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Citation for published version:

Delhey, J, Steckermeier, LC, Boehnke, K, Deutsch, F, Eichhorn, J, Kühnen, U & Welzel, C 2023, 'Existential insecurity and trust during the COVID-19 pandemic: The case of Germany', *Journal of Trust Research*.
<https://doi.org/10.1080/21515581.2023.2223184>

Digital Object Identifier (DOI):

[10.1080/21515581.2023.2223184](https://doi.org/10.1080/21515581.2023.2223184)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

Journal of Trust Research

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Existential insecurity and trust during the COVID-19 pandemic: The case of Germany

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ABSTRACT

In many, but not all situations it is easier to be trusting from a position of security. This paper addresses trust's relationship with perceived insecurities induced by the coronavirus pandemic. Looking at social trust (trust in strangers) and institutional trust (trust in the government and in the public health-care system), we explore whether individuals' trust is negatively or positively associated with economic fears and health fears. Using panel data from Germany for 2020, 2021, and 2022 we find in cross-sectional analysis that institutional trust – but not social trust – is strengthened by health fears and weakened by economic fears. Longitudinal analysis shows that changes in health fears – but not in economic fears – increase social and institutional trust. Our results indicate that only health fears are threatening enough to suspend the otherwise tight-knit syndrome of security and trust.

Keywords: COVID-19; social trust; trust in the government; trust in health-care system; existential insecurity; health fears; economic fears

Introduction

Trust is widely seen as both a social glue and lubricant for complex societies. While *social* trust is crucial for society's cohesion (e.g. Dragolov et al., 2016; Larsen, 2013), *political* trust is important for effective governance and collective action (Levi & Stoker, 2000). It is therefore no surprise that trust was an important issue for social scientists from the beginning of the coronavirus pandemic (cf. Devine et al., 2021): Political elites needed public support for unpopular measures – first and foremost the lockdowns – and citizens had to commit themselves to comply with social distancing practices and other unwanted interventions that interrupted their normal everyday life.

Research on trust and the pandemic has chiefly focused on average trust levels, behavioural compliance, and vaccination acceptance. Rising *levels* of political trust shortly after the outbreak of the pandemic have been reported for various West European countries

(De Vries et al., 2021; Esaiasson et al., 2021; Kritzinger et al., 2021; Madsen et al., 2020; Schraff, 2021). For social trust, increasing (Esaiasson et al., 2021), stable (Wu et al., 2022), and decreasing (Borkowska & Laurence, 2021) levels were reported. Regarding *behavioural compliance*, the expectation of a positive role of social and institutional trust for accepting social distancing and other containment measures have fully materialised in some studies (Helliwell et al., 2021; Lindholt et al., 2021), partially in others (Alessandri et al., 2020; Nivette et al., 2021) and not at all in yet other studies (Jennings et al., 2021; Woelfert & Kunst, 2020; Wong & Jensen, 2020). The study by Jennings et al. (2021) even concludes that from the perspective of compliance, 'mistrust is more desirable than trust' (Jennings et al., 2021, p. 1192). In contrast, individuals' trust seems to have had an unequivocally positive influence on the *acceptance of COVID-19 vaccines*. This has been demonstrated for trust in scientists (Lamot et al., 2022; Lindholt et al., 2021; Rozek et al., 2021), trust in health-care institutions and health-care professionals (Lindholt et al., 2021; Rozek et al., 2021), and trust in or satisfaction with the government (Lamot et al., 2022; Lindholt et al., 2021; Viskupič et al., 2022).

This paper examines trust in people and in institutions during the pandemic from an *existential insecurity* point of view. The coronavirus pandemic not only constituted a dramatic health crisis on a global scale but also a severe economic crisis, undermining people's sense of existential security and causing uncertainty distress (Freeston et al., 2020). We are primarily interested in how individuals' pandemic-induced *health and economic fears* relate to three forms of trust, namely general social trust in other people, trust in the government, and trust in the public health-care system. Assuming that in situations of greatest uncertainty, individuals have an inner impulse to restore a sense of security (cf. Montgomery et al., 2008), our expectation is that fears will be positively rather than negatively associated with trust, especially with trust in government, as this institution can respond most comprehensively to the threats posed by the pandemic.

We utilise panel data for Germany from the 'Values in Crisis' project (henceforth: VIC-project) collected in three waves in 2020, 2021, and 2022. These data allow us to track, for the same individuals, the dynamics of trust and its association with crisis-induced threat perceptions at different stages of the pandemic. So far, this association has mainly been explored for political trust during the onset of the pandemic (Amat et al., 2020; Jennings et al., 2021; Kritzinger et al., 2021). Our research expands knowledge by including trust in strangers and trust in the health-care system, as well as by taking into account earlier *and* later phases of the pandemic in our investigation. We further address an important knowledge gap regarding the relative importance of the health and economic fears associated with the pandemic (see Amat et al., 2020, pp. 25–26). For trust research more generally, our study provides valuable insights into the complex and at times puzzling nexus between (in)security and trust (e.g. Frederiksen, 2016; Misztal, 2011).

We continue this article by introducing our key concepts and arguments on how feeling existentially insecure and trust may be associated with each other. We then describe Germany's institutional environment and how the pandemic progressed in Germany. Subsequently, we introduce the data and key variables used in the analysis and present the empirical findings. Finally, we discuss the key results and identify some lessons for our general understanding of trust.

Conceptual clarification and theoretical approach

Social trust and institutional trust

Trust can be defined as the favourable expectation that others – individuals, or collective actors – are well-disposed towards us and would by no means wilfully harm us (Delhey & Newton, 2003; Möllering, 2001; Sztompka, 1999). When we trust, we believe in the competence, benevolence, and integrity of others (Sztompka, 1999), without being able to *know* whether they will really meet expectations. What characterises trust, therefore, is the leap of faith it involves (cf. Giddens, 1990; Möllering, 2001), beyond the good reasons people may have to be trustful (Möllering, 2001, p. 415). Trust combines good reasons with a faith-like ‘suspension of the unknown’ (Frederiksen, 2016).

It is common to distinguish forms of trust depending on who is the recipient: persons, or institutions (cf. Giddens, 1990; Sztompka, 1999). *Social trust* refers to fellow citizens of varying degrees of familiarity, from family members then neighbours and casual acquaintances (particularised trust), to abstract categories of unknown people and strangers (generalised trust) (Delhey et al., 2011; Sztompka, 1999). In modern societies, general social trust is seen as a particularly valuable and ‘civic’ resource (Delhey et al., 2011). Respective survey questions tap individuals’ fundamental attitude toward fellow human beings, detached from *concrete* decision-making situations.

