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Citation

Kantorowicz, J. J., Kuipers, S. L., Liem, M. C. A., & Boin, R. A. (2022). Divergent shifts in fear of terrorism. *Journal Of Contingencies And Crisis Management*.
doi:10.1111/1468-5973.12422

Version: Publisher's Version

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Downloaded from: <https://hdl.handle.net/1887/3425777>

Note: To cite this publication please use the final published version (if applicable).

RESEARCH NOTE

WILEY

Divergent shifts in fear of terrorism

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Funding information

None

Abstract

In this study, we examine how the two facets of the fear of terrorism—the affective and behavioural fears—shift over time. To this end, we use a unique longitudinal data set of a representative sample of 755 Dutch respondents, recruited from the Longitudinal Internet Studies for the Social Sciences panel, in the time period between November 2017 and May 2020. We find that the reported affective fear of terrorism is significantly lower during the COVID-19 crisis in 2020 than it was in 2017. Yet a divergent trend for behavioural fear of terrorism occurred. In spite of decreased affective fear of terrorism threats, respondents in 2020 reported increased protective and avoidance behaviours, similar to behaviours promoted to stop the spread of COVID-19.

KEYWORDS

avoidance and protective behaviour, COVID-19, fear of terrorism

1 | INTRODUCTION: A SHIFT IN FEAR OF TERRORISM?

Fear is a powerful incentive. It can affect individual and collective behaviours in various ways. For terrorists, fear is a weapon, as they seek to influence people's behaviour by instilling fear (Jenkins, 2006). Governments also use fear to shape collective behaviour. Fear of a common enemy can mobilize societal support for policy responses. Fear of a pandemic can induce functional behaviour (social distancing, staying at home) that contributes to stopping a virus from spreading.

In this study note, we use a unique longitudinal data set of a representative sample of the Dutch population to demonstrate how fear of terrorism shifts over time, in the period between 2017 and 2020. We operationalize fear of terrorism with two variables, which capture the affective and behavioural facets of dispositional fear of terrorism (Gabriel & Greve, 2003). Prima facie, it is difficult to form any general expectations regarding the shifts in fear of terrorism.

While the number of terrorist attacks declined in Europe in 2018¹, in the Netherlands two small terrorist attacks (stabbing) took

place, one in The Hague (May 5) and at the Amsterdam Central Station (August 31).² Additionally, in March 2019, the Netherlands experienced an officially confirmed terrorist attack at a larger scale (the Utrecht shooting).³ The literature suggests that recent (indirect) experiences of terrorist attacks in one's own country could lead to an increase of fear of terrorism and an overestimation of one's personal risks regarding (McArdle et al., 2012, pp. 751–752; Huddy et al., 2002).

At the same time, terrorist attacks at different scales had been frequenting EU member states near and far, over a longer period of time, which could also lead to a sustained or even decreasing level of fear regarding one's own situation simply because citizens get accustomed to the threat level (Waxman, 2011). An indication of lesser threat perception is the Dutch government decreasing the terror alert from 4 to 3 on the 5-point threat assessment scale.⁴ This study note juxtaposes these two competing expectations (1: recent manifestations of terrorism increase affective and behavioural fears and 2: continuous manifestations of threat reduce affective and behavioural fears).

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We document that the two forms of fear of terrorism—*affective* and *behavioural* fears—in fact diverged, that is, they evolved in opposite directions. While the *affective* fear of terrorism declined between 2017 and 2020, the *behavioural* fear increased. In fact, we observe that avoidance and protective behaviours against terrorist attacks (capturing the behavioural dimension of fear of terrorism) intensified, which corresponds to behavioural responses to the spread of COVID-19. These include avoiding and cancelling foreign and domestic trips and avoiding crowded places.

We seek to address two shortcomings in the literature that closely relate risk perception and fear (Crijns et al., 2017; Lee et al., 2010; Misis et al., 2017; Nellis & Savage, 2012; Siegrist et al., 2007). First, studies on risk perception and fear that draw on larger and representative samples of the general population are scarce, especially for the European context (Brands & van Wilsem, 2019) and they mostly deal with cross-sectional data, which rely on between-subject comparisons rather than within-subject changes. Second, even though the relationship between risk perception and fear is well documented (e.g., Guedes et al., 2018; Krulichová, 2019), much less is known about this relationship in the context of multiple, simultaneous threats (McArdle et al., 2012; Terpstra, 2011). This study seeks to contribute by conducting a large-scale nationally representative survey in fear of terrorism in the face of another simultaneous threat and possible confounding factor: the COVID-19 pandemic.⁵

This study note is organized in the following way. First, we present our data collection process and the findings from our consecutive surveys and document a divergence between the two metrics of fear. As this note has a largely inductive character, in the second part we offer potential explanations of our findings, followed by suggestions for future research.

