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Ever Thought About Strikes? Development of a Scale to Assess Attitudes and Behavioral Reactions to Strikes

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Abstract

Strikes are a recurrent phenomenon in many countries. However, research on strikes from a psychological perspective has been limited. By developing a sound measure to assess attitudes and behavioral reactions to strikes, we will be in a better position to evaluate these constructs in individuals and compare across studies. Therefore, we developed a scale to assess attitudes and behavioral reactions to strikes following classic scale development guidelines using four samples (total $N = 1369$; $N_1 = 304$, $N_2 = 209$, $N_3 = 443$, $N_4 = 413$). In Study 1, we used exploratory factor analysis to reduce the generated items to a scale and showed that the strike attitude and behavioral reactions scale consists of one affective factor (negative reactions towards strikes), one cognitive factor (legitimacy of strikes), and three behavioral factors (informing oneself about strikes, strike-related social network behavior, and support of strikers). Study 2 confirmed these five factors and showed acceptable psychometric properties. Study 3 supported the construct validity of the developed scale: the five factors were correlated with willingness to strike and attitudes towards unions, among other variables. Study 4 further showed that the scale can also capture attitudes and behavioral reactions towards specific strikes. Overall, these studies indicate that the strike attitude and behavioral reactions scale is a psychometrically sound measure consisting of five factors.

Keyword Strikes; Attitudes; Scale development; Industrial relations; Unions

Strikes are a recurrent phenomenon in collective bargaining processes and happen frequently. For example, a general strike, incapacitating almost the whole country for several days, took place in France in December 2019 (Nossiter, 2019). Furthermore, 570,808 working days were lost due to strikes in Germany in 2018 (Bundesagentur für Arbeit, 2019) and 178 days per 1,000 workers were lost due to strikes and lockouts in the UK in 2017 (International Labour Organization, 2020). The International Labour Organization estimates that since 2010, more than 44,000 strikes have taken place worldwide (Gammarano, 2019). These numbers show that many people can be affected by strikes, whether as strikers, managers, or as third parties having to cope with the consequences of strikes. Hence, strikes are a prevalent phenomenon in everyday life, and the general attitudes and behavioral reactions to this phenomenon can be of utmost importance, as well as the attitudes and behavioral reactions to specific strikes. However, this working life phenomenon has received little attention in industrial and organizational psychology (I-OP) in recent years.

Given that strikes continue to be common all over the world, the time seems ripe for a revival of research on strikes from a psychological perspective. Although research on strikes was a fairly common topic in the early years of I-OP (e.g., Kerr et al., 1957; Klandermans, 1986; Shapira & Bass, 1975; Stagner, 1948; Stagner & Rosen, 1965), this line of research has declined considerably over the last couple of decades. Both in the *Journal of Applied Psychology* and *Personnel Psychology*, industrial relations was among the five lowest ranked research areas over a period from 1963 to 2007 (Cascio & Aguinis, 2008). One reason for this decline is likely that the presence of trade unions has diminished in the USA over the last few decades (Kollmeyer, 2018). Because the USA is still a formative influence for I-OP research (Bajwa & König, 2019), research on strikes might have decreased as a result of the American decline in unions, despite the continuing relevance of strikes in other countries.

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A psychometrically sound measure of attitudes and behavioral reactions to strikes could help facilitate a revival of I-OP strike research. Such research is needed because strikes build on the support and legitimation of the public and thus on positive third-party attitudes (Kelloway et al., 2008). Currently we know little about the attitudes and behavioral reactions of the general public to the phenomenon of strikes. Hence, trade unions and employers can only guess whether their calls for or against strikes are supported by the public, the media, or their members/employees or not. The revival of strike research in I-OP is also needed because strikes can be perceived as an affective work event (Weiss & Cropanzano, 1996) that could impact the workers' job commitment, stress, and well-being (Lazarus & Folkman, 1984). An important precondition for the revival of psychological research into strikes is thus the existence of a sound measure to assess attitudes and behavioral reactions to strikes. Therefore, we developed the strike attitude and behavioral reactions scale (SABeRS) following Hinkin's (1995, 1998) scale development recommendations to assess attitudes and behavioral reactions to both the phenomenon of strikes in general and to specific strikes.

Theoretical Background

Strikes can be defined as a joint, time limited work stoppage of union members from a certain company to enforce or resist demands or to express grievances (International Labour Organization, 1993). From an economical perspective, strikes are regarded as a rational instrument to solve conflicts between a company and a union (Johnes, 1985). For unions, strikes function as an instrument of power and can be used to show their strength during collective bargaining processes with employers (Nicholson & Kelly, 1980).

Research about strikes has often been intertwined with research on trade unions. This is likely because only one single strike in the USA was not called by a union in the last 25 years (Bureau of Labor Statistics, U.S. Department of Labor, 2020), although work stoppages in the USA can in theory also be initiated by employees themselves without the involvement of unions (Waas, 2012). Much of the focus of I-OP research still lies in the USA (Bajwa & König, 2019), so the research on strikes is closely linked to research on different forms of participation in trade unions (e.g., A. Cohen, 1993; Klandermans, 1986). Union participation can be categorized into passive forms of participation, such as taking part in union elections, and active forms of participation, such as striking itself. For example, Mellor (1990) assessed the attitudes of union members towards past and future strike activity (e.g., about causes of previous strikes and about anticipated strike fund income), and A. Cohen (1993) assessed what he called "attitudinal militancy" (e.g.,

willingness to participate in an illegal strike and to warn of strike-breakers) among union members in Israel. However, unions and union membership are not necessarily needed for strikes in other countries. For example, strike action is an individual right in France, and no trade unions are formally needed for strikes there (Poutvaara et al., 2017). In Germany, only trade unions are allowed to call for strikes (and this only during collective bargaining processes), but every employee is allowed to join strikes, whether they are union members or not (Dribbusch, 2016). Trade unions are also not involved in most strikes in Russia, where illegal strikes occur regularly (Ashwin & Clarke, 2002; Christensen, 2017). We thus treat strikes as an independent area, somewhat separate from trade unions, as trade unions are not always necessary for strikes.