Trust in *institutions* and *systems* (Giddens, 1990; Hellmann, 2004; Luhmann, 1988) refers to a wide range of societal institutions and public facilities as trust recipients (Levi & Stoker, 2000; Newton, 2007). In this paper, we consider trust in the national government – typically called political trust (Zmerli & Newton, 2008) – and in the public health-care system. When we trust institutions, we believe that they will ‘deliver’ (Bouckaert & Van de Walle, 2001), and do so with benevolence and integrity. Survey questions on institutional trust typically tap individuals’ fundamental and largely implicit attitude towards societal organisations and their functioning. As this implicitness has been shown to be a constitutive element of trust (Endress, 2004), we speak of institutional *trust* rather than institutional confidence, as suggested by Luhmann (1988; see also Frederiksen, 2016). Another reason is that in the German language no differentiation is made between trust and confidence when referring to institutions. The German VIC-questionnaire explicitly asked respondents about their *trust* in institutions.

The security–trust nexus

Even if trust is operationalised as an individual disposition (as we do), the wider social context is of great importance. Sztompka’s (1999) well-known conceptual model sees trust as influenced by agential endowments, but also by wider societal conditions and the course of history. Ultimately, individual trust of any sort ‘constitutively builds on institutional arrangements’ (Bachmann, 2011, p. 206), and how citizens’ perceive these (see Delhey & Newton, 2003). One important implication from this model is that living in *objectively secure conditions* promotes trust, especially general social and institutional trust (particularised trust in networks of familiar people might be an exception, at least in specific settings, see Cook & Gerbasi, 2009). Taking the example of the socio-economic security that individuals’ agential endowments provide, research has repeatedly shown that those with better education, higher income and occupational status, and better

health are more trustful than the resource-poor, both towards other people in general, and institutions (Catterberg & Moreno, 2006; Eurofound, 2018; Slomczynski & Janicka, 2009; Zhao et al., 2019). There is little to suggest that this should be any different under the pandemic condition.

The security–trust nexus also exists with respect to contextual conditions: for one, social trust is higher in wealthy and well-governed countries (Delhey & Newton, 2005; Rothstein & Stolle, 2008). Conversely, lower levels of trust have been reported for citizenries that were exposed to state-organised spying and arbitrary arrest – for example, in Eastern Europe during Communism (Mishler & Rose, 2001); for regions that had a high load of communicable diseases prior to industrialisation (Thornhill et al., 2009); and for descendants of migrants to the United States who came from countries differently affected by the Spanish flu pandemic of 1918–1920 (Aassve et al., 2021). Overall, these findings support Ronald Inglehart’s idea that living in secure conditions is conducive to the development of pro-social values and orientations (Inglehart, 1997; 1999).

Perceived existential insecurity and trust in times of extreme crisis

For the purpose of this paper, it is important to differentiate conditions of insecurity that are not life-threatening and to which people are accustomed to from the unfamiliar insecurity induced by a sudden and deep crisis which threatens all segments of society. It is generally argued that large-scale threats have the potential to undermine citizens’ usual feeling of being able to live securely (cf. Montgomery et al., 2008; Poortvliet & Lokhorst, 2016); for many, a sense of *existential insecurity* (Wheelock, 1999) replaces the accustomed ‘sense of confidence, safety, and freedom from fear or anxiety, particularly with respect to fulfilling one’s present (and future) needs’ (Reber, 1995, p. 697; see also Gasper, 2005). This is exactly the condition of the COVID-19 pandemic, which was unforeseen, disruptive, and life-threatening.

In such a harmful condition, self-protection is one way of coping: ‘[U]nexpected events can become a source of distrust and then the protection of self-interest becomes the priority’ (Misztal, 2011, p. 371). One explanation could be that there is a limit to the amount of insecurity individuals can bear, so that ‘increased feelings of vulnerability (..) could motivate people to be more cautious (..)’ (Van Fossen et al., 2022, p. 2). Supportive evidence comes from the eurozone crisis, as declining levels of political trust – although not of social trust – were common, especially in debtor countries with high levels of unemployment (Ervasti et al., 2019; Foster & Frieden, 2017); and from the US during the coronavirus pandemic, as the perception of health risks predicted less willingness to participate in contact tracing (Van Fossen et al., 2022). Following this logic, crisis-induced fears should be *negatively* associated with trust. This reaction, however, is tantamount to a withdrawal from society and does little to restore a sense of security within the individual, which is a major motivation in situations of high risk and uncertainty (McGregor et al., 2001; Van den Bos, 2009).

A second way of coping is compensatory trust as an attempt to restore a sense of security. In this vein, Misztal emphasises the usefulness of trust as an ‘adaptive response’ to cope with situations of overwhelming uncertainty (Misztal, 2011, p. 372). Quoting Hannah Arendt (1958, p. 244), Misztal describes the psychological benefit of trust as the creation of ‘islands of certainty in an ocean of uncertainty’. The same thoughts, just

in more prosaic words, are expressed by attachment theory (Bowlby, 1969). This states that humans seek protection from the entire group, and especially from its leaders, when faced with an overwhelming external threat – a behaviour that moreover has proven to be advantageous from an evolutionary perspective (Sinclair & LoCicero, 2010). Directly aiming at the trust issue, Montgomery and colleagues (2008) posit that in the face of extreme events, those who retain *some* hope are often compelled to rely on others, be it public agencies, rescue organisations or charitable associations and their representatives. In trusting them, imposed vulnerability (stemming from the harmful event) is replaced by an elective vulnerability stemming from the decision to trust. In short, this second way of coping implies that crisis-induced fears should be *positively* associated with trust. Pre-pandemic evidence comes from – temporarily – surging support for governments in the wake of terrorist attacks (Dinesen & Jaeger, 2013; Sinclair & LoCicero, 2010; Woods, 2011). More recent research (Foa & Welzel, 2023) finds that during the COVID-19-pandemic stress and fear were related to greater support for democracy only when the external threat (indicated by high numbers of deaths) was strong.