1.1 | Data and operationalization

We conducted two waves of a 'fear of terrorism' survey in the period 6–28 November 2017 (Van der Does et al., 2021) and 4–26 May 2020, respectively. The second wave included the same questions as the prior survey, but it also contained questions related to the COVID-19 pandemic. Respondents recruited from the Longitudinal Internet Studies for the Social Sciences (LISS) panel provide a representative sample of the Dutch population in terms of common background characteristics such as sex, age, education and parents' country of origin (see [Van der Does et al., 2021] for more information about the survey instrument). The first wave provided a final sample of 1077 respondents, of which 755 participated in the second wave.

The results discussed in this paper are based on the responses from participants who took part in both waves of the survey, thus the sample size is 755. The descriptive statistics of the sample are reported in Supporting Information Material. In our survey, we operationalized dispositional fear of terrorism with two variables, which correspond to the *affective* and *behavioural* facets of fear. The *affective* fear of terrorism was measured by the following survey

item: 'To what extent do you worry about the possibility that you or (someone from) your family will be a victim of a terrorist attack'. The possible responses recorded as 1 = not worried, 2 = a little worried, 3 = very worried and 4 = extremely worried.

In the taxonomy created by Gabriel and Greve (2003, pp. 608–609), the direct usage of 'fear' in the survey questions refers to the so-called global measurement of fear of crime and responding to such a global fear question is an especially difficult cognitive task. Furthermore, as argued by Warr and Ellison (2000) and other studies in criminology (e.g., Nellis & Savage, 2012), the word 'fear' in questions is more likely to refer to one's perception of immediate threat, instead of one's anxiety about prospective victimizations. As the researchers aim to capture the perception of future victimization, the term 'worry' is argued to be more suitable for question framing.

The behavioural aspects of fear of terrorism were measured with a set of 10 survey items, which aim to capture expected behaviour in response to a terrorist attack. These items range from behaviours such as avoiding crowded places (avoidance behaviour) to investing in self-defence (protective behaviour).

2 | RESULTS

Despite the fact that the Netherlands experienced terrorist attacks in between both survey measurements, we observe a sizeable decline in the *affective* fear of terrorism. As seen in panel A of Figure 1, close to 15 percentage points of the respondents are no longer a little worried about a terrorist attack (48.7% in 2017 and 34.0% in 2020) and there is a noticeable increase of nearly 20 percentage points of the participants who are not worried about a terrorist attack (44.1% in 2017 and 63.0% in 2020). Overall, the differences in fear of terrorism between Wave 1 (2017) and Wave 2 (2020) are substantial and statistically significant ($\chi^2(3) = 61.48$, $p < .001$). In Panel B of Figure 1, we present the flows of responses across the two surveys. A large proportion of respondents shifted from 'a little bit worried' to 'not worried'. Also, a relatively large group of respondents changed their position from 'very worried' to 'a little bit worried'.

Why did this significant drop in the *affective* fear of terrorism occur? Given that this decline coincided with a growing global fear of epidemic (see Figure 2),⁶ one could ask if the increasing fear of epidemic was compensated by a decreasing fear of terrorism. In other words, does the fear of epidemic crowd out the fear of terrorism or did an accumulation of threats lead to an accumulation of fear?

There are several reasons preventing us to give a conclusive answer to the question of whether respondents trade-off one fear for the other. First, there is an objective reason to believe that people's fear of terrorism would decline even in the absence of the COVID-19 crisis. Note that in December 2019, so just before the start of the coronavirus pandemic, the Dutch authorities lowered the terrorist threat level from 4 to 3 on the 5-point threat assessment scale.