Several consequences of strikes for the employees have been studied from a psychological perspective. Most employees perceive strikes as a "necessary evil" (Jarley & Kuruvilla, 1994), a task that employees have to perform that causes harm to other people in order to achieve some perceived greater good or purpose (Molinsky & Margolis, 2005). Regarding strikes, the strike itself is the task that causes harm to the employer in the form of economic losses, but strikes also harm strikers due to reduced or ceased wages, which can lead to a reduced psychological well-being (Barling & Milligan, 1987). In addition to the strikers themselves, their social environments suffer as well (e.g., family members) because they have to cope with a changed daily routine and live with a reduced income due to the low or non-existent strike pay (Gennard, 1982).

Strikes also affect the public, as shown, for instance, by the strikes of garbage collectors (e.g., in Greece, Staff, 2019 and in the USA, Chesto, 2019), teachers and public transport workers (e.g., in France, Nossiter, 2019), pilots of an airline like Ryanair (across Europe, Topham, 2019), or Amazon warehouse workers (e.g., in Germany, Martin & Ahlswede, 2019). The public has to cope with the consequences: smelling garbage and fearing rats, having to find alternative care options for the children, being stuck in traffic jams, being forced to cancel travel plans, and experiencing delays in packages arriving. These consequences can be stressful depending on how people appraise them (Lazarus & Folkman, 1984). Third parties who are affected by strikes can perceive the situation as uncontrollable and unpleasant, subsequently experiencing high levels of stress.

At the same time, the public has also an important function regarding strikes. Public approval of a strike and of strikes in general is a powerful weapon for unions, particularly in achieving perceptions of legitimacy. Institutional theory (e.g., DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Oliver, 1991; Zucker, 1977) suggests that the survival of organizations depends, to a considerable extent, on their ability to achieve legitimacy. This perspective can also be applied to strikes: unions and employers are organizations

that try to protect themselves from public criticism by conforming to societal norms and thus trying to legitimize their behavior (cf. König et al., 2010). Before and during a strike, both employers and unions try to appeal to the public to explain why their bargaining position is reasonable. Consequently, unions spend a substantial amount of time developing media campaigns to present their line of arguments (Kelloway et al., 2008), and the success of a union can therefore be linked to their ability to gain public support (Perry, 1987). Furthermore, public opinion is able to enhance or impede union political activity, to influence member loyalty, and to affect how employers deal with unions (Bok & Dunlop, 1970). Thus, the attitudes and behavioral reactions to strikes of the public are important determining factors of the legitimacy and support of strikes. To sum up, attitudes and behavioral reactions to strikes are important for both, unions and employers.

According to Judge and Kammeyer-Mueller (2012), the most accepted definition of attitudes stems from Eagly and Chaiken (1993), who define attitudes as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p.1). Attitudes are often further separated in an affective and a cognitive component (e.g., Eagly & Chaiken, 1993; Judge & Kammeyer-Mueller, 2012; Weiss, 2002). The affective component measures the subjective, individual views, and assessments of a particular object; the cognitive component consists of the information and knowledge a person has of that particular object. These two components can be differentiated from behavioral reactions, intentions or actual behavior, regarding the object in question.[1]

Thus, we decided to develop a scale assessing attitudes via an affective and a cognitive component as well as assessing behavioral intentions. This structure allows us to systematically integrate many aspects of attitudes to strikes that have been assessed in the literature so far and to add relevant but not yet considered aspects of general attitudes and behavioral reactions to strikes, resulting in the development of a comprehensive measure of attitudes and behavioral reactions to strike.

The affective component seems to be particularly important for describing attitudes (Fazio, 1989; Huskinson & Haddock, 2006; Verplanken et al., 1998). In particular, the affective component encompasses emotions that strikes might elicit—for example, feelings of strain caused by strikes as

measured by Day et al. (2006). However, no measure exists so far to assess these elicited feelings—most studies used self-developed items to assess strain or other feelings. Day et al. (2006) also assessed whether the affected third parties perceived the strike as ethical and justified. This is an assessment of the cognitive component of attitudes, which includes evaluations of the legitimacy and justification of strikes (e.g., also assessed in the study by Gafni-Lachter et al., 2017).

The cognitive component has been assessed more often than the other components of attitude towards strikes. For example, Lozier and Mortimer (1976) examined when strikes are rated as undesirable, and Beutell and Biggs (1984) assessed whether nurses strikes are perceived as justified, what they called "pro-strike attitudes." In the same line, Lightman (1983) studied the perceived professionalism of social workers who participate in strikes. Another measure for this cognitive component was the perceived fairness used by Day et al. (2006). They used four items to assess the perceived fairness of a threatened strike: The participants had to indicate whether this strike was considered ethical, justified, legitimate, and fair. Gafni-Lachter et al. (2017) also used a self-developed item to assess the cognitive component: They asked their participants whether they believed that striking is a legitimate protest method for physicians. However, these measures of the cognitive component were all ad hoc, and an established measure to assess the cognitive component of strike attitudes is missing.

Finally, the behavioral reactions component encompasses behavioral intentions and reactions, for example, to support the union's position in conversations with one's friends, like Kelloway et al. (2008) used in their third-party support for strike action scale. For example, Kelloway et al. (2008) asked third parties whether they were willing to respect a picket line or accept literature from strikers. Hence, our measure extends existing measures in that it is aimed at the entire population and not just trade unions (A. Cohen, 1993; Mellor, 1990) and that it also takes emotional and cognitive aspects of attitudes to strikes into account in addition to behavioral support of strikes (Kelloway et al., 2008). To summarize, there seems to be a need for a psychometrically sound measure to assess attitudes and behavioral reactions to strikes, which we introduce in the next section.

