



Newspaper coverage on solidarity and personal responsibility in the COVID-19 pandemic: A content analysis from Germany and German-speaking Switzerland

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ABSTRACT

Solidarity and personal responsibility have been repeatedly called upon during the COVID-19 pandemic. This study quantifies and contextualizes the use of these terms in newspaper coverage in Germany and German-speaking Switzerland based on $n = 640$ articles from six functionally equivalent newspapers. The term solidarity in the context of the COVID-19 pandemic was mentioned in 541/640 articles (84.5%) and was primarily used during phases with high death rates and comparatively stringent policies in place, supporting the idea that solidarity was used to explain restrictive measures to the population and motivate people to comply with these measures. German newspapers published more articles on solidarity than Swiss-German newspapers, consistent with more stringent COVID-19 policies in Germany. Personal responsibility was mentioned in 133/640 articles (20.8%), meaning that the term was less frequently discussed than solidarity. Articles covering personal responsibility included more negative evaluations during phases of high infection rates as compared to phases of low infection rates. Findings indicate that the two terms were, at least to some extent, used in newspaper reporting to contextualize and justify COVID-19 policy during phases of high infection rates. Moreover, the term solidarity was used in a high variety of different contexts and the inherent limits of solidarity were rarely mentioned. Policymakers and journalists need to take this into account for future crises to not jeopardize the positive effects of solidarity.

1. Introduction

During the COVID-19 pandemic, public health restrictions have varied depending on the specific pandemic situation in a country and the political environment. While many welcomed strict policy interventions at the beginning of the crisis, the voices of critics and skeptics were getting louder as the pandemic progressed (Georgiou, Delfabbro, & Balzan, 2020; Islam et al., 2020). Policymakers and stakeholders often evoked the concepts of solidarity and personal responsibility of citizens to justify the established measures in pandemic control. In Germany and Switzerland, for instance, solidarity was a frequently used term in politicians' speeches to attune and motivate people to adhere to restrictions enforced to contain the spread of SARS-CoV-2 (Merkel, 2020; Steinmeier, 2020; Swiss Federal Council, 2020). By contrast, the notion of personal responsibility seemed to be more prominently used when legal

restrictions were eased to remind people to protect themselves against infection (Federal Office of Public Health, 2021; ZDFheute, 2022). Moreover, personal responsibility was mentioned by economic stakeholders advocating for the easing of restrictions to stimulate the economy (dpa-AFX, 2020; economiesuisse, 2021). These uses of the two terms suggest a normative connotation from policymakers to justify the introduction, waiver or absence of policies aiming at limiting viral spread, thus aiming to increase acceptance of them in the general population. However, overusing these expressions could lead to adverse reactions among people: The individual costs to comply with restrictions bas solidarity are perceived as too high over time (Prainsack & Buyx, 2011). Likewise, personal responsibility assumes rational, knowledgeable agents, but the pandemic crisis, paired with the parallel infodemic, made it difficult for some people to take on this responsibility (Balakrishnan, Ng, Soo, Han, & Lee, 2022; De Landsheer & Walburg, 2022). A

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closer examination of these two concepts in public debates allows for an understanding of their normative role and relevance in political communication.

Thus, this study aims to quantitatively examine how the terms “solidarity” and “personal responsibility” were used in Swiss-German and German newspaper coverage and whether they were used to contextualize or even justify COVID-19 policies. Investigating newspaper coverage allows for a retrospective reflection on how public debates were shaped, how they changed, and who had a say in them. This reflection can inform future efforts to control major crises by analyzing the underlying rationales of policy strategies applied in the COVID-19 pandemic.

The next section will introduce the concepts of solidarity and personal responsibility as the theoretical background of the study as well as existing literature investigating their implications in the COVID-19 pandemic. Hypotheses derived from theory will be presented at the end of this section. Section 3 will outline the methods used for the empirical part, a quantitative content analysis comparing newspaper coverage Germany and German-speaking Switzerland. Section 4 will present the results along the hypotheses outlined in section 2. The final section 5 will discuss these results with a particular focus on the limits of solidarity and the different tiers of solidarity practices, discuss the limitations of this study, and present our conclusions.

2. Theory

Prainsack and Buyx define solidarity as “practices that express the willingness to support others with whom we recognise similarity in a relevant respect” (Prainsack & Buyx, 2011). They suggest solidarity to work on three tiers: the individual, group, and institutional level (Prainsack & Buyx, 2017). While solidarity practices pose costs on an individual level, they are to the benefit of the broader community. Personal responsibility has been discussed in different contexts (e.g., Buyx, 2008; Steinbrook, 2006) and refers to the underlying ideal of the autonomous, independent individual that is held responsible for his or her actions. It is linked to both free choices and an understanding of the implications and consequences of actions (McKeon, 1957). Thus, while the two concepts of solidarity and personal responsibility both relate agents to actions that take place in a socio-cultural context, solidarity asks for supporting others in a *community* despite individual costs while personal responsibility stresses *individual* freedom.

Both concepts were linked to motivating people to protective behavior during the COVID-19 pandemic (Zimmermann et al., 2022). Findings from a 9-country qualitative interview study on solidarity in the COVID-19 pandemic indicate that policies overly focusing on personal responsibility might counteract people’s motivation for solidarity (manuscript under review). Collective responsibility, however, has been found to motivate people to comply with COVID-19-related policies (Hangal et al., 2022), including using contact tracing technology (Lucivero et al., 2022), wearing masks (Zimmermann, Eichinger, Schönweitz, & Buyx, 2021), and getting vaccinated (Liu, Ao, Zhao, & Zhang, 2022). In a white paper written through the COVID-19 Rapid Response Impact Initiative, Cammett and Lieberman stressed the importance of solidarity-promoting public messaging already in March 2020, emphasizing the central role of mass media and societal leaders in that context (Cammett & Lieberman, 2020). Studies conducted in the early phases of the pandemic, as well as during and after lockdown measures, particularly referred to solidarity as a crucial concept to overcome the pandemic (e.g., Marzana et al., 2022; McCormick, 2020; Moss & Sandbakken, 2021; Peng & Berry, 2021; van Breen et al., 2021). Relatedly, there were repeated calls for global solidarity to overcome regional resource bottlenecks and for pandemic containment (Jecker & Atuire, 2021; Zagefka, 2022). Many scholars linked global solidarity with equity and justice principles, stating that global solidarity is needed to achieve equity in the context of COVID-19 (Ebrahim et al., 2020; Killeen & Kiware, 2020).