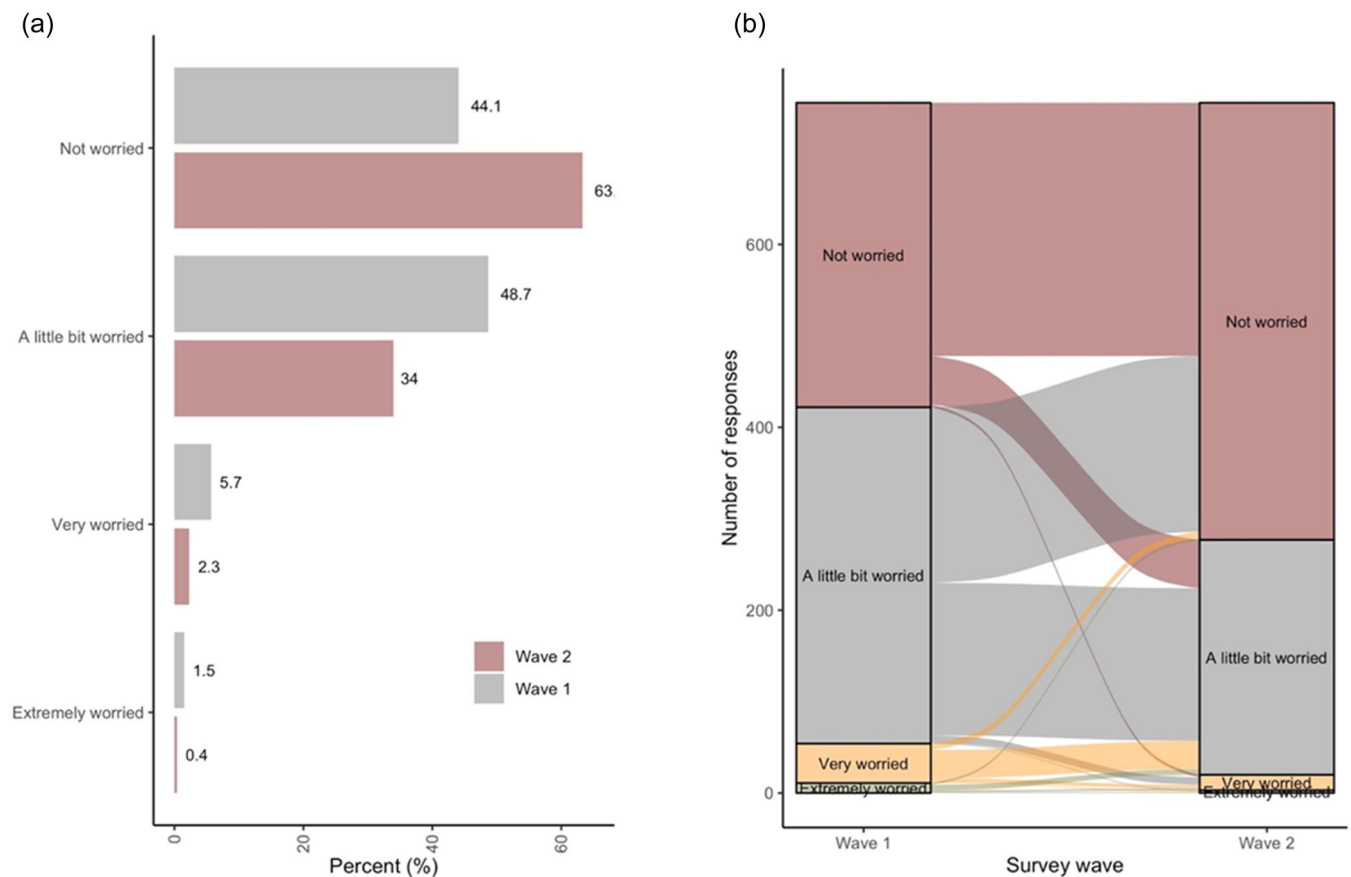


FIGURE 1 The affective fear of terrorism. (a) Distribution of responses and (b) flow of responses.

Second, all subjects in our sample aged by almost 3 years and the drop in the fear could be simply driven by aging. Third, the respondents could be subject to habituation: they learn how to live with a permanent threat leading to a lesser fear over time. Despite these limitations, we provide a tentative answer to the crowding out question by comparing two groups of respondents: (1) respondents whose global fear of epidemic increased and (2) respondents whose global fear of epidemic remained at the same level in the examined period. If the crowding out conjecture holds, at the minimum we expect that respondents with more fear of epidemic observed a greater decline in the fear of terrorism (shifting from one fear to the other) than respondents whose fear of epidemic remained stable over time. Figure 3 demonstrates the distribution of changes in the fear of terrorism across these two groups of respondents. It shows that the distribution is quite similar across both groups; this lack of difference is further confirmed by a formal statistical test ($\chi^2(5) = 4.54, p = .475$). Overall, the crowding-out effect is not evident.

