → TW → Compliance											-.004	.030	.571	-.010	.568 [-.020, .008]
AA → NA → Compliance															
<i>R</i> <sup>2</sup>										.150** ( <i>p</i> = .000)					.239** ( <i>p</i> = .001)
AIC, BIC										.046 ( <i>p</i> = .070)					1,526, 1,584

*Note.* *N* = 312. The standardized coefficients, as well as the *R*<sup>2</sup> values, were obtained using the STDYX command in Mplus. Reference category for dummy condition variables was the affect-worsening condition (negative affective engagement). IER = interpersonal emotion regulation; AIC = Akaike information criterion; BIC = Bayesian information criterion.

<sup>a</sup> Intention to comply was transformed using the Log10 command. 95% confidence intervals (CI<sub>95</sub>) report unstandardized effects.

\* *p* < .05. \*\* *p* < .01.

reaffirmed the relevance of using affect-improving strategies compared to affect worsening. Participants in both affect-improving conditions reported significantly lower negative affect, but the positive affective engagement condition was associated with significantly higher perceived trustworthiness, which mediated its relationship with compliance intentions. Based on these findings, we would encourage future research which looks in more detail at specific types of affect-improving and affect-worsening IER strategies.

### General Discussion

In this research, we sought to understand the mechanisms through which a national leader's use of extrinsic IER strategies (Niven et al., 2009; Zaki & Williams, 2013) impacted followers' behavioral intentions by examining the relationships among IER, trust, negative affect, and compliance intentions. Specifically, we tested a theoretical model of how the IER strategies in political leaders' communications relate to citizens' compliance intentions through its effect on citizens' trust and negative affect. Our studies collectively demonstrate that the IER strategies of a political leader are important considerations in the context of crisis communications to a nation during a global pandemic. Affect-improving IER strategies (Post et al., 2019; Williams, 2007) enhance citizens' perceptions of psychological safety and emotional support (Williams, 2007) and dampen negative affect. Moreover, our studies demonstrated that the leader's use of affect-improving strategies during crisis communications (and specifically *positive engagement*) was positively related to citizens' perceptions of the leader's trustworthiness, which in turn increased citizens' intention to comply with the national pandemic restrictions.

We obtained mixed findings for the role of affect-worsening strategies. Across all studies, they did not have a direct effect on compliance but were negatively related to perceived trustworthiness and associated with higher levels of negative affect. Only in our second study did we find that they had an indirect effect of worsening compliance via lower perceived trustworthiness. Thus, at best, it seems that affect-worsening strategies have no effect, and at worst, they may exacerbate the situation. This lends some support to contentions that fear focused appeals produce unintended consequences such as denial, avoidance, defensiveness, anxiety, increased risk behavior, and a feeling of lack of control (Stolow et al., 2020).

Across all studies, evaluations of the leader's trustworthiness but not affective mechanisms drove the effect of leader IER strategies on citizens' intentions to comply. A possible interpretation of this result is that in a crisis, citizens—in recognizing their own vulnerability—respond positively to a competent, benevolent leader, regardless of how they are feeling. Trust is likely to reduce complexity and uncertainty (Lewicki & Brinsfield, 2011) and provide a solid basis for behavioral intentions irrespective of affect. There was little evidence to suggest that the use of affect-worsening strategies or negative affect was associated with compliance intentions. Affect-worsening strategies appear to be perceived as threat-enhancing behaviors that amplify citizens' negative emotions and consequently negatively impact compliance intentions.

We also provided an initial exploration of whether there is merit to exploring differential effects of specific affect-improving and affect-worsening IER strategies, finding that *positive affective engagement* was associated with higher perceived trustworthiness compared to *negative affective engagement* or *relationship-oriented* strategies (even affect-improving ones such as *acceptance*). Despite the strong

emphasis on solidarity across political discourse during the COVID-19 pandemic, affect-improving strategies targeted at strengthening social relationships (“we’re all in this together”) were not as helpful as positive engagement strategies in promoting compliance (and trust). This result is a little surprising as prior evidence would suggest that a strong sense of national (collective) identity, predicted compliance with constrained mobility guidance (e.g., van Bavel et al., 2022). Moreover, as the relationship-oriented strategies function by communicating about the target's relationship with the regulator, we tentatively expected it to have a stronger impact on the trust pathway which is a relational pathway. It may be that in threatening contexts, specific political leader IER strategies that emphasize affiliative behaviors are less effective when juxtaposed with leader IER strategies that offer instrumental promises for engaged support.