Which way of coping is more likely under the pandemic condition we had until recently? We believe that the second option – trust as an adaptive response – is likely if the potential trustee is expectably part of the solution rather than the problem and has the resources to protect the individual. This outcome is expectable for *trust in government* and *trust in the health-care system*, for the latter especially in view of the health fears. In contrast, for *other people in general* coping strategy one – the protective mode of being distrustful – seems more reasonable, as *any* person could have been infected with the coronavirus and thus could pose a danger. Put differently, there are more good reasons to expect protection from institutions than from fellow countrymen.

Insights from previous research on the coronavirus pandemic

The lion's share of pandemic-related research relevant to us is on political trust. Several studies from Europe found evidence for a short-lived rally-around-the-flag at the beginning of the pandemic (Bol et al., 2021; De Vries et al., 2021; Kritzinger et al., 2021; Madsen et al., 2020; Schraff, 2021). This has been interpreted either as a leap of faith in view of the ability to act, as demonstrated by the first lockdowns, or as 'driven by collective angst due to rising COVID-19 case numbers' (Schraff, 2021, p. 2). Only a few studies have examined trust's link with fears *directly*, with mixed findings: one study found a *trust-enhancing* effect for perceived public health threats during the first COVID-19 wave in Austria but not in France (Kritzinger et al., 2021). Perceived economic threats, in contrast, were not associated with political trust in these two countries. Examining four Western democracies at the onset of the pandemic (Jennings et al., 2021), various threat perceptions – personal threat, threat to country, and threat to job/business – were positively associated with political trust in a pooled analysis. In a country-by-country perspective, trust was related to higher threat perception in the USA and Australia, but not in Italy and the United Kingdom, where higher threat perceptions were associated with distrust. To the best of our knowledge, no study has addressed these associations for social trust and for trust in the health-care system.

Evidence for trust's individual-level relationship with structural security stemming from agential endowments is also mixed. In England, the corrosive impact of the pandemic on

neighbourhood trust was most prevalent among low-educated residents of disadvantaged communities and among ethnic minorities (Borkowska & Laurence, 2021) – the standard security–trust nexus. In Canada, both generalised and particularised social trust increased among individuals with higher socio-economic positions while it decreased among individuals with lower socio-economic positions (Wu et al., 2022). This suggests that the structural security–trust nexus may even intensify under the pandemic condition. Yet in the Netherlands, the effect of standard individual-level determinants of political trust – for example, economic evaluations – became strongly attenuated during the first wave of the COVID-19 pandemic (Schraff, 2021), which might suggest that individual socio-economic resources were less important for trust in pandemic times, at least for political trust.

Almost all of the aforementioned studies have dealt with the early stages of the pandemic, leaving open the question of how citizens responded to the *continuing* crisis. On the one hand, COVID-19 infection rates skyrocketed across Europe, including Germany (see next section), in the second and third wave of the pandemic. This might have refreshed threat perceptions, renewing the need for trust as an adaptive response. On the other hand, all European governments, including the German government, were struggling with containing the pandemic, which raises the question of how long citizens credited their governments and other institutions with extra trust as crisis managers. Two years of containment regulations have also revealed that not all citizens behaved responsibly. In conjunction with a polarising public debate about coronavirus sceptics (cf. Jaspal & Nerlich, 2022; Schieferdecker, 2021; Spöri et al., 2022), such negative experiences may make it increasingly unlikely that people who feel threatened by the pandemic will put extra trust in strangers.

Contextual information on the COVID-19 pandemic in Germany

The institutional hallmarks of German society are the social market economy and a conservative welfare state, which is focused on securing status (Esping-Andersen, 1990). With about 40% of the German population believing that most people can be trusted, pre-pandemic Germany took a position among the five most trusting countries in the EU, surpassed only by the Nordic countries. With respect to trust in institutions, about one-third of Germans trust their government and almost two-thirds their health-care system, placing Germany just above the EU average (EVS, 2022, own calculations, weighted percentages).

When the pandemic broke out, the German government reacted swiftly with decisive measures (Steinhardt, 2021). For two-thirds of the period between March 2020 and November 2022, the government response in Germany – such as school and workplace closures, stay-at-home requirements, and travel restrictions – were stricter than the EU average. During the fieldwork periods of the VIC-project (see Table 1 for details), Germany's government strictness was close to the EU average in the first survey wave, and slightly below it in the second and third survey waves (Hale et al., 2021).

With regards to confirmed COVID-19 infections, Germany started out at the EU average and managed to stay below that during the autumn/winter 2020–21. The autumn/winter 2021–22 infection wave hit Germany with a small time-lag and somewhat harder than the EU, on average. Looking at COVID-19-related deaths, Germany's death rate was constantly

Table 1. Public health situation during VIC fieldwork periods

VIC wave		Wave 1	Wave 2	Wave 3
Fieldwork		Apr 24 to May 10, 2020	Feb 15 to Mar 1, 2021	Feb 16 to Apr 28, 2022
Daily new infections per million	Min	11	85	864
	Max	28	98	2,753
	Ø	17	91	2,031
Daily COVID-19-related deaths per million	Min	1	4	2
	Max	2	6	3
	Ø	2	5	2
Vaccinated people per 100	First dose	-	3–5	77–78
	Second dose	-	2–3	75–76
	Third dose	-	-	58–66

OWID (2023): New confirmed cases of COVID-19 (7-day smoothed) per 1,000,000 people. Counts can include probable cases, where reported; New deaths attributed to COVID-19 (7-day smoothed) per 1,000,000 people. Counts can include probable deaths, where reported; Total number of people who received at least one vaccine dose per 100 people in the total population; Total number of people who received all doses prescribed by the initial vaccination protocol per 100 people in the total population.

higher than the EU average. The field periods of the first and the second survey wave each fell into a period of decreasing cases and deaths, whereas the third field period was characterised by a rise to previously unimaginable case numbers, yet simultaneously decreasing death rates (Figure 1).

Vaccination roll-out in Germany started December 26th, 2020. During the second field time only about 3–5% of the population had received their first COVID-19 shot, 2–3% had received a second dose. By the end of August 2021 two-thirds of the German population was vaccinated at least once. This number had increased to more than three-quarters when the third field time started. Table 1 summarises the public health situation during the three fieldwork periods.