After demonstrating changes in the affective facet of fear, we now turn to examining the shifts in the behavioural aspects of fear of terrorism. In line with Guedes et al. (2018), we expect that a decline in the affective fear of terrorism corresponds with a decrease of behavioural fear captured via avoidance and protective behaviours. The avoidance and protective behaviours are measured by a set of 10 items ranging from avoiding crowded places (avoidance) to investing

in self-defence (protective behaviour). The items are displayed in Figure 4.

Figure 4 shows that decline in the affective fear for terrorism does not translate into a commensurate decline of avoidance and protective behaviours. In fact, respondents in 2020 are *more* likely than in 2017 to (1) avoid crowded places ($\chi^2(2) = 74.85, p < .001$), (2) avoid domestic travel destinations ($\chi^2(2) = 45.57, p < .001$), (3) avoid foreign travel destinations ($\chi^2(2) = 27.29, p < .001$), (4) cancel a trip to any travel destination ($\chi^2(2) = 84.80, p < .001$) and (5) cancel a trip to a place with a higher risk of a terrorist attack ($\chi^2(2) = 23.43, p < .001$). Other behavioural responses are not statistically significant. This includes (1) stay extra alert ($\chi^2(2) = 0.87, p = .647$), (2) follow the news with extra attention ($\chi^2(2) = 0.03, p = .984$), (3) buy cancellation insurance ($\chi^2(2) = 3.51, p = .173$), (4) consult travel advice ($\chi^2(2) = 5.92, p = .052$), and (5) invest in self-defence ($\chi^2(2) = 2.10, p = .350$). All in all, the shifts of affective and behavioural fears are in fact divergent.

2.1 | Conclusions and future research outlook

The affective fear of terrorism declined in the period between November 2017 and May 2020, even though the Netherlands experienced a confirmed terrorist attack in the meantime. We found