*Positive affective engagement* as an affect-improving IER strategy can be considered an informational, problem-focused form of support (Niven et al., 2009), and citizens may perceive that they can trust the leader's competence to a greater extent as a result. Perceived trustworthiness has three components, ability, benevolence, and integrity. Our research suggests that affect-improving IER (and specifically *positive affect engagement*) may drive the citizen's attention to the competence of the leader to deliver (ability-based trustworthiness), while past research has posited that IER may be critical to signaling benevolence, especially in ambiguous relationships (e.g., Reeck et al., 2016). As an initial exploration of this reasoning, we conducted additional post hoc analyses for our studies. For Studies 1 and 2 (see Table S4 in the online supplemental materials), we conducted a model with the three components of trustworthiness as mediators.<sup>6</sup> We found some modest evidence for differential indirect effects. All three trustworthiness components were predicted by affect-improving IER and additionally by affect-worsening IER in Study 2 only. Trust in the leader's ability mediated the paths from both leader affect-improving and affect-worsening IER to compliance in Study 2, but no other indirect paths were significant. In Study 3, we looked at differences in ability, benevolence, and integrity across the three conditions. The *positive affective engagement* condition was significantly higher than the other two conditions with regard to ability and benevolence trustworthiness and from the *negative affective engagement* condition (but not *acceptance* condition) with regard to integrity trustworthiness (see Table S7 in the online supplemental materials). While future research is needed to investigate these relationships, it appears that *positive affect engagement* may operate primarily by bringing focus to the ability and benevolence subdimensions of leader trustworthiness.

### Contributions to Theory and Research

Leadership represents an intersection of forces and factors associated with the leader, the followers, and the context in which they are embedded (Bligh et al., 2004). We integrated theory and research regarding IER (Madrid et al., 2016; Niven et al., 2009; Post et al., 2019; Williams, 2007) with theory from crisis management (Hobfoll et al., 2007) and EASI theory (van Kleef, 2009) to understand the impact of political leaders' use of IER on citizens in a crisis context. Although the focus on IER might suggest that the key mechanism underlying its impact is affect, our research points to a more

<sup>6</sup> Before this step, we conducted a CFA to ensure that the three-factor conceptualization of trustworthiness fit the data. Results of the CFAs can be found in Table S3 in the online supplemental materials.

cognitive inferential pathway via trustworthiness as the critical underlying mechanism in crisis contexts and provides initial empirical support for theoretical relationships proposed by Williams (2007) and Niven et al. (2012). In doing so, we build on the IER literature by expanding knowledge regarding the impact of leader IER on citizen behavioral intentions during crises.

### Practical Implications

Leaders require more than good communication skills in a crisis. They need a framework that can aid them in conveying the emotional and cognitive meaning of the crisis to motivate citizens to engage in necessary behaviors and support effective governance. Drawing on extrinsic IER strategies can aid with this. As IER strategies clearly vary in their effectiveness, these studies offer guidance to leaders facing dire circumstances regarding the strategies that can be used to foster trust in leadership and motivate citizen compliance intentions. Recent research has found that such relational behaviors may be more frequent in female leaders (e.g., Post et al., 2019; Sergent & Stajkovic, 2020). However, attempts to explain effects such as ours through leader gender confounds the effects of gender and relational skills (Post et al., 2019). Rather, our studies demonstrate that IER can serve as a useful framework to understand and describe affective leadership communication during crises.

### Strengths, Limitations, and Directions for Future Research

Our study is among the first to investigate the impact of leader extrinsic IER strategies in a distal relationship, rather than in proximal interpersonal interactions. However, this distance between the agent (i.e., the leader) and the target of the regulation process (i.e., the citizen) may have an impact on the regulation strategies used and how they are perceived. Future research should examine this and extend our findings with a broader range of national leaders.

In our multistudy approach, we aimed to maximize external validity by capturing the impact of IER for the intended audience of leader communications in Study 1 and Study 2 and then to maximize internal validity by experimentally manipulating IER with an audience unfamiliar with the leader in Study 3. Studies 1 and 2 focused on the perceptions of leader IER strategies (in a similar fashion to past research, e.g., Madrid et al., 2016, 2019), rather than leaders' own ratings, which could be a limitation of our design. In these studies, we cannot discount a potential halo effect, whereby participants rate the IER more favorably and hence, rate the leader more favorably due to generally favorable opinions as a whole. Study 3 used an experimental approach, not relying on citizen perceptions of IER, although the argument could be made that in the content analysis process of identifying the audio clips for the experimental conditions these represent the researchers' perceptions of these strategies.

Study 3 identified the merits of examining specific IER strategies within the affect-improving and affect-worsening categories and identified that *positive engagement strategies* may be particularly worthy of further investigation. Recent research by Shu et al. (2021) demonstrated that the effectiveness of specific extrinsic IER strategies (specifically, situation modification and reappraisal which are similar to the positive engagement strategies in our Study 3) can be differentially effective depending on whether the individual (the target of the IER) is experiencing anxiety or sadness.

We did not capture this nuance in our studies (as the early stages of the COVID-19 pandemic were broadly considered to be worrying times) but consideration of this in future research outside of contexts of crisis will be important to consider. Ideally, we would also have included a manipulation check in this study.