Scale Development

General Procedure

A solid scale development process consists of at least three studies, according to scale development recommendations (Hinkin, 1995, 1998). The first study is used for item generation. In this study, a large number of items are developed and

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[1] We planned to develop a strike attitude scale based on the tripartite model of attitudes (Katz & Stotland, 1959; Rosenberg et al., 1960). Resulting from the review process, we changed our conceptualization in that we now do not rely on the tripartite model anymore and now refer to attitudes and behavioral reactions based on criticism of the behavioral component of the tripartite model (e.g., Fazio & Olson, 2003).

reduced to a scale following statistical and content-related considerations. After item generation, all potential items are given to a sample, and the results of this sample are used for the first reduction of items. In the second study, the psychometric properties of the generated scale are assessed with a second sample, with particular emphasis on scale reliability. Finally, in the third phase, the scale is evaluated using a third sample to assess the convergent and discriminant validity with other constructs (Hinkin, 1995, 1998). We added a fourth validation study to ensure that it can also be used to assess the attitudes and behavioral reactions towards specific strikes.

The data of all reported studies are available at https://osf.io/3tbx2/. Ethical approval was not required for these studies in accordance with the local legislation and institutional requirements of Saarland University.

Study 1—Item Generation and Item Reduction

Method

Item Generation Items were generated based on a literature review and a theoretical definition of the construct "strikes" (Hinkin, 1998; see, e.g., Langer & König, 2018). We first relied on already existing items. The existing items covered various aspects such as perceived fairness of strikes (Day et al., 2006), strain due to strike (Day et al., 2006), legitimacy of strikes (Gafni-Lachter et al., 2017), justification of a strike (Gafni-Lachter et al., 2017), and strike support (Kelloway et al., 2008). In total, we obtained seven items from previous studies that could be interpreted as representing the general attitude to strikes or behavioral intentions. We clustered these items into the three components: affective, cognitive, and behavioral reactions. Then, we developed further items for each component. Regarding the affective attitude component, we decided to focus on positive affect, such as admiration, neutral affect such as being indifferent, and negative affect, for example, feeling stressed out by strikes. In total, we had eleven items for this attitude component. For the cognitive component, we complemented the already existing items with self-developed items as well. Here, we decided to consider positive and negative cognitive aspects. In total, eleven items were used for the cognitive component (e.g., positive, "Strikes are a legitimate tool"; negative, "Strikes cause too many costs"). The behavioral reactions component was developed by us with items reflecting either support of strikers (e.g., "I would talk to strikers to show them my support"), neutral behavioral reactions (e.g., "I read about strikes"), or support of the employers (e.g., "I inform myself of the employers' point of view about strikes"). In total, fifteen items for the behavioral reactions' component

were included. We consciously decided that the affective and behavioral reactions component had items representing an indifference aspect, because strikes are a special attitude object to which some people might have distinctively positive or negative attitudes and behavioral reactions and others might have rather neutral (or indifferent) attitudes and behavioral reactions to strikes (i.e., they might just not care). Hence, the initial model consisted of the three components which were divided in eight factors. After generating a total of 37 items, two subject matter experts (SMEs) read and annotated them. The SMEs slightly changed some item wording and confirmed that the items reflected relevant aspects of attitudes and behavioral reactions to strikes from their opinion. Items can be found in Table 1.

As per Hinkin's (1998) recommendations, the items developed were short and simple. Moreover, we created a large pool of items. As Hinkin (1998) also recommends five to six items per construct, we aimed for a total of 15 items for the three components. The response format was a 5-point Likert type ranging from "Do not agree" to "Agree" (following Lozano et al., 2008). Only the two end options were labeled in the questionnaire.

Sample Participants were recruited from high pedestrian traffic areas and in a shopping mall in two German cities. They were asked to fill out a survey about their attitudes and behavioral reactions to strikes. In total, 455 persons filled out the questionnaire. Some had to be excluded because they indicated that they did not fill out the questionnaire honestly ($n = 23$), filled out only parts of it ($n = 83$), or were strikers at the moment of participation and not third parties ($n = 45$). The final sample consisted of $N = 304$ participants. This sample size corresponds to a person-variable ratio of 8:1 and thus was above the recommendations of a ratio of 5:1 (Reio & Shuck, 2015). The mean age was 40.01 ($SD = 17.15$); 49.3% were female. 67.4% were employed, 14.1% were members of a union, and 41.1% had already participated in a strike themselves. Of those who had already participated in a strike, only 15.2% reported that this strike had taken place in the last year.

Procedure After a welcoming page, the 37 items were presented, followed by demographic questions. The items were ordered in the same way for all participants; however, the items were not organized based on their content but in a random order.

Statistical Analyses Statistical analyses in all four studies were conducted using IBM SPSS26, R 3.6.1 (R Core Team, 2019), and several additional R packages: careless (v1.2.1; Yentes & Wilhelm, 2018), psych (v2.1.3; Revelle, 2019), paran (v1.5.2; Dinno, 2018), paramap (v.0.13.0; O'Connor,

Table 1 Initial items in German plus English translation, proposed dimensions of these items (first column), and results of the exploratory factor analysis (Study 1, $N = 304$)