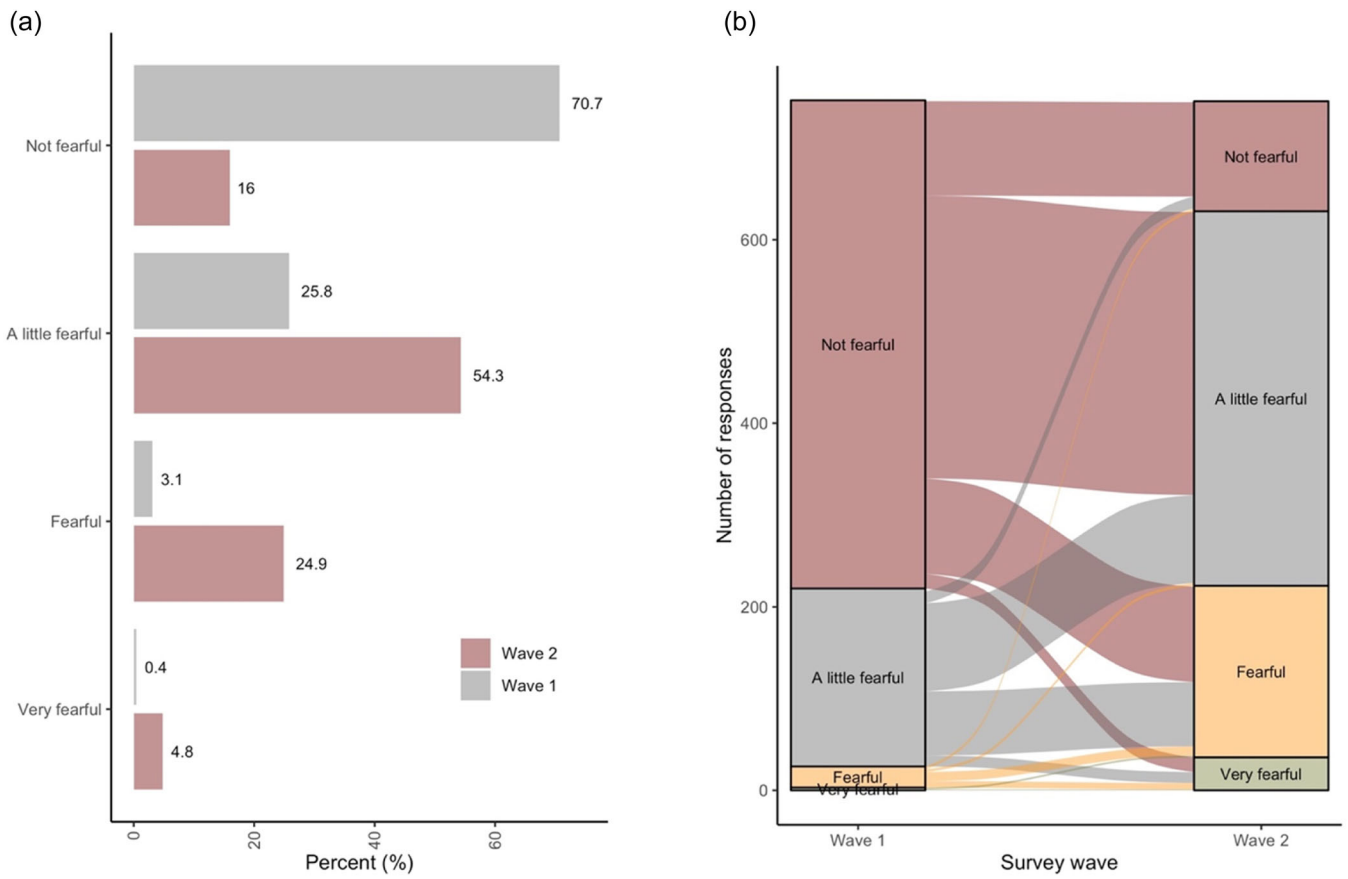


FIGURE 2 The global fear of epidemic. (a) Distribution of responses and (b) flow of responses.