As the pandemic progressed, evidence and notions of the limits or failure of solidarity in the COVID-19 pandemic became apparent (Previtali, Allen, & Varlamova, 2020; West-Oram, 2021). Many authors lamented the failure of global solidarity in the context of the global distribution of scarce resources, such as COVID-19 tests or vaccines (e.g., Figueroa et al., 2021; Obinna, 2022; Sekalala et al., 2021; Syntia Munung, Ujewie, & Afolabi, 2022). On a more national or regional level, it was suggested that calls for solidaristic practices could sometimes also lead to polarization instead of social cohesion (Chadwick, 2020; Stjernswärd & Glasdam, 2021). For instance, intergenerational solidarity might also turn into ageism once solidarity towards the elderly is exhausted (Ayalon et al., 2020; Barrett, Michael, & Padavic, 2021; Barth et al., 2021; Ellerich-Groppe, Pfaller, & Schweda, 2021; Fraser et al., 2020). This polarization was already evident in April 2020, when some residents from Germany and German-speaking Switzerland strongly and spontaneously distinguished between those complying vs those not complying with restrictive measures (Zimmermann et al., 2022).

On an individual level, a person can act both responsibly and in solidarity by taking responsibility for themselves while supporting others (Deutscher Ethikrat, 2020). Moreover, the concepts can be used to theoretically explain the trajectories of COVID-19 policies in different countries: Personal responsibility, stressing the freedom of the individual, may be used to justify the absence or easing of policies restricting individual freedom. Solidarity, on the other hand, stresses communal aspects and can, therefore, be seen as a justification for restrictive measures limiting individual freedom. As indicated by the Oxford Stringency Index (Ritchie et al., 2020), COVID-19 policy was generally less stringent in Switzerland than in Germany (Figure A. 2). Therefore, mirroring the meaning of these terms to justify policymaking during the pandemic, we developed the following hypotheses: *German newspapers published more articles about solidarity than Swiss-German newspapers (H1a) and Swiss-German newspapers published more articles about personal responsibility than German newspapers (H1b)*. If the terms were mainly used to justify COVID-19 policies, then we expect *the terms solidarity and personal responsibility to be most often used by political actors (H2)*.

Moreover, if solidarity was used as a justification for stringent COVID-19 policies, the following additional hypotheses apply:

- Coverage about solidarity was higher in phases with high stringency of policy measures than in phases with lower stringency (H3a) and more positively/less negatively evaluated (H4a)
- Coverage about personal responsibility was higher in phases with lower stringency of policy measures than in phases with high stringency (H3b) and more positively/less negatively evaluated (H4b)

3. Material and methods

Newspaper coverage was selected as the analytic body for this research, excluding other media content (i.e., social media or online news platforms). First, newspaper articles are stable, published entities that can be systematically searched for in online databases. By contrast, content on online news platforms or social media, for instance, is constantly changing, edited, and deleted, and the algorithms of search engines are biased and intransparent (McMillan, 2009). Second, newspapers simultaneously inform the public about ongoing issues and reflect the public debate (Peters, 1994), thereby shaping the public’s view on things while being influenced by issues that move public debates themselves. During the COVID-19 pandemic crisis, newspapers and other traditional journalistic media regained importance as reliable, trustworthy and accessible information sources (Amann, Sleight, & Vayena, 2021; Zimmermann, Fiske, et al., 2021). As such, they played an important role in the COVID-19 pandemic by motivating individuals to comply with policies and enact protective behavior, while reflecting societal happenings and situational changes (Cammett & Lieberman, 2020).

3.1. Comparative approach

Switzerland and Germany are neighboring countries in Western Middle Europe. In 2021, Germany had 83.24 million inhabitants ([Statistisches Bundesamt, 2022](#)), and Switzerland had 8.74 million ([Bundesamt für Statistik, 2022](#)). Switzerland has three major language areas (German-speaking, French-speaking, and Italian-speaking) that differ in terms of culture, which was shown to be relevant for the spread and containment of SARS-CoV-2 ([Deopa & Fortunato, 2021](#); [Mazzonna, 2020](#)). Particularly the German-speaking part of Switzerland is culturally and economically closely connected to Germany. As such, we apply a quasi-experimental most similar system design by comparing newspaper coverage from Germany and German-speaking Switzerland, which are embedded in similar media systems but differing policy responses in the COVID-19 pandemic ([Berg-Schlosser, 2003](#); [Teune & Przeworski, 1970](#)). While both countries reacted similarly when SARS-CoV-2 started to spread in Europe, COVID-19 policy was less stringent in Switzerland than in Germany from the summer of 2020 on, as measured by the Oxford Stringency Index ([Ritchie et al., 2020](#)).

3.2. Selection of articles

The time frame of analysis was 1 January 2020 – 30 April 2022, from the start of the COVID-19 pandemic until most COVID-19-related restrictions were lifted in Switzerland and Germany. From each country, two newspapers with different political orientations and comparatively high readerships as well as the most-read tabloid were selected for the analysis (Germany: *Süddeutsche Zeitung* [left-liberal broadsheet], *Die Welt* [conservative broadsheet], *Bild* [tabloid]; Switzerland: *Neue Zürcher Zeitung* [conservative broadsheet], *Tagesanzeiger* [left-liberal broadsheet], *Blick* [tabloid]).¹ All included newspapers belong to private publishing groups and are not government-owned. Relevant articles were retrieved through a keyword search in Factiva (Dow Jones) using the search algorithm: (COVID* OR Corona* OR SARS-CoV-2) AND (Solidarität OR solidarisch* OR eigenverantwort*) (searching titles and lead texts only). Full articles were downloaded and manually screened whether they met the inclusion criteria. Journalistic newspaper articles that covered solidarity and/or personal responsibility in the context of the COVID-19 pandemic were included. Articles without editorial content (e.g. glossaries, content summaries, TV programs) were excluded from the analysis. When front-page articles introduced a longer article on the same relevant topic, the full text was retrieved from Factiva in an additional, targeted search (n = 26) (see [Figure A. 1](#) for the detailed search and selection strategy).

3.3. Operationalization and data collection

Article metadata (title, length, publication date, newspaper) were retrieved from Factiva. To assess *what* was covered by newspapers, *who* had a say in coverage, and *how* it was evaluated, we developed a codebook based on previous newspaper content analyses analyzing similar issues ([Gerhards & Schäfer, 2009](#); [Schäfer, 2009](#); [Zimmermann, Aebi, Kolb, Shaw, & Elger, 2019](#)). We measured how extensive the terms “solidarity” and “personal responsibility” were discussed in articles, in what contexts the terms were mentioned, how they were evaluated (measured as the presence or absence of positive and negative evaluative statements about the implementation of solidarity and personal responsibility practices) and what actors were cited using those terms (details about these variables are presented in the supplementary codebook). A preliminary list of context categories was derived through

¹ Coming originally from the UK print newspaper landscape, broadsheet newspapers represent well-investigated, high-quality journalism whereas tabloids report short, personalized, entertaining and sensationalist stories and news.

a qualitative content analysis procedure including a step-wise abstraction into categories ([Mayring, 1994](#)), applied to a random selection of 57 articles. The actor and evaluation categories were drawn from a codebook used in a previous study on a different health topic ([Zimmermann et al., 2019](#)).