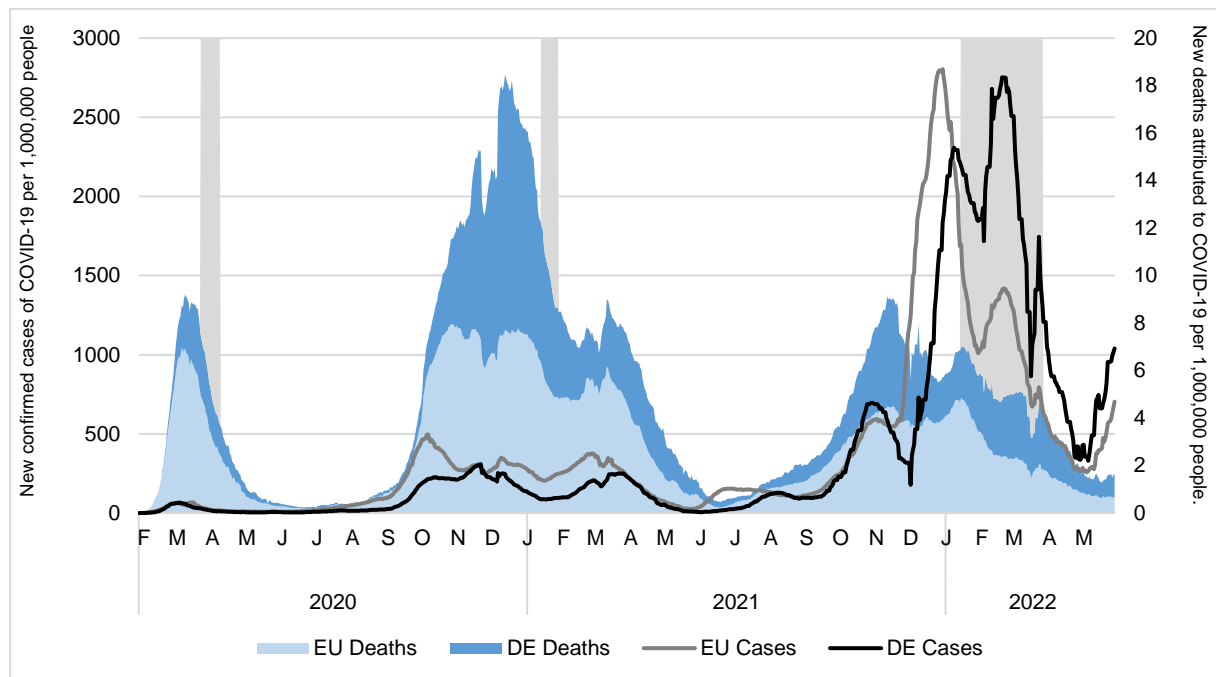


Figure 1. Confirmed COVID-19 cases and deaths in Germany and the EU, early 2020 to mid-2022

OWID (2023): New confirmed cases of COVID-19 (7-day smoothed) per 1,000,000 people. Counts can include probable cases, where reported; New deaths attributed to COVID-19 (7-day smoothed) per 1,000,000 people. Counts can include probable deaths, where reported. Grey bars depict field times of the VIC-survey.

Moving to economic repercussions, GDP per capita fell by 10% during the first and second quarter of 2020 (Gern & Hauber, 2020). Afterwards, economic activity recovered, interrupted by the quarters with lockdowns. All in all, according to the German Federal Statistical Office, GDP growth rates were -3.7 in 2020, $+2.6$ in 2021, and $+1.9$ in 2022. Although the German government was quite generous in mitigating economic hardships caused by the lockdowns (Steinhardt, 2021), the aid packages could not prevent slight increases in poverty rates in the first year of the pandemic, with younger people, women, and those who were employed prior to the outbreak of the pandemic being affected above-average from this increase (Menta, 2022). Moreover, the pandemic increased the economic strain of low-income households, although less so than in other European countries (Gambacorta et al., 2022).

Focusing on the German case, this paper aims to shed light on trust's relationship with pandemic-induced economic and health insecurities as well as with structural (in)securities related to income and education, over the course of the pandemic. We do this from an exploratory rather than an explanatory perspective, given both the lack of strong theoretical priors and inconclusive evidence from previous studies. In a first step, we focus on how trust is *structured* through pandemic and structural uncertainties in each wave separately. In a second step, we then focus on changes over time: here, we make use of the panel structure of our data and examine whether individuals whose uncertainty levels increased or decreased within the pandemic also report corresponding *changes* in their trust levels. Our analysis, therefore, seeks answers to the following research questions:

RQ1: Viewed cross-sectionally, are pandemic-related insecurities – that is, economic and health fears – and structural (in)securities positively or negatively associated with individuals' trust in strangers, the government, and the health-care system during the pandemic period?

RQ2: Viewed longitudinally, do changes in pandemic-related insecurities and in structural (in)securities explain changes in individuals' trust in strangers, the government, and the health-care system?

Data, variables, and analytical strategy

We used data from the VIC-project to investigate the social and psychological impacts of the COVID-19 pandemic in Germany. The survey was designed as a panel-study for Germany and the UK in a collaborative effort of one British and three German universities. The first wave was conducted between April 24 and May 10, 2020, the second between February 15 and March 1, 2021, and the third between February 16 and April 28, 2022. Participants were drawn from an online panel maintained by Bilendi Market Research GmbH. A detailed quota design was used, with hard quotas for region, gender, age, and education as well as additional cross-quotas for age and education within regions, which resulted in a high-quality quota-representative sample of the population aged 18–74 years. The subsequent cross-sectional analyses are based on a balanced panel of 1,241 respondents in waves 1 and 2, and a sample of 1,202 respondents in wave 3 that includes 877 respondents from the balanced panel plus a refresher sample of 325 newly recruited respondents. The fixed-effects panel-analysis is based on a balanced panel of 877 respondents who participated in all three waves. Table A1 in the appendix provides information on our unweighted and weighted quota samples, including a

comparison with population statistics. None of the analyses reported here have been previously reported using this data.

Dependent variables: Forms of trust

Forms of trust. Questions were asked about all three forms of trust – social trust, trust in the government, and trust in the health-care system¹ – using a four-point scale. To operationalise *general social trust*, the VIC-survey asked respondents to evaluate how much they trust people they are meeting for the first time (an item adapted from the World Values Survey/European Values Study, EVS).² The response categories were ‘do not trust at all’, ‘do not trust very much’, ‘trust somewhat’, and ‘trust completely’. *Institutional trust* was captured via the question ‘Please indicate how much you trust the following institutions in our country’: ‘(a) the government and (b) the healthcare system?’ Response categories were ‘none at all’, ‘not very much’, ‘quite a lot’, and ‘a great deal’. For the cross-sectional analysis we dichotomised all three trust items into ‘low trust’ (summarising the first two response categories, coded as 0), and ‘high trust’ (the remaining two categories, coded as 1). The reason for this is the skewed distribution of both social trust – very few people trust others completely – and of trust in the healthcare system – very few people do not trust the health-care system at all. For the longitudinal analysis we use the full four-point scale. Intra-individual trust changes can thus take values from –3, indicating the maximum possible loss of trust, to +3, indicating the maximum gain in trust.