Item	Original item in German	English translation	Rotated factor loadings						
			F1	F2	F3	F4	F5	F6	F7
pA1	Streiks geben mir ein positives Gefühl	Strikes give me a positive feeling	−.22	.08	−.24	−.11	−.15	.20	−.09
pA2	Es freut mich, wenn Streikende für ihre Forderungen einstehen	It makes me feel happy when strikers stand up for their claims	**−.33**	.06	−.25	−.05	−.05	.13	−.03
pA3	Ich bewundere Streikende	I admire strikers	−.29	.01	−.04	−.14	−.08	**.45**	−.04
neuA1	Ich bin gleichgültig gegenüber Streiks	I am indifferent to strikes	.22	−.12	.09	−.04	.24	−.25	−.04
neuA2	Streiks interessieren mich nicht	I do not care about strikes	.18	−.17	.12	−.12	**.32**	−.09	.13
neuA3	Ich fühle mich nicht von Streiks betroffen	I do not feel affected by strikes	.05	.08	.03	.09	**.32**	−.03	−.02
negA1	Ich fühle mich von Streiks gestört	I feel disturbed by strikes	.02	−.00	**.64**	.04	.11	−.21	−.04
negA2	Streiks belasten mich	Strikes strain myself	−.08	.05	**.74**	−.02	.03	−.05	−.04
negA3	Durch Streiks fühle ich mich gestresst	I feel stressed out by strikes	−.01	−.06	**.77**	−.03	−.12	.10	.05
negA4	Wenn ich etwas über Streiks höre, macht mir dies Angst	Hearing something about strikes frightens me	.22	.06	**.40**	−.12	−.00	.24	.09
negA5	Von Streiks bin ich genervt	I am annoyed by strikes	.05	−.08	**.58**	.20	.04	.01	−.02
pC1	Streiks sind notwendig	Strikes are necessary	**−.57**	.07	−.03	.02	−.13	.03	−.06
pC2	Streiks sind ein legitimes Mittel	Strikes are a legitimate tool (Day et al., 2006; Gafni-Lachter et al., 2017)	**−.64**	.12	−.00	.02	.06	−.08	−.05
pC3	Streiks sind gerechtfertigt	Strikes are justified (Day et al., 2006)	**−.45**	.04	−.07	−.04	.06	.21	−.14
pC4	Streiks sind fair	Strikes are fair (Day et al., 2006)	−.28	.08	−.02	−.12	−.03	.03	−.29
nC1	Die Menschen in diesem Land wären ohne Streiks genauso gut dran	People would just be as well off if there were no strikes in this country (McShane, 1986)	**.45**	.02	−.05	−.06	.13	−.08	.06
nC2	Die Bedeutung von Streiks wird überschätzt	The importance of strikes is overestimated	.20	.08	−.09	.03	.09	−.02	**.41**
nC3	Streiks verursachen zu viele Kosten	Strikes cause too many costs	.13	.05	.01	.05	−.01	.05	**.50**
nC4	Streiks sind eine Zeitverschwendung	Strikes are a waste of time	**.33**	.06	.06	.06	.20	.02	.11
nC5	Streiks treffen die falschen Personen	Strikes hit the wrong people	.06	−.11	.08	.06	.08	−.01	**.39**
nC6	Streikende stellen überzogene Forderungen	Strikers make overdrawn demands	−.04	−.05	.03	−.01	−.04	−.01	**.64**
nC7	Streiks werden zu schnell beschlossen	Strikes are decided too fast	.01	−.04	.07	.03	.06	−.02	**.54**
pB1	Ich würde mit Streikenden sprechen, um ihnen meine Unterstützung zu zeigen	I would talk to strikers to show them my support (Kelloway et al., 2008)	.11	**.35**	−.11	−.14	−.02	**.49**	−.02
pB2	Ich würde Informationsblätter von Streikenden entgegennehmen	I would accept leaflets from strikers (Kelloway et al., 2008)	−.10	**.43**	−.09	.01	.03	**.37**	−.05
pB3	Ich würde die Seite der Streikenden bei Diskussionen einnehmen	I would support the strikers' position in conversations (Kelloway et al., 2008)	−.16	.13	.04	−.12	−.09	**.36**	−.17
neuB1	Ich teile Informationen zu Streiks in den sozialen Netzwerken	I share information about strikes on social media	.08	.01	.01	**−.68**	−.05	.08	−.01
neuB2	Ich lese Informationen über Streiks	I read about strikes	−.02	**.75**	−.00	−.03	−.06	.10	−.06
neuB3	Ich gehe Streiks so gut wie möglich aus dem Weg	I avoid strikes as much as possible	−.14	−.06	**.30**	.09	.27	−.04	**.42**
neuB4	Ich kommentiere Beiträge in sozialen Netzwerken zu Streiks	I comment on posts about strikes on social media	.01	.02	.01	**−.72**	.00	.02	−.04
neuB5	Ich informiere mich über die Gründe von Streiks	I inform myself about the causes of strikes	−.16	**.73**	−.02	.02	−.01	.09	−.11
neuB6	Ich eigne mir selbst Hintergrundwissen zu Streiks an	I acquire background knowledge about strikes	−.04	**.71**	−.02	−.03	−.16	−.06	−.07
neuB7	Ich mache nichts in Bezug auf Streiks	I do not do anything about strikes	−.19	−.12	−.03	.08	**.74**	.05	.08
neuB8	Mit Streiks habe ich nichts zu tun	I have nothing to do with strikes	−.05	−.18	−.07	.04	**.73**	.08	−.02
negB1	Ich informiere mich über die Sichtweise des Arbeitgebers bei Streiks	I inform myself of the employers' point of view about strikes	.02	**.74**	.02	−.04	.02	−.08	.10

Table 1 (continued)

Item	Original item in German	English translation	Rotated factor loadings						
negB2	Ich würde die Seite der Arbeitgeber bei Diskussionen einnehmen	I would support the employers' position in conversations	−.04	.17	.03	−.10	.03	−.28	.24
negB3	Ich teile Posts gegen Streiks in sozialen Netzwerken	I share posts against strikes on social networks	−.05	−.05	−.01	**.77**	.02	−.10	.00
negB4	Ich beschwere mich über die Auswirkungen von Streiks	I complain about the consequences of strikes	−.10	.00	.24	−.05	.01	.02	.23

pA positive affect, *neuA* neutral affect, *negA* negative affect, *pC* positive cognition, *nC* negative cognition, *pB* positive behavior, *neuB* neutral behavior, *negB* negative behavior

Numbers in bold = loadings above .30

Table 2 Correlations Study 1

Factor	F1	F2	F3	F4	F5	F6	F7
F1 Legitimacy of strikes	(.80)						
F2 Informing oneself about strikes	.44***	(.86)					
F3 Negative reactions towards strikes	−.45***	−.27***	(.79)				
F4 Strike-related social network behavior	.17**	.32***	−.09	(.76)			
F5 Indifference towards strikes	−.41***	−.46***	.29***	−.26***	(.66)		
F6 Support of strikers	.59***	.59***	−.40***	.33***	−.50***	(.74)	
F7 Negative cognitions towards strikes	−.60***	−.30***	.54***	−.16**	.41***	−.51***	(.77)
M	4.05	3.37	1.84	1.66	2.59	3.35	2.45
SD	0.71	1.04	0.30	0.79	0.91	0.84	0.75

$N = 304$. Numbers in the diagonal line represent reliabilities (Cronbach's α of the respective factors)

$^{*}p < 0.05$

$^{**}p < 0.01$

$^{***}p < 0.001$

2020), MBESS (v4.8.0; Kelley, 2019), lavaan (v.0.6–8; Rosseel, 2012), sem (v3.1–11; Fox et al., 2017), semPlot (v1.1.2; Epskamp, 2019), and semTools (v0.5–4; Jorgensen et al., 2019).