Coder training and codebook refinement took place in four coding sessions and was performed by the main author and a student assistant. An inter-coder reliability test was performed on 57 articles that were sorted by publication date and newspaper; then, every 10th article was selected. Because articles published between November 2021 and April 2022 were coded later, the reliability test only relied on articles published before November 2021. We use Scott’s Pi ([Scott, 1955, 2009](#)) to calculate the reliability score because our variables are all nominal with highly variable degrees of freedom, which are taken into account for this measurement. For the categories *feature* and *evaluation of solidarity*, we reached good reliability with scores higher than 0.7, for the other categories the reliability scores ranged between 0.4 and 0.7, which is considered sufficient reliability ([Krippendorff, 2009](#)) (see [Table A. 1](#) for detailed reliability scores). After inter-coder reliability testing, results were screened for repetitive differences. Coder errors and codebook ambiguities were discussed and coder instructions in the codebook were refined and specified accordingly. No changes were made concerning categories or variables. To further improve reliability, a second coder double-checked the coding for articles where the first coder experienced uncertainties during coding.

3.4. Data analysis

Data were analyzed using SPSS 28. For the longitudinal analysis, phases were defined based on pandemic development as mirrored by death rates and the Oxford Stringency Index ([Table A. 2](#); [Figure A. 2](#)). Since these phases differed in length, the average number of articles per month was calculated for data analysis to ensure comparability between the different time frames. A Chi-Square Goodness of Fit Test was performed to test whether the proportion of the number of articles about solidarity and personal responsibility was equal between countries (H1). A Z-Test for Independent Proportions was applied to test for significant differences in proportions, applying, if necessary, the Benjamini-Hochberg correction for multiple testing (H2, H3). The significance threshold was set to 0.05.

Because the media coverage was dominated by one newspaper outlet (*Süddeutsche Zeitung*), we examined whether the findings were consistent when excluding this outlet from the analysis, adding to the robustness of the findings. Only when country comparisons were performed (H1, section 4.1), the functionally equivalent Swiss-German newspaper outlet (*TagesAnzeiger*) was excluded from the analysis, too.

4. Results

We identified a total of 640 eligible articles in the six newspapers included in this analysis; 541/640 (84.5%) about solidarity and 133/640 (20.7%) about personal responsibility. The majority of articles (395/640; 61.7%) were classical journalistic news articles and reports, but we also included reader’s letters (42/640; 6.6%), journalist opinion pieces (commentaries, satiric articles; n = 124, 19.4%), interviews (32/640; 5.0%), guest comments (39/640; 6.1%), and other features (8/640; 1.3%). *Süddeutsche Zeitung* published more relevant articles than other newspapers (300/640; 46.9%, [Table 1](#)).

Some 34/640 articles (5.3%) covered both concepts but only half of them (n = 17) discussed both concepts in more than one sentence. Except for one article, these 17 articles were all published in broadsheet newspapers. The most-mentioned context was compliance for both solidarity and personal responsibility ([Table A. 3](#)). Most articles were published throughout the year 2020 (n = 10, 58.8%). In 2021, 5 articles (29.4%) were published; 4 of them in November and December 2021. The remaining 2 articles were published between January and April

Table 1
Number of articles identified.

Country	Newspaper	Solidarity only (n = 507)	Both topics (n = 34)	Personal responsibility only (n = 99)	Total (n = 640)
Germany	Süddeutsche Zeitung	263 (51.9%)	12 (35.3%)	25 (25.3%)	300 (46.9%)
	Die Welt	41 (8.1%)	3 (8.8%)	14 (14.1%)	58 (9.1%)
	Bild	12 (2.4%)	0 (0%)	2 (2%)	14 (2.2%)
	Total Germany	316 (62.3%)	15 (44.1%)	41 (41.4%)	372 (58.1%)
German-speaking Switzerland	Tages Anzeiger	67 (13.2%)	5 (14.7%)	16 (16.2%)	88 (13.8%)
	Neue Zürcher Zeitung	75 (14.8%)	12 (35.3%)	25 (25.3%)	112 (17.5%)
	Blick	49 (9.7%)	2 (5.9%)	17 (17.2%)	68 (10.6%)
	Total Switzerland	191 (37.7%)	19 (55.9%)	58 (58.6%)	268 (41.9%)

2022.

4.1. Country comparison (H1)

German newspapers published more articles about solidarity (331/541; 61.2%, Table 1) than Swiss-German newspapers (210/541; 38.8%). The difference was statistically significant ($X^2(d1,541) = 27.04, p < .001$). Although Swiss-German newspapers published more articles about personal responsibility (77/133; 57.9%), than German newspapers (56/133; 42.1%, Table 1), this difference was not statistically significant ($X^2(d1,133) = 3.32, p = .069$). When excluding *Süddeutsche Zeitung* and its Swiss-German equivalent *Tagesanzeiger*, Swiss-German newspapers published significantly more articles than German articles on both solidarity (138/194; 71.1%, $X^2(d1,194) = 34.66, p < .001$) and personal responsibility (56/75; 74.7%, $X^2(d1,75) = 18.25, p < .001$, see Appendix B.1).

4.1.1. Development of coverage over time

Coverage about solidarity was highest in phase II during the first pandemic wave and lockdown in both countries (Fig. 1): In German-speaking Switzerland, coverage peaked in March 2020 (41/210; 19.5%); in Germany in April 2020 (63/331; 19.0%). A second, smaller peak in coverage was visible in November 2020 during phase IV (GER: 16/331; 4.8%, SWI: 13/210; 6.2%). German coverage peaked again during phase IX in January 2022 (25/331; 7.6%). The proportional difference in coverage between countries was only statistically significant for phase IX ($z = 3.901, p < .001$).

Regarding personal responsibility, the amount of coverage remained relatively stable over time (Fig. 1). When comparing coverage among countries, the number of articles was higher in German-speaking Switzerland than in Germany in phase III (summer 2020) (23/31; 74.2%, $p = .036$) and German newspapers reported more on personal responsibility in phase IX (12/15; 80.0%, $p = .002$, Figure A. 3).