Independent variables

Crisis-related insecurity

The VIC-data asked about fears people might have had due to the pandemic. *Economic fears* and *health fears* were measured as responses to the respective questions: ‘How afraid are you that you or your loved ones will suffer from an economic recession following the coronavirus crisis?’ and ‘How afraid are you that you or your loved ones will get sick and suffer severely from the coronavirus?’, evaluated on a five-point scale from 0 ‘not at all afraid’ to 4 ‘very afraid’.

Structural (in)security

We operationalised *education* as the highest educational level attained by the respondents, subcategorised into three levels: primary (primary or less); secondary (complete or incomplete technical/vocational secondary); and tertiary (complete or incomplete university-preparatory secondary or university-level). We operationalised *income* as the country-specific income decile to which the respondents belonged once all their household’s income sources had been considered and equalised for the number of dependents.

Control variables

Since the pandemic and political measures taken to contain it affected people differently, we control for *gender* (male as reference), *age* in years, *marital status* (married as reference), *children in household* (no children as reference), and *residence* (urban as reference). Age and gender should be considered from a health perspective alone. Research on

COVID-19 infections and deaths found systematic differences related to gender, age, and combinations thereof – with older men being more likely to die from a COVID-19 infection than older women, and working-age women being more likely to be infected than men of the same age (Cannistraci et al., 2021; Doerre & Doblhammer, 2022). Gender should further be considered from an equity perspective, especially in combination with parenthood. Gender inequality in care and housework increased at least in the early stages of the pandemic (Jessen et al., 2022), along with stress and mental distress of mothers and single parents (Li et al., 2022). The often-voiced concerns about a regression to traditional gender roles was also reflected in pandemic-related worries, with women worrying more about childcare and men worrying more about paid work (Czymara et al., 2021). Finally, controlling for urbanisation is relevant because the effects of containment policies differed between urban and rural areas in terms of health outcomes (Glogowsky et al., 2020) as well as economic insecurity and institutional trust (Arin et al., 2022).

Analytical strategy

First, we estimate logistic regressions by type of trust and year to examine how crisis-related and structural (in)securities relate to the levels of trust people hold, addressing RQ1. This step makes use of the full samples for each year; the samples from 2020 and 2021 (N = 1,241) are thus identical but differ from 2022 (N = 1,202). Second, we estimate fixed-effects (within) regression models to estimate associations between changes in the trust levels and changes in crisis-related and structural (in)securities, addressing RQ2. This step makes use of a reduced sample of those individuals who participated in all three waves, that is a balanced panel of 877 individuals (2,631 observations).

Results

Distribution of key variables

The three forms of trust vary distinctly, both in their absolute levels and their development over time (see Table 2). Many Germans trust the health-care system (ranging from 77% in 2020 to 67% in 2022); still about half place trust in the government (from 59% in 2020 to 49% in 2022); yet only a quarter trust other people generally (from 25% in 2020 to 24% in 2022). The differences in trust levels between the three recipients of trust are statistically significant in all three years. Whereas the population-average of social trust remained stable across the three points in time, both trust in the government and in the health-care system decreased significantly from year to year.

Moving from overall to within-individual changes (see Table 3), we find that social trust and trust in the government remained stable across all three waves for about half of the population, and trust in the health-care system for about 40%. Year-to-year decreases in trust were reported by slightly more people for both forms of institutional trust (20–22%, respectively) than for social trust (17%). Year-to-year increases were overall fewer, with 16–17% reporting increases in social trust and trust in the health-care system, and 12–14% reporting increases in trust in the government.

With regard to *crisis-related insecurities*, economic fears were overall more pronounced than health fears, yet significantly so only in 2020 and 2021. While the level

Table 2. Mean, standard deviation, minimum and maximum of variables in the analysis.

	2020	2021	2022	Min	Max
	Mean (SD)	Mean (SD)	Mean (SD)		
Social Trust	1.10 (0.66)	1.08 (0.68)	1.06 (0.68)	0	3
Social Trust (dichotomised)	0.25 (0.43)	0.25 (0.43)	0.24 (0.43)	0	1
Trust in the Government	1.60 (0.81)	1.51 (0.83)	1.40 (0.81)	0	3
Trust in the Government (dichotomised)	0.59 (0.49)	0.55 (0.50)	0.49 (0.50)	0	1
Trust in Health Care System	1.92 (0.74)	1.84 (0.78)	1.75 (0.80)	0	3
Trust in Health Care System (dichotomised)	0.77 (0.42)	0.72 (0.45)	0.67 (0.47)	0	1
Feared economic insecurity	2.04 (1.15)	1.98 (1.17)	1.90 (1.17)	0	4
Feared health insecurity	1.93 (1.12)	2.10 (1.13)	1.87 (1.12)	0	4
Lower education	0.19 (0.39)	0.16 (0.36)	0.17 (0.37)	0	1
Intermediate education	0.56 (0.50)	0.56 (0.50)	0.56 (0.50)	0	1
Higher education	0.25 (0.43)	0.28 (0.45)	0.27 (0.44)	0	1
Income deciles	5.18 (2.90)	5.36 (2.91)	5.42 (2.92)	1	10
Gender (ref. male)	0.50 (0.50)	0.50 (0.50)	0.49 (0.50)	0	1
Married/partner	0.56 (0.50)	0.56 (0.50)	0.53 (0.50)	0	1
Divorced/separated/widowed	0.14 (0.34)	0.13 (0.34)	0.12 (0.33)	0	1
Never married/single	0.30 (0.46)	0.31 (0.46)	0.35 (0.48)	0	1
Child(ren) in household	0.23 (0.42)	0.23 (0.42)	0.27 (0.44)	0	1
Age in years	45.25 (15.15)	46.18 (15.10)	44.93 (15.25)	18/19	73/74
Area (ref. urban)	0.22 (0.41)	0.22 (0.41)	0.22 (0.41)	0	1
East Germany	0.18 (0.38)	0.18 (0.38)	0.18 (0.38)	0	1
Observations	1,241	1,241	1,202		

VIC Germany, weighted means and standard deviations.

of economic fears remained stable across the three points in time, health fears overall increased from 2020 to 2021 before returning to the 2020 level in 2022 (see Table 2). Within individuals, economic fears turned out to be more volatile than health fears. For about three in four people, economic fears changed during the pandemic, compared to roughly two out of three people whose health fears changed. Year-to-year more people reported decreases in economic fears (29–31%) than increases (22–27%). Health fears on the contrary increased from 2020 to 2021 in nearly every third person, and decreased for about every sixth. From 2021 to 2022 this trend reversed, with twice as many people (31% vs 13%) experiencing fewer health fears than more (see Table 4).