Results

Preliminary Analyses We first checked whether requirements for running an exploratory factor analysis were met (Fabrigar & Wegener, 2012). The Kaiser–Meyer–Olkin coefficient (KMO) was 0.90, which means that sufficient correlations existed between the items. The sample size was eight times larger than the number of items, and the Bartlett test showed a significant result. Hence, all the requirements for an exploratory factor analysis were met.

Test of Hypotheses To analyze the factor structure of the items, an exploratory factor analysis with principal axis factoring and Oblimin rotation was conducted (Goretzko et al., 2021). The factor analysis resulted in seven factors following a parallel analysis (Hayton et al., 2004). Factor loadings of the items on the seven factors after the Oblimin rotation can be found in Table 1. In total, the seven factors explained 46% of the variance. Correlations between the factors (absolute values) ranged between $r = |.08|$ and $r = |0.60|$ (see Table 2).

The first factor was labeled "legitimacy of strikes" because its marker item was "Strikes are a legitimate tool" (factor loading = −0.64). The second factor was labeled "informing oneself about strikes"; its marker item was "I read about strikes" (factor loading = 0.75). The third factor was labeled "negative reactions towards strikes," and its marker item was "I feel stressed out by strikes" (factor loading = 0.77). The fourth factor was labeled "strike-related social network behavior" because its marker item was "I share posts against strikes on social networks" (factor loading = 0.77). The fifth factor was labeled "indifference towards strikes," and its marker item was "I do not do anything about strikes" (factor loading = 0.74). The sixth factor was labeled "support of strikers," and its marker item was "I would talk to strikers to show them my support" (factor loading = 0.49). Finally, the seventh factor was labeled "negative cognitions towards strikes"; its marker item was "Strikers make overdrawn demands" (factor loading = 0.64).

Table 3 Study 1: Deleted items and reasons for exclusion

Deleted item	Reasons for exclusion
Strikes give me a positive feeling	No loading above .30 on one of the factors
It makes me feel happy when strikers stand up for their claims	Highest loading on legitimacy of strikes and not the affective factor, low highest factor loading (−.33)
I admire strikers	Highest loading on support of strikers and not the affective factor (.45)
I am indifferent to strikes	Highest loading on support of strikers and not the affective factor (−.25)
I inform myself of the employers' point of view about strikes	Loads on factor informing oneself about strikes, but does not fit with the content of the other items on this factor
I do not care about strikes	Low highest loading on the factor indifference to strikes (.32)
Hearing something about strikes frightens me	Lowest loading of the negative affective items (.40) on the negative reactions factor and not twice as high as second highest loading (.24)
Strikes are fair	Low loading on legitimacy of strikes (−.28)
Strikes hit the wrong people	Low loading on negative cognition factor (.39)
I avoid strikes as much as possible	Low loading on negative cognition factor (.42) and not twice as high as second highest loading (.30)
I complain about the consequences of strikes	Low loading on negative cognition factor (.23) and equally loading on negative reactions factor (.24)
I would support the employers' position in conversations	Low loading on negative cognition factor (.24) and also loading on support of strikers' factor to an equal extent (−.28)
I do not feel affected by strikes	Repeated participant feedback that the item is difficult to understand
People would just be as well off if there were no strikes in this country	Repeated participant feedback that the item is difficult to understand
The importance of strikes is overestimated	Repeated participant feedback that the item is difficult to understand
Strikes are decided too fast	Repeated participant feedback that the item is difficult to understand
I do not do anything about strikes	Repeated participant feedback that the item is difficult to understand
I have nothing to do with strikes	Repeated participant feedback that the item is difficult to understand
Strikes are a legitimate tool	Repeated participant feedback that the item is difficult to understand
Strikers make overdrawn demands	Repeated participant feedback that the item is difficult to understand
I share posts against strikes on social networks	Supposed to be negative formulated item, reformulating it in a way that it fits with the other social network items would not provide any information gain over "I share information about strikes on social media."
I feel stressed out by strikes	Exclusion based on modification indices—item had the highest modification index

As the goal of Study 1 was to generate items and to test which of the items worked best, we conducted an item reduction following the factor analysis. In particular, 22 items were removed following several considerations (see Table 3 for all reasons). First, six items were excluded because they loaded on several factors to an equal extent (e.g., "Strikes are fair"). Second, six items were excluded because they loaded rather low (i.e., below 0.40 and not twice as strong on appropriate factor than any other factor, Hinkin, 1995, 1998) on their respective factors (e.g., "Strikes give me a positive feeling"). Third, eight items were excluded due to participant feedback: After filling out the questionnaire, participants were asked whether they had any comments, and they indicated that some of the items were not easy to answer or that they did not easily understand them (e.g., "The importance of strikes is overestimated"). Thus, items for which these remarks were made more frequently were also excluded. Furthermore, one item was excluded because it would have been the only negative worded item on its factor. Finally, we examined the modification indices to assess how the model could be further improved (Bentler, 2010). One item was excluded due to having the highest modification index (see Muncer and Ling (2006) for a similar approach). Among others, all items relating to the indifference towards strikes factor and all but one item from the negative cognitions factor were removed by this reduction process. Due to this reduction process, all positive and neutral affective items were also removed.