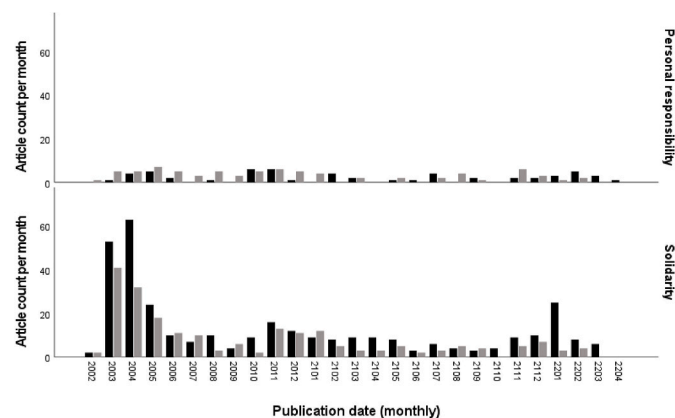


Fig. 1. Development of newspaper coverage over time. Black = Germany, grey = German-speaking Switzerland.

4.1.2. Context categories

The most prevalent context categories regarding solidarity were solidaristic support (193/541, 35.7%), solidaristic compliance (113/541, 20.9%), and international solidarity (110/541, 20.3%, Table 2). An association between solidarity context categories and countries was observed ($\chi^2(d9, 532) = 36.680, p < .001$). A two-sided z-test of proportions on individual context categories revealed German newspapers publishing significantly more articles on declaring solidarity (57/331; 17.2% vs 10/210; 4.8%, $z = 4.287, p < .001$) and Swiss-German newspapers publishing more articles about solidaristic compliance (55/207, 26.6% vs 58/325, 17.8%, $z = -2.417, p = .016$) and the limits of solidarity (16/207, 7.7% vs 9/325, 2.8%, $z = -2.646, p = .008$). For the context categories connected to personal responsibility, no significant association between countries was observed ($\chi^2(d3, 132) = 3.801, p = .284$). When excluding *Süddeutsche Zeitung* and *TagesAnzeiger*, «declaring solidarity» was less prominent than in the whole analysis whereas solidaristic compliance was more prominent. Otherwise, there were no significant differences (Table B. 2).

4.2. Actors cited (H2)

Most-cited actors for articles about solidarity include the media (116/541, 21.4%), individual citizens (including reader’s letters, 64/541, 11.8%) as well as regional politics (57/541, 10.5%, Table 3). For personal responsibility, the media (33/133, 24.8%), regional politics (26/133, 19.5%) and national politics (24/133, 18.0%) were most cited.

To test H2, regional, national, and international politics were combined into one category (“politics”). All other actors were summarized in a second category (“other”, Table A. 3). Because “media” were coded as actors in all journalistic commentaries and “citizens/individuals” in all reader letters, these sorts of articles were excluded for this analysis. A Paired-Samples Proportions Z-Test indicate a significantly lower proportion of political actors as compared to other actors in articles about solidarity (132/408, 32.4% vs 229/408, 56.1%, $z = -5.397, p < .001$). No significant differences were found in articles about personal responsibility (politics: 40/90, 44.4%, others: 41/90, 45.6%, $z = -0.120, p = .905$). These findings were reproducible when excluding *Süddeutsche Zeitung* from the analysis (see Appendix B.2).

4.3. Pandemic phases (H3, H4)

When testing for the independency of coverage in stages of relaxed versus stringent policies, we found that significantly more articles were published about solidarity during stringent phases (317/541, 58.6%, $X^2(d1, 541) = 15.987, p < .001$). No significant difference was observed in articles about personal responsibility ($X^2(d1,133) = 0.068, p = .795$, Table 4). These findings were reproducible when excluding *Süddeutsche Zeitung* (see Table B. 4).

When comparing the proportions of article evaluations between phases of relaxed versus stringent COVID-19 policies (Table 4), personal responsibility was significantly more negatively evaluated during stringent policy phases ($z = -2.026, p = .043$). This finding was not reproducible when excluding *Süddeutsche Zeitung* (see Appendix B.3).

Table 2
Contexts in which solidarity were mentioned in newspaper coverage.

Topic	Context category	Description	Germany	German-speaking Switzerland	All articles
Solidarity	Declaring solidarity	Symbolic activities and actions where people declared themselves in solidarity with others (e.g. through demonstrations, clapping for health workers)	57 (17.2%)	10 (4.8%)	67 (12.4%)
	Solidaristic compliance	Solidarity as motivation to adhere to governmental restrictions	58 (17.5%)	55 (26.2%)	113 (20.9%)
	Solidaristic vaccination	Solidarity as motivation to getting vaccinated against COVID-19	37 (11.2%)	23 (11%)	60 (11.1%)
	Solidaristic support	Supportive actions, e.g. getting groceries for the elderly or donations to support those in need	117 (35.3%)	76 (36.2%)	193 (35.7%)
	Unsolidaristic behavior	Actions and behavior explicitly referred to as unsolidaristic	18 (5.4%)	15 (7.1%)	33 (6.1%)
	Limits of solidarity	Notions about the limits of solidarity	9 (2.7%)	16 (7.6%)	25 (4.6%)
	Solidaristic political decision-making	Solidarity as a decisive factor in political decision-making during the pandemic	17 (5.1%)	7 (3.3%)	24 (4.4%)
	International solidarity	Solidarity between countries	71 (21.5%)	39 (18.6%)	110 (20.3%)
	Solidarity other context		9 (2.7%)	12 (5.7%)	21 (3.9%)
	Total no of articles about solidarity		331 (100%)	210 (100%)	541 (100%)
Personal responsibility	Personal responsibility compliance	Adherence to restrictive measures is a matter of personal responsibility; only limited control through the state	19 (33.9%)	23 (29.9%)	42 (31.6%)
	Personal responsibility instead of restrictions	Lack of legally binding restrictions for pandemic containment, individual protection based on personal responsibility	37 (66.1%)	51 (66.2%)	88 (66.2%)
	Personal responsibility other context		2 (3.6%)	10 (13%)	12 (9%)
		Total no of articles about personal responsibility	56 (100%)	77 (100%)	133 (100%)

Table 3
Actors cited in coverage about solidarity and personal responsibility.

Actors	Solidarity	Personal responsibility	Total
Media	116 (21.4%)	33 (24.8%)	136 (21.3%)
Science	27 (5%)	12 (9%)	35 (5.5%)
Medicine	25 (4.6%)	11 (8.3%)	34 (5.3%)
Economics	28 (5.2%)	7 (5.3%)	31 (4.8%)
Citizens/individuals	64 (11.8%)	17 (12.8%)	74 (11.6%)
Celebrities/culture	47 (8.7%)	6 (4.5%)	51 (8%)
Politics (regional) **	57 (10.5%)	26 (19.5%)	77 (12%)
Politics (national) **	52 (9.6%)	24 (18%)	68 (10.6%)
Politics (international) *	49 (9.1%)	5 (3.8%)	54 (8.4%)
Law	3 (0.6%)	1 (0.8%)	3 (0.5%)
Governmental organisations	3 (0.6%)	1 (0.8%)	4 (0.6%)
Nongovernmental organisations **	56 (10.4%)	4 (3%)	56 (8.8%)
Church/religion	17 (3.1%)	2 (1.5%)	17 (2.7%)
Other actors	8 (1.5%)	1 (0.8%)	9 (1.4%)
Total no of articles	541 (100%)	133 (100%)	640 (100%)

Notes: Tests for statistical significant (z-test based comparison of column proportions) are based on two-sided tests. Significance level: 0.05. *p < .05, **p < .01. The Benjamini-Hochberg correction for multiple testing was applied.