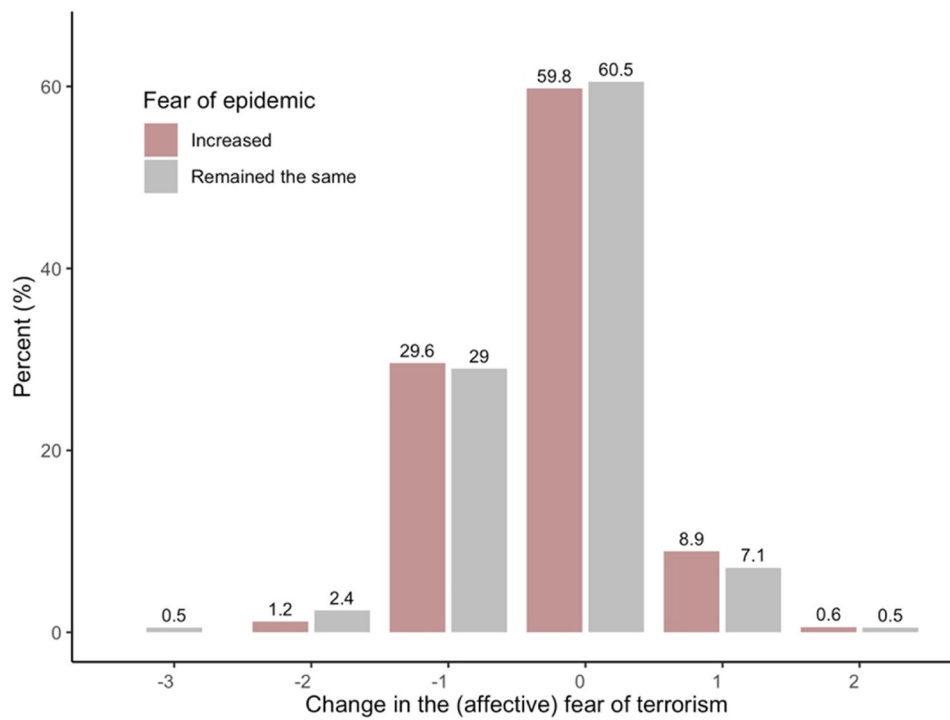
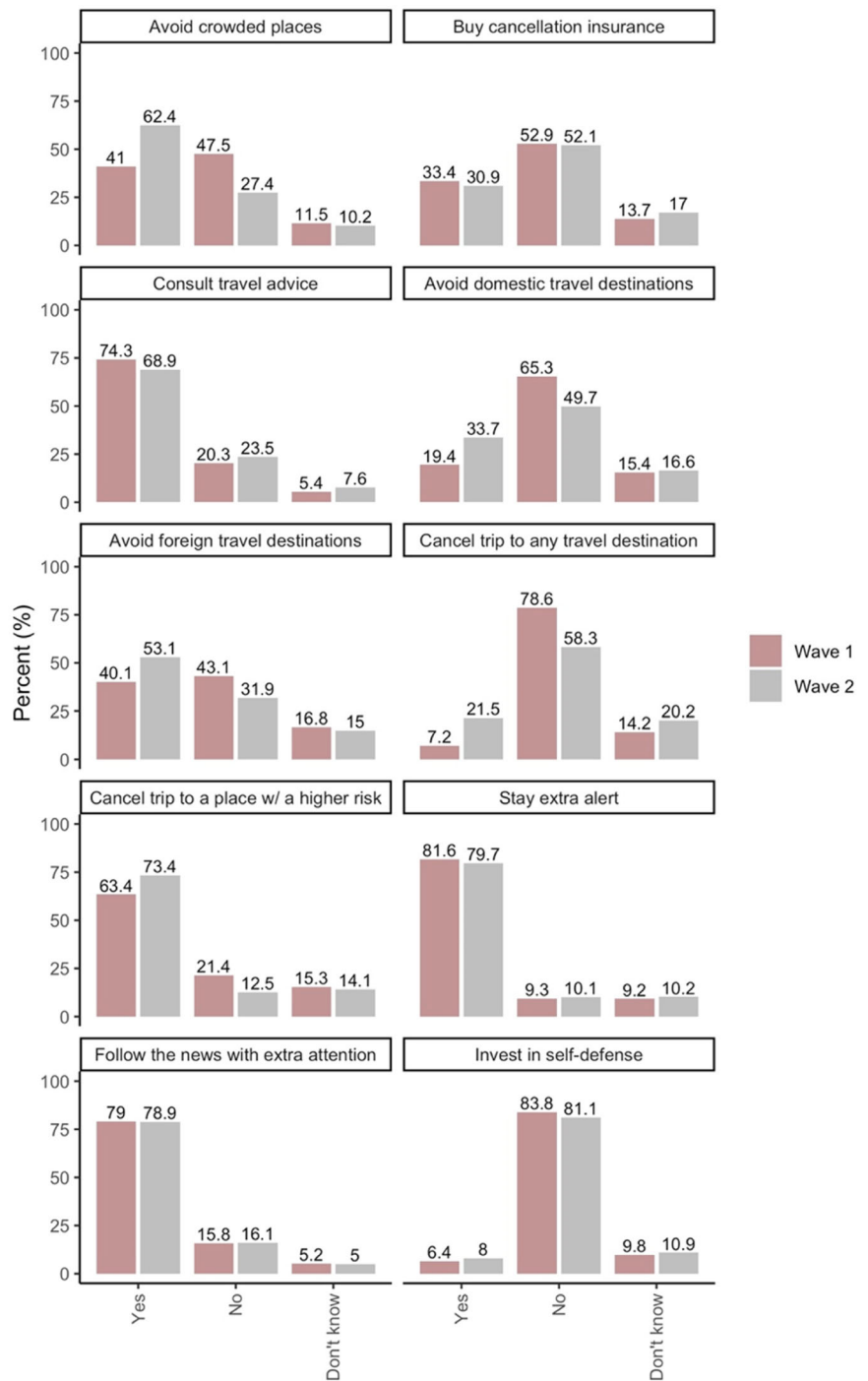


FIGURE 3 The distribution of changes in the fear of terrorism across respondents who experienced an increase in fear of epidemic and those whose fear of epidemic remained stable.

FIGURE 4 Behavioural fear in response to a terrorist attack.



a divergent trend for behavioural fear of terrorism. Arguably, the divergence between the two facets of fear of terrorism was triggered by the occurrence of the major confounding event—the coronavirus pandemic. In response to questions regarding their response to perceived terrorism threats, respondents reported increased protective and avoidance behaviours in 2020, similar to behaviours promoted (and in some instances even imposed) to stop the spread of COVID-19. The increase in behavioural responses suggests that respondents might have copied behaviours ‘scripted’ by COVID-19 crisis responses. Taken from behaviourism approaches, a behavioural

script is also known as a ‘procedural’ schema (Hastie, 1981), or an ‘event’ schema (Taylor & Crocker, 1981). Simply put, scripts constitute a sequence of expected behaviours for a given situation, that is, how actors should act according to the unfolding of events. From this perspective, scripts offered by local and national government in the face of the COVID crisis include avoiding and cancelling trips and avoiding crowded places.