Thus, only five of the initial seven factors were retained. The single left item that had loaded on the negative cognitions towards strikes factor was grouped with the legitimacy of strikes factors as it had its second highest loading on this factor. The resulting five-factor structure was negative reactions towards strikes, legitimacy of strikes, informing oneself about strikes, strike-related social network behavior, and support of strikers.

Table 4 Study 2 items ($N = 209$) and discriminatory power

Factor	German item	English translation	Discriminatory power
Negative reactions towards strikes	Ich fühle mich von Streiks gestört	I feel disturbed by strikes	.76
	Streiks belasten mich	Strikes strain myself	.71
	Von Streiks bin ich genervt	I am annoyed by strikes	.82
Legitimacy of strikes	Streiks sind notwendig	Strikes are necessary	.71
	Streiks sind gerechtfertigt	Strikes are justified	.62
	~~Streiks verursachen zu viele Kosten.~~	~~Strikes cause too many costs.~~	~~.51~~
	Streiks sind eine Zeitverschwendung (reverse-coded)	Strikes are a waste of time (reverse-coded)	.68
Informing oneself about strikes	Ich lese Nachrichten über Streiks	I read about strikes	.55
	Ich interessiere mich für die Gründe von Streiks	I am interested in the reasons of strikes	.60
	Ich eigne mir selbst Hintergrundwissen zu Streiks an	I acquire background knowledge about strikes	.63
Strike-related social network behavior	Ich teile Informationen zu Streiks in den sozialen Netzwerken	I share information about strikes on social media	.67
	Ich kommentiere Beiträge in sozialen Netzwerken zu Streiks	I comment on posts about strikes on social media	.69
	Ich schaue mir Beiträge zu Streiks in sozialen Netzwerken an	I look at posts about strikes on social media	.53
Support of strikers	Ich würde Streikenden meine Unterstützung zeigen	I would show my support to strikers	.68
	Ich würde Flyer von Streikenden entgegennehmen	I would accept leaflets from strikers	.62
	Ich würde die Seite der Streikenden bei Diskussionen einnehmen	I would support the strikers' position in conversations	.66

The crossed-out item was not included in the final scale. The English version of the scale was translated and back-translated by two individuals, both fluent in German and English following best practices (e.g., Schaffer & Riordan, 2003).The instruction of the scale is "On a scale from 1 (do not agree) to 5 (agree), please indicate to what extent you agree with these statements."

Discussion

This study yielded a measure with a five-factor structure after an exploratory factor analysis and item reduction process. The obtained five-factor structure also aligns in several ways with our previously assumed three components: first, the negative reactions towards strikes factor is equal to the affective component of attitudes in the model. Secondly, the legitimacy of strikes factor can be understood as the cognitive component of attitudes, as this factor reflects the knowledge a person has about strikes and how this person judges strikes from a normative perspective. Finally, the other three factors—informing oneself about strikes, strike-related social network behavior, and support of strikes—all consist of behavioral intentions or actual behaviors. Thus, these three factors together represent the behavioral reactions component. We examined the fit of this new five-factor structure with new data in Study 2.

Study 2—Psychometric Properties

Study 2 had two aims: The first aim was to conduct a confirmatory factor analysis to confirm the five-factor structure from Study 1 with the shortened item set. Second, we wanted to examine the reliability of the scales (i.e., Cronbach's α and McDonald's ω).

Method

Sample Participants were recruited online via newspaper websites and social networks. In total, 216 persons took part in the study. Of these, $N = 209$ filled out all 16 items and were included in the analyses. The mean age was 30.93 ($SD = 11.63$), and 67.0% were female. Most (64.1%) were employed, 13.9% were members of a union, and 27.3% had already participated in a strike themselves. Of those who reported to have participated in a strike, 36.8% reported that this strike had taken place less than a year ago.

Table 5 Correlations and internal consistencies Study 2

Factor	F1	F2	F2–3 items	F3	F4	F5
F1 Negative reactions towards strikes	(.88)					
F2 Legitimacy of strikes	− .67**	(.80)				
F2 Legitimacy of strikes–3-item version	− .58**	.95**	(.82)			
F3 Informing oneself about strikes	− .20**	.35**	.33**	(.76)		
F4 Strike-related social network behavior	− .32**	.36**	.28**	.46**	(.79)	
F5 Support of strikers	− .56**	.64**	.59**	.48**	.63**	(.80)
M	2.53	3.85	4.03	3.51	2.11	3.16
SD	1.09	0.82	0.82	0.90	1.09	1.02
McDonald's ω	.88 [.85–.92]	.80 [.75–.86]	.83 [.77–.88]	.77 [.71–.82]	79 [.72–.85]	.80 [.75–.85]

$N = 209$. Numbers in the diagonal line represent Cronbach's α of the respective factors. Numbers in square brackets represent the 95% confidence interval

**$p < 0.01$

Table 6 Results of the confirmatory factor analyses comparisons for Studies 2–4

	χ^2	df	CFI	TLI	RMSEA [90% CI]	SRMR	AIC	$\Delta\chi^2$
Study 2								
Five-factor model with 16 items	229.85	94	.91	.89	.08 [.07–.10]	.08	8883.74	
Five-factor model with 15 items	176.84	80	.93	.91	.08 [.06–.09]	.07	8319.55	
Three-factor model	337.03	87	.82	.79	.12 [.10–.13]	.09	8482.50	134.53
One-factor model	625.32	90	.62	.56	.17 [.16–.18]	.13	8798.37	359.24
Study 3								
Five-factor model	149.65	80	.97	.96	.04 [.03–.05]	.05	17,837.23	
Three-factor model	439.99	87	.85	.81	.10 [.09–.10]	.09	18,183.55	196.36
One-factor model	885.98	90	.65	.59	.14 [.13–.15]	.12	18,754.02	466.32
Study 4								
Five-factor model	188.53	80	.93	.91	.06 [.05–.07]	.06	16,071.49	
Three-factor model	514.17	87	.73	.67	.11 [.10–.12]	.10	16,507.88	185.36
One-factor model	811.34	90	.54	.47	.14 [.13–.15]	.12	16,981.40	305.59

CFI comparative fit index, *TLI* Tucker-Lewis index, *SRMR* standardized root mean square residual, *RMSEA* root mean square error of approximation, *AIC* Akaike Information Criterion

Procedure Several items from Study 1 were reworded (see Table 4) to make them more understandable. Furthermore, the item "I look at posts about strikes on social media." was added to the factor strike-related social network behavior to capture all relevant behaviors on social networks. Again, after a welcoming page with a short definition of strikes, the participants filled out the 16 items of the scale on a 5-point Likert-type scale ranging from "Do not agree" to "Agree" and answered demographic questions.