The other differences were not statistically significant when applying the Benjamini-Hochberg correction for multiple testing.

5. Discussion

Overall, German and Swiss-German newspaper coverage of solidarity was more extensive than on personal responsibility, reflecting that a pandemic is a global crisis that requires collective efforts (Prainsack & Buyx, 2011; West-Oram & Buyx, 2017). Our findings only support part of the hypotheses (Table 5). Supporting H1a and mirroring more stringent policies in the country, German newspapers published more articles on solidarity than Swiss-German newspapers. However, contrary to H1b, there was no statistically significant difference in coverage among the countries regarding personal responsibility. However, we do report a

tendency for more articles published in Swiss-German newspapers. Given the relatively low number of articles published about personal responsibility, a higher N would possibly make the reported tendency statistically significant.

Supporting H3a but not H3b, coverage about solidarity was more common in phases with stringent policies, but there was no difference between the phases in coverage regarding personal responsibility. Political actors were often cited when using those terms, but only for personal responsibility, they were cited significantly more often than other actors. Thus, H2 can only partly be accepted. Moreover, partly supporting H4b, personal responsibility was more negatively evaluated in phases of high stringency. These findings indicate that, to a limited extent, solidarity was used by politicians and the media to justify and explain policies, particularly the implementation of restrictive policies. The term personal responsibility was much less important and did not seem to serve the purpose of refraining from or easing restrictions in times of low stringencies, based on our data. Also, only few articles covered both concepts in more than one sentence, indicating a only limited reflection on the connection or potential opposition of the two terms.

Conceptually, solidarity and personal responsibility are epistemologically different in the sense that solidarity refers to individuals as inherently relational agents embedded in a collective, whereas personal responsibility refers to the individual as a discrete entity (Smiley, 2017). In the literature, however, the concepts are often discussed as being parallel concepts that (should) go hand in hand. Some argue that solidarity comes with obligations and people can (and should) be held responsible for meeting those (Davies & Savulescu, 2019). The German Ethics Council coined the term “solidarische Eigenverantwortung”, meaning that people have to take responsibility for their own actions to practice solidarity in the context of the COVID-19 pandemic (Deutscher Ethikrat, 2020, p. 5). As a German research group illustrated based on a journalistic commentary published in *Neue Zürcher Zeitung* in April 2020, it was sometimes even assumed that solidaristic actions should be based on personal responsibility, which would result in the absence of state intervention (Ellerich-Groppe et al., 2021). Our findings indicate that newspaper reporting did not support this to a larger extent and that the reported linkage of seeing the two concepts as two sides of the same

Table 4
No of articles and evaluations in phases of relaxed versus stringent COVID-19 policies.

		Policy stringency					
		Relaxed		Stringent		Total	
		N	% of total	N	% of total	N	% of total
Solidarity		224	41.4%	317	58.6%	541	100.0%
Personal responsibility		68	51.1%	65	48.9%	133	100.0%
Evaluation solidarity	Negative	40	17.9%	54	17.0%	94	17.4%
	Ambivalent	12	5.4%	31	9.8%	43	7.9%
	Positive	82	36.6%	117	36.9%	199	36.8%
	No evaluation	90	40.2%	115	36.3%	205	37.9%
	Total	224	100.0%	317	100.0%	541	100.0%
Evaluation personal responsibility	Negative	17	25.0%	27	41.5%	44	33.1%
	Ambivalent	6	8.8%	2	3.1%	8	6.0%
	Positive	7	10.3%	9	13.8%	16	12.0%
	No evaluation	38	55.9%	27	41.5%	65	48.9%
	Total	68	100.0%	65	100.0%	133	100.0%

Table 5
Overview and evaluation of hypotheses.

Hypotheses	Interpretation based on findings
H1a German newspapers published more articles about solidarity than Swiss-German newspapers.	Supported
H1b Swiss-German newspapers published more articles about personal responsibility than German newspapers.	Rejected; no statistically significant difference
H2 The terms solidarity and personal responsibility were most often used by political actors.	Supported for personal responsibility; rejected for solidarity
H3a Coverage about solidarity was higher in phases with high stringency of policy measures than in phases with lower stringency.	Supported
H3b Coverage about personal responsibility was higher in phases with lower stringency of policy measures than in phases with high stringency.	Rejected; no statistically significant difference
H4a Coverage about solidarity was more positively evaluated in phases with higher stringency of policy measures and more negatively in phases with lower stringency	Rejected; no statistically significant difference
H4b Coverage about personal responsibility was more positively evaluated in phases with lower stringency of policy measures and more negatively in phases with high stringency.	Partly supported (more negatively in phases with high stringency)

coin was the exception rather than the standard in newspaper reporting.

5.1. The limits of solidarity

While personal responsibility has been evaluated critically in newspaper coverage, solidarity was rather positively assessed, but that changed in the second half of the pandemic. This relates to observations that solidarity cannot be accounted for in the long term because people are not willing to cover the costs of solidaristic actions and expect reciprocity indefinitely (Collins, 2020; Prainsack & Buyx, 2017). Yet, a surprisingly small portion of articles addressed such limits of solidarity explicitly or discussed unsolidaristic behavior. This may point to a lack of awareness in newspaper coverage that solidarity-based obligations and requirements come with such limits (see e.g., Drotbohm & Reichardt, 2020; Ellerich-Groppe, 2023). This might have contributed to overextending the notion of solidarity as a reason for compliance and restrictive policies – particularly in Germany, as our data indicate. This can be problematic, as solidarity as a normative reason for public policy is disputed, particularly in pluralistic, democratic societies (Lopez Frias

& Thompson, 2022).

Moreover, an important ratio of articles mentioned solidarity in the context of a pure declaration of solidarity (e.g. by clapping for health-care workers). This is not in line with Prainsack and Buyx’ definition of solidarity, as these practices did not evoke relevant costs. Instead, it contributed to the use of the word “solidarity” as a political statement, as being on “the right side of things”. This became particularly noticeable in the late stages of the pandemic in Germany, where the word “solidarity” was commonly used to frame demonstrations against COVID deniers, thereby creating a divide rather than a sense of general togetherness (Häyry, 2020; Stjernswärd & Glasdam, 2021). This shows that solidarity is a diversified term that is used in various settings, as it lacks a commonly accepted, firm definition (Prainsack & Buyx, 2017).