Our results suggest that these behavioural scripts, in addition to cognitive behavioural responses, may be copied when facing other threats, such as terrorism. However, a somewhat simpler explanation

could be as follows. Since by and large the public was complying with the policies to contain the spread of coronaviruses, such as avoiding crowded places and trips, it was easy and costless for respondents to report that they pursue the same actions in response to the threat of terrorism. If that is the case, we expect that over time, as the coronavirus pandemic phases out along with policies related to it, the intensity of behavioural responses towards terrorism will decline as well.

These explanations are only tentative, and as such we call for more research on the behavioural spillovers between crises and their persistence. Will pandemic-induced behavioural responses become so ingrained in collective memory that citizens will be more likely to avoid crowded places in response to different types of future threats? What can we see empirically in terms of avoidance behaviour now that immediate pandemic threats have subsided in the Summer of 2022? What are individual level characteristics of respondents whose affective fear of terrorism decreased and how do they differ from respondents whose fear remained stable. By the same token, what are characteristics of respondents most prone to behavioural spillovers from the COVID-19 crisis to terrorism fear perception. Finally, although we do not provide any evidence for the existence of the crowding out effects of fear, we encourage further research on the question whether fear is cumulative or compensative. Fear and risk perception are shaped by the crisis at hand. The crisis at hand also shapes expected responses to other types of risks. These are important insights for policymakers that seek to communicate on risk and responses.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the LISS Panel data (<https://www.lissdata.nl/>). Restrictions apply to the availability of these data, which were used under license for this study. Data are available with the permission of the LISS Panel.

ENDNOTES

- ¹ See the official statistics provided by the Europol: <https://www.europol.europa.eu/activities-services/main-reports/european-union-terrorism-situation-and-trend-report-2021-tesat> (last accessed on November 10, 2021).
- ² Algemene Inlichtingen en Veiligheidsdienst (Dutch General Intelligence and Security Service), Annual Report 2018.
- ³ For more details on the Utrecht shooting, see, for instance, Wolbers (2021).
- ⁴ See the official statement by the NCTV: <https://www.government.nl/latest/news/2019/12/09/national-coordinator-for-security-and-counterterrorism-threat-level-lowered-to-3-attack-in-the-netherlands-%E2%80%98conceivable%E2%80%99> (last accessed on November 10, 2021).
- ⁵ See Kruglanski et al. (2020) for a detailed discussion on how the pandemic crisis, and especially uncertainty and confusion around the crisis, is exploited by terror groups for, inter alia, the spread of conspiracy theories and other terrorists' propaganda.
- ⁶ The exact question asked to capture the fear of epidemic was as follows: "How fearful are you that in the Netherlands the following will take place: an epidemic". The possible responses were recorded as

1 = Not fearful, 2 = a little fearful, 3 = fearful, and 4 = very fearful. Briefly discussing the results, in Wave 1 (2017) respondents were generally not fearful of the occurrence of a major epidemic in their country, as 70.7% and 25.8% of them showed no or minor fear. This shifts considerably for responses collected from the same individuals in Wave 2 (2020). Now only 16% of respondents display no fear and 54.3% a little fear. Also, nearly 25% of respondents report that they are fearful of a major epidemic. In contrast, in Wave 1 (2017) only 3.1% of these participants stated this level of fear. The differences between these two waves are statistically significant ($\chi^2(3) = 492.42, p < .001$).