Results

First, the reliability of the five factors was estimated using Cronbach's α and McDonald's ω. For this, the negative formulated items of the legitimacy of strikes factor were recoded. The internal consistency coefficients, correlations, means, and standard deviations can be found in Table 5. The discriminatory power of the items ranged between $r = 0.51$ and $r = 0.82$ (see Table 4). No part-whole correction would have led to a better reliability coefficient.

Next, a confirmatory factor analysis (CFA) using maximum-likelihood estimates was performed to confirm the five-factor structure. To evaluate model fit, we followed recommendations by Hu and Bentler (1999) who consider cut-off values for comparative fit index (CFI) and Tucker-Lewis index (TLI) ≥ 0.95, standardized root mean square residual (SRMR) ≤ 0.08, and root mean square error of approximation (RMSEA) ≤ 0.06 as indicating a good model fit. All results of the CFAs can be found in Table 6. The model fit of the expected factor structure was acceptable: $\chi^2(94) = 229.85 > 2*df = 188$ (Ullman, 2013), $p < 0.001$, CFI = 0.91, TLI = 0.89, RMSEA = 0.08 [90% CI: 0.07–0.10],

and SRMR $= 0.08$. When taking a look at the modification indices, factor loadings, and discriminatory power, we found that the item "Strikes cause too many costs" had the highest modification index and lowest factor loading (-0.62) compared to the other items' loadings on the legitimacy of strikes factor. Furthermore, this item also had the lowest discriminatory power of all items. Thus, we conducted another confirmatory factor analysis with maximum-likelihood estimates without that item (model 2). The fit of model 2 was also acceptable: $\chi^2(80) = 176.84 > 2*df = 160$ (Ullman, 2013), $p < 0.001$, CFI $= 0.93$, TLI $= 0.91$, RMSEA $= 0.08$ [90% CI: 0.06–0.09], and SRMR $= 0.07$. Furthermore, model 2 had a smaller Akaike information criterion (AIC) with AIC $= 8319.55$ compared to model 1 (AIC $= 8883.74$) and thus exhibited a better fit to the data (Sakamoto et al., 1986). Because the content of this item was also ambiguous, it was removed from the scale. The reliability of the legitimacy of strikes factor thereafter was Cronbach's $\alpha = 0.82$, McDonald's $\omega = 0.83$ [0.77–0.88] (with $M = 4.03$ and $SD = 0.82$).

We also tested whether this five-factor model showed a better model fit than a three-factor model. In the three-factor model, the factors informing oneself about strikes, strike-related social network behavior, and support of strikers were aggregated into a single behavioral intentions factor. The five-factor model showed a significant better fit than the three-factor model, $\Delta\chi^2(7) = 134.53$, $p < 0.001$. Moreover, model 2 had a smaller AIC $= 8319.55$ compared to the model with three factors (AIC $= 8482.50$) and thus exhibited a better fit to the data (Sakamoto et al., 1986). We additionally tested whether our proposed five-factor model showed a significantly better fit than a one-factor model. This assumption was also supported, $\Delta\chi^2(10) = 359.24$, $p < 0.001$. Again, model 2 had a smaller AIC $= 8319.55$ compared to the model with one factor (AIC $= 8798.37$) and thus exhibited a better fit to the data (Sakamoto et al., 1986). As such, the results supported a five-factor structure with three items per factor.

Discussion

The reliability coefficients of the five factors were satisfactory: Cronbach's α ranged from 0.76 to 0.88. The use of modification indices to modify the scale is considered additional exploratory work rather than confirmatory; therefore, the resulting scale structures need to be validated in another study. The factor means suggest that participants had on average a rather positive attitude to strikes. Participants did not have a strong negative reaction towards strikes ($M = 2.53$), saw strikes as legitimate ($M = 4.03$), and kept themselves informed about strikes ($M = 3.50$). Furthermore, they indicated that they were rather neutral towards supporting strikers ($M = 3.16$) and rather seldom used social networks to inform themselves or communicate about strikes

($M = 2.10$). The acceptable model fit further confirmed the five-factor structure from Study 1.

Study 3—Validity Study

Theoretical Background

The first aim of this third study (following Hinkin, 1995, 1998) was to confirm the five-factor structure of the strike attitude and behavioral reactions scale (SABeRS) that was constructed in the two previously described studies. Hence, we hypothesize more formally: *The five-factor structure from Studies 1 and 2 will be confirmed in this sample (H1).*

Convergent Validity The second aim of this study was to examine the convergent validity of the proposed strike attitude and behavioral reactions dimensions. The first construct used to assess the convergent validity was the willingness to strike. Willingness to strike is described as a function of dissatisfaction in many areas, but it can also be a generalization of dissatisfaction from other parts of work (Stagner, 1956). Unions rely on their members' willingness to strike because it is important to plan their sanctions in a collective bargaining process. Willingness to strike is known to be related to union loyalty (Barling et al., 1992). Furthermore, willingness to strike seems to be lower for older employees and among employees with higher perceived employability, whereas employees with left-wing views often show a greater willingness to strike, as well as employees who are more dissatisfied with their jobs (Jansen et al., 2017). Based on the value-attitude-behavior hierarchy (Homer & Kahle, 1988), people with positive attitudes towards strikes and more behavioral reactions should be more willing to perform behaviors that align with their attitudes, one of these behaviors being willingness to strike. Following these arguments and findings, we hypothesize: *Willingness to strike is negatively correlated with negative reactions towards strikes (H2a) and positively correlated with legitimacy of strikes (H2b), informing oneself about strikes (H2c), strike-related social network behavior (H2d), and support of strikers (H2e).*

To further assess the convergent validity, we used attitudes towards unions. The attitudes towards unions are seen as important determinants of industrial relations outcomes (Jarley & Kuruvilla, 1994). Furthermore, union attitudes have been found to be predictors for support of strike actions (Kelloway et al., 2008) as well as predictors for actual strike behavior (Tivendell & Watson, 1995). Thus, we hypothesize: *Attitudes towards unions are negatively correlated with negative reactions towards strikes (H3a) and positively correlated with legitimacy of strikes (H3b), informing oneself*

about strikes (H3c), strike-related social network behavior (H3d), and support of strikers (H3e).