5.2. The three tiers of solidarity

According to Prainsack and Buyx’ theoretical approach (2011, 2017), solidarity can be practised on the individual, the group, and the contractual level. These levels were also represented in newspaper coverage, with a particular focus on individual solidarity. Contractual solidarity was represented to a lesser extent, as reported in the context categories *solidaristic political decision-making* and *international solidarity*. Of note, existing national solidarity institutions, such as social security systems, were not captured by this analysis if they were not specifically mentioned in the context of the COVID-19 pandemic. Another potential reason for this is that these aspects might not be discussed under the concept of solidarity, even though they can be understood as institutionalized solidarity (Prainsack & Buyx, 2011).

Equivalent to individual and group-level solidarity, solidaristically motivated support of others, compliance with policies, and vaccination have been studied and discussed in COVID-19-related scholarly literature. First, the support of others has been shown to have increased in the early stages of the pandemic in Germany (Bertogg & Koos, 2021). Yet, after the initial phase with a first wave and lockdown, solidaristic support declined (Ntontis et al., 2022). Second, solidarity has been acknowledged early in the pandemic as a prerequisite to compliance with COVID-19 policies (Cammatt & Lieberman, 2020). Indeed, people in German-speaking Switzerland and Germany perceived solidarity as an important motivator for compliance in the early stages of the pandemic (Hangel et al., 2022; Liekefett & Becker, 2021; Zimmermann et al., 2022). Also, mask-wearing was repeatedly associated with solidaristic motivation (Cheng, Lam, & Leung, 2020; Zimmermann, Eichinger, et al., 2021). Third, solidarity is reported as a motivation for COVID-19 vaccination in many studies, in line with the narrative in the newspapers in our study (Kerrigan et al., 2023; Majid, Ahmad, Zain, Akande, & Ikhlaiq, 2022). Yet, in the context of vaccination prioritization at the beginning of the COVID-19 vaccination campaign, the narrative of

giving others priority because they were more endangered was not always linked to genuine solidarity, but sometimes also to vaccine hesitancy (Fiske et al., 2022; Knotz, Gandenberger, Fossati, & Bonoli, 2021).

5.3. Limitations

Only a selection of newspapers from each country was analyzed in this study. The amount of coverage on the topics of solidarity and personal responsibility varied considerably between newspapers, indicating important newspaper-specific differences. With the selection of newspapers, we were aiming for functional equivalence but due to these differences, results might likely have differed had we chosen other outlets (for example, the *Frankfurter Allgemeine Zeitung* instead of *Die Welt* in Germany). Still, most findings were reproducible when excluding *Süddeutsche Zeitung*, the outlet publishing almost half of the included articles, and – for country comparison – the functionally equivalent *TagesAnzeiger*.

The article selection process also resulted in rather low case numbers, lowering statistical power for comparisons between pandemic phases, for example. Moreover, by using targeted search terms in Factiva, only articles that were directly using the wording *Solidarität* and *Eigenverantwortung* were identified as relevant in this study. It is possible that other aspects, for example, institutionalized forms of solidarity, would have been more salient with a more inclusive approach. We instead show how diffuse the words *Solidarität* and *Eigenverantwortung* were used in newspaper coverage. Also, for Switzerland, the findings are not generalizable to the French, Italian and Rhaeto-Romanic media landscape because culture and language impact the use of these two terms significantly.

Finally, we chose a quantitative approach comparing the amount of coverage and its aspects in Germany and German-speaking Switzerland. Including a codebook with predefined content categories bears the limitation that an in-depth, qualitative assessment of the article content is beyond this paper’s methodological scope.

5.4. Conclusion

The terms solidarity and personal responsibility were used to justify and explain COVID-19 policy in newspaper coverage. Solidarity was used to justify the implementation of restrictive policies (particularly in Germany), and personal responsibility to explain the lack thereof. Our findings illustrate the relative importance of the term solidarity in the context of the COVID-19 pandemic. The term “solidarity” was used in various contexts, including symbolic declarations, calls for protective

behavior, and to justify COVID-19 policy. The inflationary use of the term while not explicitly acknowledging and discussing the limits of solidarity is problematic, particularly in times of crisis: Acting in solidarity comes with costs that accumulate over time. Calling for the maintenance of solidarity practices without installing institutionalized systems of reciprocity might demotivate people, causing solidarity calls to lose their positive effects. Newspapers and policymakers alike should be aware of this when using the concept of solidarity in future crises and discuss and acknowledge explicitly the limit and exhaustion of solidarity as a practice. Relatedly, the role solidarity may take to provide reasoning in policymaking needs to be more explicitly defined in the future.

Ethical Statement for SSM population health

- 1) this material has not been published in whole or in part elsewhere;
- 2) the manuscript is not currently being considered for publication in another journal;
- 3) all authors have been personally and actively involved in substantive work leading to the manuscript, and will hold themselves jointly and individually responsible for its content.

Author statement

Bettina M. Zimmermann: Conceptualization, methodology, software, investigation, writing – original draft, visualization, project administration, funding acquisition.

Alena Buyx: Conceptualization, validation, investigation, writing – review & editing.

Stuart McLennan: Conceptualization, validation, investigation, writing – review & editing.

Declaration of competing interest

The authors declare no conflicts of interest.

Data availability

The data used for analysis is provided as supplemental file

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Appendix A. 1

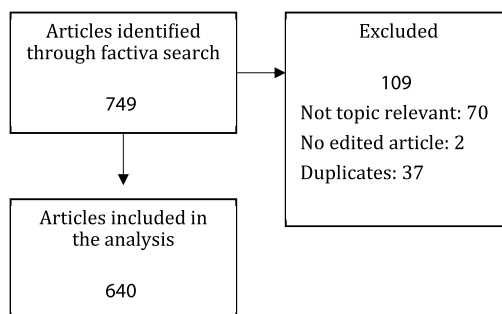


Fig. A1. Article selection flowchart.