As expected, *structural (in)security* was relatively stable across the three waves (see Table 2). Education was part of the quota set for the sample and thus mirrored the factual distribution of education attained in Germany, with a concentration of people at the secondary level. Unsurprisingly, this variable hardly changed between the three survey waves. Income turned out to be more volatile: whereas *average* household income remained stable over the pandemic years, every fourth (from 2021 to 2022

Table 3. Changes in social and institutional trust in Germany (in %).

	Social			Government			Healthcare system		
	2020–2021	2021–2022	2020–2021–2022	2020–2021	2021–2022	2020–2021–2022	2020–2021	2021–2022	2020–2021–2022
decreases	17	17	<1	20	21	2	22	22	1
stable	67	66	51	66	66	48	61	62	42
increases	16	17	<1	14	12	<1	17	16	1

VIC Germany, N = 878, percentage of participants whose trust increased, remained stable or increased from first to second, from second to third wave, and throughout all three waves (weighted).

Table 4. Changes in crisis-related insecurities in Germany (in %).

	Economic fears			Health fears		
	2020– 2021	2021– 2022	2020- 2021-2022	2020– 2021	2021– 2022	2020- 2021-2022
decreases	29	31	3	15	31	2
stable	44	46	24	54	57	34
increases	27	22	2	31	13	2

VIC Germany, N = 878, percentage of participants whose fears increased, remained stable or increased from first to second, from second to third wave, and throughout all three waves (weighted).

even every third) household suffered a financial loss, and every fourth household enjoyed a gain (see Table 5).

Trust during the pandemic in cross-sectional perspective

Insecurities and social trust

Next, we shed light on trust's *cross-sectional* relationship with (in)securities during the pandemic. We begin with presenting the results of logistic regression models of social trust on crisis-related and structural insecurity (Table 6). The crisis-related existential insecurities – both health fears and economic fears – were unrelated to social trust in all three waves. Of the structural (in)securities, income exerted a negligible positive effect on social trust in the second wave, yet not in the other waves. Education, on the other hand, was positively associated in all three waves, indicating that the higher educated have a more trustful attitude towards strangers. Whereas the lack of an income effect comes as a surprise – higher income is usually associated with higher social trust – the education effect is in line with previous research.

Insecurities and trust in the government

We move on with cross-sectional analysis, this time for political trust (Table 7). Most importantly, trust in the German government is associated with crisis-related insecurities. Yet whereas individuals with higher economic fears were less likely to trust the government in all three waves, people with higher health fears were more likely to trust the government. In line with previous research, people with higher education and higher income expressed higher trust in their government.

Insecurities and trust in the health-care system

Trust in the German health-care system was also associated with both crisis-related and structural insecurities yet to a lesser extent than trust in the government (Table 8). Again, economic fears exerted a *negative*, and health fears a *positive* effect. The

Table 5. Changes in income and education in Germany (in %).

	Income			Education	
	2020– 2021	2021– 2022	2020- 2021-2022	2020– 2021	2021– 2022
decreases	27	33	5	-	-
stable	47	43	25	95	97
increases	26	24	5	5	3

VIC Germany, N = 878, percentage of participants whose structural insecurities remained stable or increased from first to second, from second to third wave, and throughout all three waves (weighted).

Table 6. Social trust and crisis-related and structural insecurities in Germany.

	2020	2021	2022
Economic fears	0.930 (0.049)	1.018 (0.053)	0.943 (0.051)
Health fears	0.983 (0.053)	0.983 (0.052)	0.967 (0.054)
Income (deciles)	1.016 (0.020)	1.040* (0.021)	0.996 (0.021)
Education (3 levels)	1.507*** (0.133)	1.274** (0.115)	1.385*** (0.126)
Gender (Ref.: male)	0.816 (0.089)	0.785* (0.086)	0.796* (0.090)
Divorced/separated/widowed	1.136 (0.195)	1.026 (0.181)	0.861 (0.165)
Never married/single	0.813 (0.113)	0.971 (0.138)	1.015 (0.148)
Child(ren) in household	0.995 (0.135)	1.282 (0.175)	1.385* (0.188)
Age in years	0.995 (0.004)	1.001 (0.005)	1.004 (0.005)
Area (Ref.: urban)	0.835 (0.113)	0.816 (0.110)	1.022 (0.138)
East Germany	0.869 (0.124)	0.702* (0.104)	0.631** (0.098)
Constant	0.235*** (0.087)	0.177*** (0.071)	0.172*** (0.067)
Observations	1,241	1,241	1,202
Pseudo r²	0.02	0.02	0.02
Chi²	44.28	35.28	39.56
Log likelihood	-1062.85	-1065.73	-1019.44

VIC Germany, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Odds ratios, standard errors in parentheses.

negative association of economic fears becomes significant only from the second wave onward. Being in a structurally secure position exerts the expected positive effect, albeit the effect of education is comparatively small and significant only in the first survey wave.

Trust during the pandemic in longitudinal perspective

We now turn to the relationship between *changes* in insecurities and *changes* in social and institutional trust. For this purpose, we present results from three fixed-effects regressions based on the reduced balanced panel of respondents who participated in all three survey waves (Table 9).

Longitudinally, social and institutional trust were primarily affected by crisis-related insecurity, in particular health fears: changes in health fears significantly increased people's social trust, their trust in the government and in the health-care system. In contrast, trust was completely unaffected by changes in economic fears, and largely unaffected by changes in income and education. A change in the income position – which occurred quite often – had a positive impact on individuals' trust in the government, but none on social trust and trust in the health-care system. Changes in education played no role at all for any form of trust. This is hardly surprising since very few people in the sample earned an educational degree during the time period covered.