REFERENCES

- Brands, J., & van Wilsem, J. (2019). Connected and fearful? Exploring fear of online financial crime, Internet behaviour and their relationship. *European Journal of Criminology*, 18, 213–234. <https://doi.org/10.1177/1477370819839619>
- Crijns, H., Cauberghe, V., & Hudders, L. (2017). Terrorism threat in Belgium: The resilience of Belgian citizens and the protection of governmental reputation by means of communication. *Public Relations Review*, 43(1), 219–234. <https://doi.org/10.1016/j.pubrev.2016.10.006>
- Gabriel, U., & Greve, W. (2003). The Psychology of Fear of Crime: Conceptual and Methodological Perspectives. *British Journal of Criminology*, 43(3), 600–614. <https://doi.org/10.1093/bjc/azg600>
- Guedes, I. M. E. S., Domingos, S. P. A., & Cardoso, C. S. (2018). Fear of crime, personality and trait emotions: An empirical study. *European Journal of Criminology*, 15(6), 658–679. <https://doi.org/10.1177/1477370817749500>
- Hastie, R. (1981). Schematic principles in human memory. In E. T. Higgins, C. P. Herman, & M. P. Zanna (Eds.), *Social Cognition* (pp. 39–88). Erlbaum.
- Huddy, L., Feldman, S., Capelos, T., & Provost, C. (2002). The consequences of terrorism: Disentangling the effects of personal and national threat. *Political Psychology*, 23(3), 485–509.
- Jenkins, B. (2006). *The new age of terrorism*.
- Kruglanski, A. W., Gunaratna, R., Ellenberg, M., & Speckhard, A. (2020). Terrorism in time of the pandemic: Exploiting mayhem. *Global Security: Health, Science and Policy*, 5(1), 121–132. <https://doi.org/10.1080/23779497.2020.1832903>
- Krulichová, E. (2019). The relationship between fear of crime and risk perception across Europe. *Criminology & Criminal Justice*, 19(2), 197–214. <https://doi.org/10.1177/1748895818757832>
- Lee, J. E. C., Lemyre, L., & Krewski, D. (2010). A multi-method, multi-hazard approach to explore the uniqueness of terrorism risk perceptions and worry. *Journal of Applied Social Psychology*, 40, 241–272. <https://doi.org/10.1111/j.1559-1816.2009.00572.x>
- McArdle, S. C., Rosoff, H., & John, R. S. (2012). The dynamics of evolving beliefs, concerns emotions, and behavioral avoidance following 9/11: A longitudinal analysis of representative archival samples. *Risk Analysis*, 32, 744–761. <https://doi.org/10.1111/j.1539-6924.2012.01814.x>
- Misis, M. L., Bush, M. D., & Hendrix, N. (2017). An examination of college students' fears about terrorism and the likelihood of a terrorist attack. *Behavioral Sciences of Terrorism and Political Aggression*, 9, 125–138. <https://doi.org/10.1080/19434472.2016.1187656>
- Nellis, A. M., & Savage, J. (2012). Does watching the news affect fear of terrorism? The importance of media exposure on terrorism fear. *Crime and Delinquency*, 58, 748–768. <https://doi.org/10.1177/001128712452961>
- Siegrist, M., Keller, C., Kastenholz, H., Frey, S., & Wiek, A. (2007). Laypeople's and experts' perception of nanotechnology hazards. *Risk Analysis*, 27(1), 5–69. <https://doi.org/10.1111/j.1539-6924.2006.00859.x>

- Taylor, S. E., & Crocker, J. (1981). Schematic bases of social information processing. In *Social Cognition: The Ontario Symposium*.
- Terpstra, T. (2011). Emotions, trust, and perceived risk: Affective and cognitive routes to flood preparedness behavior. *Risk Analysis*, 31, 1658–1675. <https://doi.org/10.1111/j.1539-6924.2011.01616.x>
- Van Der Does, R., Kantorowicz, J., Kuipers, S. & Liem, M. (2021). Does terrorism dominate citizens' hearts or minds? The relationship between fear of terrorism and trust in government. *Terrorism and Political Violence*, 33(6), 1276-1294. <https://doi.org/10.1080/09546553.2019.1608951>
- Warr, M., & Ellison, C. G. (2000). Rethinking social reactions to crime: Personal and altruistic fear in family households. *American Journal of Sociology*, 106, 551–578.
- Waxman, D. (2011). Living with terror, not living in terror: The impact of chronic terrorism on Israeli society. *Perspectives on Terrorism*, 5(5–6), 4–26.

- Wolbers, J. (2021). Understanding distributed sensemaking in crisis management: The case of the Utrecht terrorist attack. *Journal of Contingencies and Crisis Management*. <https://doi.org/10.1111/1468-5973.12382>

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Kantorowicz, J., Kuipers, S., Liem, M., & Boin, A. (2022). Divergent Shifts in Fear of Terrorism. *Journal of Contingencies and Crisis Management*, 1–7. <https://doi.org/10.1111/1468-5973.12422>