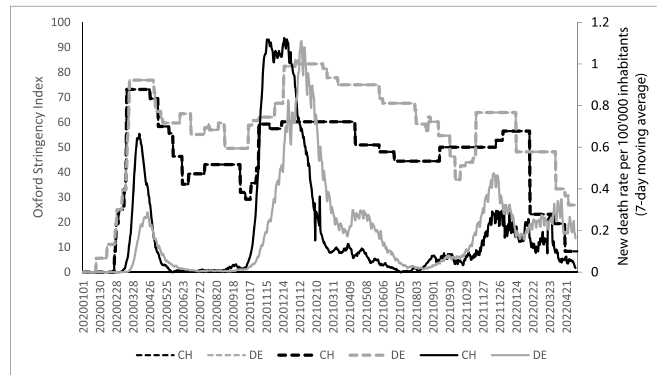


Fig. A2. COVID-19 death rates and restrictive measures according to the Oxford Stringency Index in Germany (grey) and Switzerland (black). [data source: (Ritchie et al., 2020)]

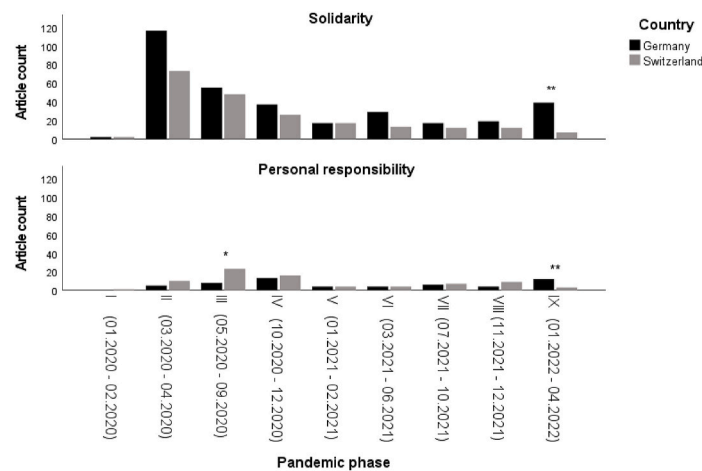


Fig. A3. Average number of articles published about solidarity and personal responsibility per pandemic phase.

Table A1
Inter coder reliability scores.

Variable	No of tested cases	Coder agreement	Coder disagreement	Cursory and consequential errors	Observed percent agreement	Expected percent agreement	Scott's Pi
Feature	57	50	7	0	0.877	0.393	0.798
Importance solidarity	57	44	13	0	0.772	0.369	0.639
Evaluation solidarity	88	67	17	4	0.798	0.283	0.718
Context solidarity	58	38	20	0	0.655	0.132	0.603
Importance personal responsibility	57	49	7	1	0.875	0.615	0.675
Evaluation personal responsibility	30	15	9	6	0.625	0.235	0.510
Context personal responsibility	27	12	11	4	0.522	0.132	0.449
Actors	99	39	43	17	0.476	0.073	0.435

Table A2
Pandemic phases

Phase	Stringency of policies	Date	No of months (M) ¹	Switzerland ²	Germany ³
I: Initiation phase	Relaxed	Jan/Feb 2020	2	28 Feb: "particular situation" according to Epidemics Act	
II: First pandemic wave, "lockdown"	Stringent	March/April 2020	2	16 Mar: "extraordinary situation" according to Epidemics Act, lockdown for businesses, events, schools from 16 Mar	Cancel large events from 12 Mar, lockdown for businesses, events, schools from 16 Mar

(continued on next page)

Table A2 (continued)

Phase	Stringency of policies	Date	No of months (M) ¹	Switzerland ²	Germany ³
III: Relaxation summer 2020	Relaxed	May–September 2020	6	Step-wise reopening (starting with garden centers, hairdressers from 27 Apr) 6 Jul mask mandates public transport	Step-wise openings (regional differences), starting with hairdressers (4 May)
IV: Second pandemic wave	Stringent	October 2020–December 2020	3	Stepwise implementation of restrictions from 19 Oct (mask requirements, closing discos, restricting events), closure of restaurants, leisure since 22 Dec	Contact restrictions, business closures from 28 Oct, university online from 1 Dec, school closures from 16 Dec
V: Alpha wave	Stringent	January–February 2021	2	Business closures, home office mandates from 18 Jan	Home office recommended from 19 Jan
VI: Lifting of restrictions, rollout of vaccination program	Relaxed	March 2021–June 2021	4	reopenings starting 1 Mar 2021	reopenings starting 1 Mar 2021
VII: Relaxation summer 2021	Relaxed	July 2021–October 2021	4	3G rules from 26 June (facultative), 3G required from 13 Sep	3G rules from 23 Aug
VIII: Delta wave Delta	Stringent	November–December 2021	2	Extension of 3G rules from 6 Dec, 2G since 20 Dec	3G for workplace and public transport from 18 Nov, 2G for shopping and leisure from 2 Dec, contact restrictions for vaccinated people from 28 Dec
IX: Omicron	Relaxed	January–April 2022	4	Stepwise lifting of restrictions since 13 Jan	2G + for gastro from 7 Jan, reopenings starting 16 Feb

Notes: ¹For longitudinal analysis, articles were weighted against the duration of the phase to get results based on the articles published on average per month (weight = 1/M). ²Source: Press releases from the Swiss Federal Government (https://www.bag.admin.ch/bag/de/home/das-bag/aktuell/medienmitteilungen.html?dyn_startDate=01.01.2021, last accessed 21 Dec 2022). ³Source: Information material issued by the German Federal Government (<https://www.bundesregierung.de/breg-en/service>, last accessed 21 Dec 2022).

Table A3

Context categories in articles mentioning both solidarity and personal responsibility

	Germany	German-speaking Switzerland	Total
Declaring solidarity	1 (12.5%)	1 (11.1%)	2 (11.8%)
Solidaristic compliance	3 (37.5%)	3 (33.3%)	6 (35.3%)
Solidaristic vaccination	1 (12.5%)	2 (22.2%)	3 (17.6%)
Solidaristic support	2 (25%)	2 (22.2%)	4 (23.5%)
Unsolidaristic behavior	0 (0%)	1 (11.1%)	1 (5.9%)
Limits of solidarity	1 (12.5%)	1 (11.1%)	2 (11.8%)
Solidaristic political decision-making	2 (25%)	0 (0%)	2 (11.8%)
International solidarity	1 (12.5%)	0 (0%)	1 (5.9%)
Solidarity other context	0 (0%)	3 (33.3%)	3 (17.6%)
Personal responsibility compliance	3 (37.5%)	5 (55.6%)	8 (47.1%)
Personal responsibility instead of restrictions	4 (50%)	4 (44.4%)	8 (47.1%)
Personal responsibility other context	1 (12.5%)	3 (33.3%)	4 (23.5%)
Total no of articles	8 (100%)	9 (100%)	17 (100%)

Table A4

Actors cited in newspaper coverage

	All articles			Excluding reader letters and journalistic commentaries		
	Politics	Other actors	Total	Politics	Other actors	Total
Solidarity	152 (28.1%)	355 (65.6%)	541 (100%)	132 (32.4%)	229 (56.1%)	408 (100%)
Personal responsibility	53 (39.8%)	81 (60.9%)	133 (100%)	40 (44.4%)	41 (45.6%)	90 (100%)

Appendix B. Analysis excluding *Süddeutsche Zeitung*

B.1 Country comparison (H1)

When excluding *Süddeutsche Zeitung* and its Swiss equivalence, *TagesAnzeiger*, amount of coverage was generally higher in Switzerland than in Germany for both solidarity (SWI: 138/194, 71.1%, $X^2(d1,194) = 34.660$, $p < .001$) and personal responsibility (SWI: 56/75, 74.7%, $X^2(d1,75) = 18.253$, $p < .001$). This is mainly because the Swiss tabloid *Blick* published more relevant articles than the German tabloid *Bild*.