Table 7. Trust in the government and crisis-related and structural insecurities in Germany.

	2020	2021	2022
Economic fears	0.856** (0.041)	0.762*** (0.038)	0.739*** (0.037)
Health fears	1.413*** (0.071)	1.720*** (0.089)	1.624*** (0.084)
Income (deciles)	1.112*** (0.020)	1.106*** (0.020)	1.064*** (0.019)
Education (3 levels)	1.509*** (0.119)	1.479*** (0.121)	1.185* (0.094)
Gender (Ref.: male)	0.923 (0.091)	0.875 (0.087)	0.814* (0.081)
Divorced/separated/widowed	0.794 (0.120)	1.153 (0.180)	0.704* (0.114)
Never married/single	1.104 (0.139)	1.342* (0.175)	0.820 (0.106)
Child(ren) in household	1.035 (0.128)	1.228 (0.156)	0.840 (0.102)
Age in years	1.004 (0.004)	1.003 (0.004)	0.999 (0.004)
Area (Ref.: urban)	1.162 (0.138)	0.963 (0.115)	0.825 (0.098)
East Germany	0.766* (0.096)	0.724* (0.092)	0.722** (0.091)
Constant	0.226*** (0.075)	0.150*** (0.054)	0.515 (0.175)
Observations	1,241	1,241	1,202
Pseudo r²	0.06	0.08	0.06
Chi²	145.01	209.2	150.54
Log likelihood	-1237.77	-1224.27	-1239.07

VIC Germany, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Odds ratios, standard errors in parentheses.

Discussion and conclusion

The goal of the paper at hand was to explore how crisis-induced perceptions of insecurities – personal health threats and economic threats – affected trust in strangers, the government, and the health-care system in Germany during the COVID-19 pandemic. In this concluding section, we summarise our main findings and discuss their broader implications for understanding trust (for summary table, see Table 10).

A first main finding is that cross-sectionally, it is institutional trust in both the government and in the health-care system, not social trust, which is sensitive to people's fears. Yet the two kinds of fears our research addressed work in different directions: *economic* fears work out *negatively* and are associated with lower trust in the government (in all three survey waves) and the health-care system (in two of the three survey waves). In contrast, *health* fears work out *positively*, as suggested by positive relationships with trust in the government and the health-care system (in all three survey waves). For keeping up trust in institutions, mitigating the economic fallout of the coronavirus pandemic is as important a goal as containing the virus itself.

A second main finding is that from a longitudinal perspective, primarily health fears are relevant. Changing health fears within individuals significantly increased trust in the government and in the health-care system, and social trust, too.

A third finding concerns the effects of income and education, our measures of structural insecurity: overwhelmingly, those with higher income and higher educational attainment are more trustful towards fellow citizens and institutions.

Table 8. Trust in health care and crisis-related and structural insecurities in Germany.

	2020	2021	2022
Economic fears	0.915 (0.049)	0.818*** (0.043)	0.825*** (0.041)
Health fears	1.246*** (0.069)	1.539*** (0.083)	1.445*** (0.076)
Income (deciles)	1.096*** (0.023)	1.141*** (0.023)	1.055** (0.020)
Education (3 levels)	1.199* (0.107)	1.084 (0.096)	1.171 (0.098)
Gender (Ref.: male)	0.789* (0.089)	0.622*** (0.068)	0.728** (0.076)
Divorced/separated/widowed	1.321 (0.235)	1.510* (0.260)	0.741 (0.123)
Never married/single	1.213 (0.172)	1.492** (0.212)	0.751* (0.102)
Child(ren) in household	1.167 (0.165)	1.396* (0.194)	0.888 (0.112)
Age in years	1.006 (0.004)	1.009* (0.005)	1.007 (0.004)
Area (Ref.: urban)	0.962 (0.128)	0.856 (0.110)	1.050 (0.132)
East Germany	1.137 (0.167)	0.928 (0.128)	0.784 (0.101)
Constant	0.836 (0.307)	0.474 (0.184)	0.871 (0.311)
Observations	1,241	1,241	1,202
Pseudo r²	0.03	0.07	0.04
Chi²	54.31	152.9	106.45
Log likelihood	-1023.38	-1073.46	-1142.73

VIC Germany, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Odds ratios, standard errors in parentheses.

Table 9. Fixed-effects (within) regression of trust on crisis-related and structural insecurities.

	Social Trust	Trust in the Government	Trust in Healthcare System
Afraid of economic recession	0.007 (0.014)	-0.004 (0.015)	0.005 (0.016)
Health fears	0.036* (0.017)	0.045* (0.017)	0.038* (0.019)
Income (deciles)	0.002 (0.009)	0.023* (0.010)	0.018 (0.011)
Education (3 levels)	0.081 (0.078)	0.022 (0.080)	0.112 (0.088)
Never married/single	-0.048 (0.082)	0.082 (0.085)	-0.066 (0.093)
Divorced/separated/widowed	0.141 (0.099)	0.022 (0.103)	0.083 (0.112)
Child(ren) in household	-0.291* (0.123)	-0.108 (0.127)	0.175 (0.139)
Area (Ref.: urban)	-0.023 (0.091)	0.063 (0.094)	-0.015 (0.103)
East Germany	-0.033 (0.031)	0.005 (0.032)	0.023 (0.035)
Age in years	-0.007 (0.011)	-0.086*** (0.011)	-0.060*** (0.012)
Constant	4.773 (3.434)	5.110 (3.559)	2.024 (3.890)
Observations	2,631	2,631	2,631
r ² within	0.0091	0.0421	0.0209
r ² overall	0.0000	0.0003	0.0018
r ² between	0.0002	0.0009	0.0035

VIC Germany, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Fixed-effects (within) regression coefficient, standard-errors in parentheses.

Table 10. Summary of cross-sectional and panel results in Germany

		Social Trust				Trust in Government				Trust in Healthcare System			
		2020	2021	2022	Panel	2020	2021	2022	Panel	2020	2021	2022	Panel
Fear	Economic					-	-	-			-	-	
	Health				+	+	+	+	+	+	+	+	+
Resources	Income		+			+	+	+	+	+	+	+	
	Education	+	+	+		+	+	+		+			

(+) positive association; (-) negative association; (empty cell) not significant at $p < 0.05$.