Given the temporal context and focus of our research, which focused on government leader communication regarding the COVID-19 crisis, we did not include positive affect in our model, as it seemed unlikely that citizens would experience positive emotions during this time. However, we did conduct supplementary analysis (see Table S2 in the online supplemental materials) replacing negative with positive affect and confirmed that it did not change our findings (the indirect effect through perceived trustworthiness remained, and positive affect was not associated with compliance intentions). However, future research which looks to examine the impact of distal leader IER strategies outside of crisis periods, may do well to consider possible effects on positive affect.

Furthermore, we investigated negative affect as a composite and chose not to investigate discrete negative emotions. Past research has demonstrated that discrete emotions, such as anger and fear, can lead to different action tendencies (e.g., Tamir & Ford, 2009). Future research could further expand on our findings by considering the role of leader IER strategies on the different action tendencies of discrete emotions among followers.

In our research, we captured compliance intentions rather than actual compliance behaviors. However, the compliance intentions reported from the participants of Study 1 align well with national surveys conducted on a weekly basis by the Department of Health in Ireland at that time,<sup>7</sup> as well as with analysis conducted by the National Public Health Emergency Response Team (NPHER) using Google location data<sup>8</sup> and research conducted by the Dublin Institute for Advanced Studies (DIAS) demonstrating decreases in human-made seismic-noise starting from the first national lockdown in March 2020.<sup>9</sup> Thus, we can be cautiously confident that our measure of compliance intentions reflected actual behavior.

Finally, while the cross-sectional design in Studies 1 and 2 limits the extent to which we can infer causality, the real-time collection of the data, directly following real leader speeches meant we captured "live" reactions to the ministerial briefings. Furthermore, the order of variables in the model was theoretically derived (Little et al., 2016; Niven et al., 2012) and combined with the experimental nature of Study 3, our studies present reasonable evidence of the replicability of these effects. Ideally, Study 3 would also have included an affect-worsening relationship-oriented IER condition and a control condition with neutral information although the nature of the audio clips from a real speech made it impossible to develop an appropriate control.

### Constraints on Generality

All three studies were conducted with reference to leaders in two Anglo-phone European countries and while some cross-cultural

<sup>7</sup> These reports can be accessed via the Government of Ireland's website here: <https://www.gov.ie/en/collection/6b4401-view-the-amarach-public-opinion-survey/>.

<sup>8</sup> <https://www.rte.ie/news/coronavirus/2020/04/03/1128229-google-location-data/>.

<sup>9</sup> <https://www.dias.ie/2020/04/08/dias-seismologists-detect-decrease-in-human-made-noise-across-ireland-due-to-covid-19-lockdown/>.

research has indicated that nonwestern samples have been underrepresented in pandemic-related research (e.g., Conway et al., 2022), others (e.g., Wang et al., 2021, 87 country study) have reported only negligible cultural differences in emotional reactions to emotion regulation strategies. However, wider evidence (e.g., Knoll et al., 2021) of significant cultural differences on intrapersonal issues such as silence motives and behavior (withholding voice/opinion) would suggest that future researchers consider the cultural norms of the populations they research. For instance, it is possible that respondents from collectivist cultures would perceive leader IERs differently than those in an individualist society (Minkov et al., 2017). A further constraint on generalizability is that the focal referents in the research were male political leaders in two European countries, both stable parliamentary democracies. The findings may not transfer seamlessly to different political and sociocultural contexts, where alternative leadership models apply and where different cultural norms with reference to leadership pertain. Future research will benefit from examining specifically, samples representing different cultural and political norms, and how IER strategies employed by political leaders are perceived in these different contexts.

The COVID-19 pandemic represented a unique global disruptive phenomenon, pitching political leaders and citizens into an uncharted domain with reference to a host of societal norms and behaviors. While the exogenous disruption of the pandemic offered an excellent context for real-time leadership IER research, the uniqueness of the circumstances would suggest that the research insights gained in this study are evidence from within an exceptional global event. The insights, while enormously valuable, should be adapted to other contexts with caution. However, as the affect-improving IER effects reflect the evidence from many pre-pandemic studies and contexts, further research might review the impact of experiencing different discrete emotions in different contexts (Cohen-Chen et al., 2020). To extend our understanding of political leader IER effects on citizen behavior, researchers might focus on other global challenges such as climate change and decarbonization, as areas that require significant popular behavior change and adaptation. How might leader IER influence societal perceptions of the need for immediate versus longer-term actions, where benefits may not accrue for this generation but for future generations?

### Conclusion

IER strategies used by national leaders in their communication to citizens are important for perceived trustworthiness, negative affect, and compliance intentions and have significant implications for national leaders in times of national crisis. Evidence from our experimental and field settings suggests that affect-improving strategies, and in particular positive affective engagement strategies, are a critical tool for influencing citizen behavioral intentions during a crisis, via perceived trustworthiness.

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