Table B1
Number of articles if *Süddeutsche Zeitung* and *TagesAnzeiger* are excluded from the analysis.

		Solidarity (N = 194)		Personal responsibility (N = 75)		Total (N = 252)	
		N	% of total	N	% of total	N	% of total
Germany	Die Welt	44	22.7%	17	22.7%	58	23.0%
	Bild	12	6.2%	2	2.7%	14	5.6%
	Total Germany	56	28.9%	19	25.3%	72	28.6%
German-speaking Switzerland	Neue Zürcher Zeitung	87	44.8%	37	49.3%	112	44.4%
	Blick	51	26.3%	19	25.3%	68	27.0%
	Total German-speaking Switzerland	138	71.1%	56	74.7%	180	71.4%

Table B2
Contexts in which solidarity were mentioned in newspaper coverage excluding *Süddeutsche Zeitung* and *TagesAnzeiger* (see [Table 3](#) for all newspapers).

		Germany	German-speaking Switzerland	Total
Solidarity	Declaring solidarity	4 (7.1%)	5 (3.6%)	9 (4.6%)
	Solidaristic compliance	14 (25%)	35 (25.4%)	49 (25.3%)
	Solidaristic vaccination	7 (12.5%)	16 (11.6%)	23 (11.9%)
	Solidaristic support	17 (30.4%)	50 (36.2%)	67 (34.5%)
	Unsolidaristic behavior	1 (1.8%)	6 (4.3%)	7 (3.6%)
	Limits of solidarity	3 (5.4%)	7 (5.1%)	10 (5.2%)
	Solidaristic political decision-making	4 (7.1%)	4 (2.9%)	8 (4.1%)
	International solidarity	15 (26.8%)	28 (20.3%)	43 (22.2%)
	Solidarity other context	4 (7.1%)	10 (7.2%)	14 (7.2%)
	Total no of articles about solidarity	56 (100%)	138 (100%)	194 (100%)
Personal responsibility	Personal responsibility compliance	5 (26.3%)	18 (32.1%)	23 (30.7%)
	Personal responsibility instead of restrictions	14 (73.7%)	35 (62.5%)	49 (65.3%)
	Personal responsibility other context	1 (5.3%)	8 (14.3%)	9 (12.2%)
	Total no of articles about personal responsibility	19 (100%)	56 (100%)	6100%)

B.2 Actors cited (H2)

Because no country comparison was involved in H2, only *Süddeutsche Zeitung* was excluded from this analysis to have higher case numbers and greater statistical power. Similar to the whole analysis, most-cited actors for articles about solidarity were the media (63/236, 21.4%), individual citizens (including reader’s letters, 33/236, 14.0%), but regional politics was less well represented (16/236, 6.8%), and there was a higher ratio of celebrities and cultural actors (32/236, 13.6%, [Table B. 3](#)). For personal responsibility, the media (27/84, 32.1%) and national politics (20/84, 23.8%) were still the most cited actors, but regional politics (12/84, 14.3%) were again less prominent than in the whole analysis.

A Paired-Samples Proportions Z-Test confirm a significantly lower proportion of political actors as compared to other actors in articles about solidarity (56/192, 29.2% vs 113/192, 58.9%, $z = -4.5798$, $p < .001$). Confirming the whole analysis, no significant differences were found in articles about personal responsibility (politics: 25/65, 38.5%, others: 33/65, 50.8%, $z = -1.131$, $p = .258$).

Table B3
Actors cited in newspaper coverage excluding *Süddeutsche Zeitung* (for table including all newspapers see [Table 3](#)).

		Solidarity		Personal responsibility		Total	
		N	% of total	N	% of total	N	% of total
Actors	Media	63	26.7%	27	32.1%	81	27.2%
	Science	13	5.5%	11	13.1%	20	6.7%
	Medicine	17	7.2%	7	8.3%	22	7.4%
	Economics	16	6.8%	7	8.3%	19	6.4%
	Citizens/individuals	33	14.0%	11	13.1%	41	13.8%
	Celebrities/culture	32	13.6%	6	7.1%	36	12.1%
	Politics (regional)	16	6.8%	12	14.3%	26	8.7%
	Politics (national)	30	12.7%	20	23.8%	45	15.1%
	Politics (international)	24	10.2%	3	3.6%	27	9.1%
	Law	3	1.3%	1	1.2%	3	1.0%
	Governmental organisations	2	0.8%	1	1.2%	3	1.0%
	Nongovernmental organisations	20	8.5%	2	2.4%	20	6.7%
	Churche/religion	5	2.1%	2	2.4%	5	1.7%
	Other actors	4	1.7%	1	1.2%	5	1.7%
	Total	236	100.0%	84	100.0%	298	100.0%

B.3. Pandemic phases (H3, H4)

When testing for the independency of coverage in stages of relaxed versus stringent policies without *Süddeutsche Zeitung*, findings were confirmed

that significantly more articles were published about solidarity during stringent phases (167/266, 62.8%, $X^2(d1,266) = 17.383$, $p < .001$) and that there was no statistically significant difference for personal responsibility ($X^2(d1,96) = 0.042$, $p = .838$).

Proportions of article evaluations were not statistically significant but case numbers were very low, particularly for personal responsibility.

Table B4

No of articles and evaluations in phases of relaxed versus stringent COVID-19 policies (excluding *Süddeutsche Zeitung*; for analysis including all newspapers see Table 4).

		Policy stringency					
		Relaxed		Stringent		Total	
		N	% of total	N	% of total	N	% of total
Solidarity		99	37.2%	167	62.8%	266	100.0%
Personal responsibility		49	51.0%	47	49.0%	96	100.0%
Evaluation solidarity							
	No evaluation	32	32.3%	63	37.7%	95	35.7%
	Negative	18	18.2%	30	18.0%	48	18.0%
	Ambivalent	7	7.1%	21	12.6%	28	10.5%
	Positive	42	42.4%	53	31.7%	95	35.7%
	Total	99	100.0%	167	100.0%	266	100.0%
Evaluation personal responsibility							
	No evaluation	26	53.1%	18	38.3%	44	45.8%
	Negative	13	26.5%	20	42.6%	33	34.4%
	Ambivalent	4	8.2%	1	2.1%	5	5.2%
	Positive	6	12.2%	8	17.0%	14	14.6%
	Total	49	100.0%	47	100.0%	96	100.0%

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