What general lessons do these results provide? First of all, distinguishing among trust recipients is essential. We find institutional trust to be more crisis-sensitive than social trust, both in terms of the association with fears and the change in the population aggregate. If people seek 'islands of certainty', they turn to institutions, not fellow citizens, which arguably reflects the vastly different competence to – potentially – protect people from harm. There are simply more good reasons to turn to the state and to expert institutions when feeling existentially insecure, particularly in a country like Germany with its well-functioning institutional system. Nevertheless, being endowed by the fearful with extra trust could be a double-edged sword for governments: if a crisis turns out to be unmanageable, disappointment is inevitable, and public support might crumble – as indicated by the downward trend in institutional trust that we have documented. Our results show parallels with the evolution of trust during the eurozone crisis, when the trajectory of social trust was stable (and even rising in crisis-stricken Greece), but that of institutional trust falling (Ervasti et al., 2019).

A second insight is that during the pandemic *both* ways of coping with overwhelming uncertainty that have been proposed by trust scholars (cf. Misztal, 2011) were at play – yet linked to different fears: the self-protective withdrawal of trust was linked to *economic* fears; trust as an adaptive response driven by hope to *health* fears (for a similar finding on perceived collective health threats, see Kritzinger et al., 2021). One possible explanation for this divergence could be the differential attribution of responsibility that people may have made: while there was no reason to blame the government or the health-care system for the virus per se, and thus for the danger to life and limb (exogenous attribution of health risks), governments may well have been seen as co-responsible for the economic distortions (endogenous attribution of economic strain) – and hence were penalised with a trust malus by those who felt threatened economically. This explanation is in line with a study of three Western democracies, showing that the perception of national job insecurity during the coronavirus pandemic was linked to the impression of a psychological contract breach on the part of the government, and to greater dissatisfaction with the government's management of the pandemic (Shoss et al., 2023).

An alternative explanation is that trust as an adaptive response occurs only when people feel so insecure about their existence that they perceive their survival to be at risk. The economic fears we recorded might have remained well *below* this threshold, at least in a wealthy country like Germany. With their corrosive impact on institutional trust, economic fears largely resemble the pattern we found for 'normal' structural insecurities, such as low income and low education (cf. Delhey & Newton, 2003). These associations correspond to the general state of knowledge of empirical trust research and contradict conclusions that 'standard variables' no longer predict differences in trust in times of crisis (Schraff, 2021). Whether there is a crisis or not, having low cultural and economic capital seems to make people less trustful. Seen in conjunction, our findings for structural (in)securities and economic fears confirm that there is an intimate link between security and trust that is broken only under exceptional circumstances – such as health fears in a global pandemic (as demonstrated in this paper), 'imposed' vulnerability in the wake of natural disasters (Montgomery et al., 2008), or fear of terrorist attacks (Sinclair & LoCicero, 2010). Only then, trust as an adaptive response suggests itself as a coping strategy, partly suspending the tight-knit syndrome of security and trust.

A secondary outcome of our study concerns the observed overall downward trend in institutional trust as the pandemic progressed. Given that the German government – much like those of other countries – was largely pursuing a try-and-error policy, and that the occasionally high case numbers of COVID-19 infections had pushed the health-care system, and hospitals in particular, to breaking point, this decline is not surprising. In contrast, average trust in strangers remained stable over the years, despite the at times tense social climate between the majority of the population and the corona sceptics (Schieferdecker, 2021). At the individual level, we found a remarkable fluctuation of trust between 2020 and 2022 for all forms of trust, in roughly every second person; a fluidity of this scale challenges the conviction of a prominent school of thought that equates social trust with a personality trait (Erikson, 1950; Uslaner, 2008).

A final issue concerns the limitations of our study, which also allows hinting at possible future research directions. Our sample was quota-representative of the population aged 18–74, so we were missing information on the elderly, the age group for which COVID-19 is most dangerous. Studies specifically focused on the elderly would provide valuable additional insights. Finally, cross-national comparisons, either with a larger set of countries or a country dissimilar to Germany with regard to the general performance of state institutions, are necessary to explore the extent to which the findings obtained for Germany can be generalised. In other countries, people may have experienced pandemic-induced economic strain as a much stronger existential threat – especially in less-developed welfare states, where people have to pay for their own health care to a greater extent than in Germany. Citizens there may have found it more difficult to conceive of their government or their health-care systems as an ‘island of certainty’.

Notes

1. The health-care system (German: Gesundheitssystem) is a term commonly used in the German language. It encompasses all persons, organisations, facilities, regulations, and processes that serve to promote health, prevent disease, and provide treatment, rehabilitation and care.
2. In international surveys generalised social trust is usually captured by a question asking about trust in most people (Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?) or about people one meets for the first time. Both variables have been shown to empirically capture a common latent factor of generalised trust that is distinct from particularised and identity-based trust (Freitag & Bauer, 2013).

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The data collection and research was part of the project ‘Values in Crisis: A Crisis of Values? Moral Values and Social Orientations under the Imprint of the Corona Pandemic’, funded by Volkswagen Foundation, grant number 99/127. We would like to thank the editor and two anonymous reviewers for their valuable suggestions on earlier versions of this paper.

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Data

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Table A1. Sample information of VIC-data, compared to population statistics.

Characteristic	% Population	Waves 1 and 2		Wave 3	
		raw	weighted	raw	weighted
<i>Sex</i>					
<i>Male</i>	50.10	50.70	50.10	48.97	50.10
<i>Female</i>	49.90	49.30	49.90	51.03	49.90
<i>Diverse</i>	-	-	-	-	-
<i>Total</i>	100.00	100.00	100.00	100.00	100.00
<i>Age</i>					
<i>16–24 years</i>	13.20	5.70	13.20	8.41	13.20
<i>25–34 years</i>	15.90	12.73	15.90	14.05	15.90
<i>35–44 years</i>	17.90	17.66	17.90	17.14	17.90
<i>45–54 years</i>	21.70	25.08	21.70	22.06	21.70
<i>55–64 years</i>	16.80	20.16	16.80	19.68	16.80
<i>65 + years</i>	14.50	18.67	14.50	18.65	14.50
<i>Total</i>	100.0	100.00	100.00	100.00	100.00
<i>Education</i>					
<i>Low</i>	19.50	21.09	19.50	18.65	19.50
<i>Middle</i>	55.30	55.08	55.30	57.22	55.30
<i>High</i>	25.20	23.83	25.20	24.13	25.20
<i>Total</i>	100.00	100.00	100.00	100.00	100.00