For unions, their members' attitudes to strikes are important during a collective bargaining process. Given the strong link between strikes and unions, belonging to a union may influence an individuals' attitude and behavioral reactions towards strikes. If union members report a higher willingness to strike (Jansen et al., 2017), they might thus also show more positive attitudes to strikes than non-union-members. It has also been shown that people with higher pro-strike attitudes were more willing to join a union (Beutell & Biggs, 1984). Thus, we hypothesize: *Union members have lower negative reactions towards strikes (H4a) and report a higher legitimacy of strikes (H4b) than non-members. Furthermore, union members inform themselves more about strikes (H4c), show more strike-related social network behavior (H4d), and support strikers more than non-members (H4e).*

In conjunction with this, union members who feel more committed to their unions will participate more in union activities (Fullagar & Barling, 1989), and union loyalty—a facet of union commitment—has been shown to predict willingness to strike (Barling et al., 1992). Thus, we hypothesize: *Union loyalty is negatively correlated with negative reactions towards strikes (H5a) and positively correlated with legitimacy of strikes (H5b), informing oneself about strikes (H5c), strike-related social network behavior (H5d), and support of strikers (H5e).*

Employees who have already participated in a strike have a higher probability of participating in another strike compared to employees who have never taken part in a strike (Campolieti et al., 2005; J. E. Martin & Sinclair, 2001). Hence, having taken part in a strike might influence one's attitudes to strikes and the perception of strikes as a useful means in collective bargaining. Thus, we hypothesize: *Persons who have previously taken part in a strike will report fewer negative reactions towards strikes (H6a), perceive strikes as more legitimate (H6b), inform themselves more about strikes (H6c), show more strike-related social network behavior (H6d), and support strikers more (H6e) than persons who never participated in a strike.*

To further assess the convergent validity of the strike attitude scale, we measured participants' political orientation. As mentioned earlier, employees with left-wing views reported a greater willingness to strike (Jansen et al., 2017). This aligns with other research (Jost et al., 2008, 2017), showing that liberals try to change the status quo and advance social change towards social, economic, and political equality. Thus, we hypothesize: *Political orientation (with higher values corresponding to an increasing conservative orientation) is positively correlated with negative reactions towards strikes (H7a) and negatively correlated with legitimacy of strikes (H7b), informing oneself about*

strikes (H7c), strike-related social network behavior (H7d), and support of strikers (H7e).

Discriminant Validity The third aim of this study was to assess the discriminant validity of the SABeRS. To do so, we chose the personality dimensions openness to experience, extraversion, and conscientiousness as well as generalized self-efficacy. These four constructs can be expected to be rather unrelated to attitudes and behavioral reactions to strikes. In the case of openness, it should not matter whether a person is prone to gather new experiences or not (Fatke, 2019) when asked for their attitudes to strikes. Thus, we hypothesize: *Openness to experience is not (or at least to a lower extent in comparison to the convergent validities) correlated with negative reactions towards strikes (H8a), legitimacy of strikes (H8b), informing oneself about strikes (H8c), strike-related social network behavior (H8d), and support of strikers (H8e).*

Regarding extraversion, people who are rather outgoing could have the same attitude to strikes as persons who prefer to be on their own (McCrae & Costa, 1999). Thus, we hypothesize: *Extraversion is not (or at least to a lower extent in comparison to the convergent validities) correlated with negative reactions towards strikes (H9a), legitimacy of strikes (H9b), informing oneself about strikes (H9c), strike-related social network behavior (H9d), and support of strikers (H9e).*

In the case of conscientiousness, attitude to strikes should not be influenced by whether people do, for instance, their tasks on time or are rather lazy (McCrae & Costa, 2008). Thus, we hypothesize: *Conscientiousness is not (or at least to a lower extent in comparison to the convergent validities) correlated with negative reactions towards strikes (H10a), legitimacy of strikes (H10b), informing oneself about strikes (H10c), strike-related social network behavior (H10d), and support of strikers (H10e).*

Finally, in the case of generalized self-efficacy, attitude towards strikes should not be influenced by people's perception of their competence to successfully conduct a certain activity (Beierlein et al., 2012). Hence, we hypothesize: *Generalized self-efficacy is not (or at least to a lower extent in comparison to the convergent validities) correlated with negative reactions towards strikes (H11a), legitimacy of strikes (H11b), informing oneself about strikes (H11c), strike-related social network behavior (H11d), and support of strikers (H11e).*

Method

This study was preregistered (available at https://aspredicted.org/xz9iz.pdf).

Sample Participants were recruited online via the WiSo Panel (Göritz, 2014), and 528 persons completed the study. At the end of the survey, participants were asked whether they responded honestly and whether their data could be used. Participants who selected "no" were excluded from the analyses ($n = 10$). Participants who responded to the items at a rate faster than 2 s per item were also excluded from the analyses ($n = 28$; Huang et al., 2012). Furthermore, long strings (i.e., the number of times a participant chose the same response option consecutively) above fourteen items (which was where the so-called "elbow" appeared in the data, Johnson, 2005) were identified. The analyses reported below were calculated excluding participant data with long strings ($n = 47$; Johnson, 2005; Niessen et al., 2016). We repeated the analyses *including* these participants, and the differences in results were negligible (available upon request from the first author). This exclusion procedure was conducted following the specification in the preregistration of this study. After controlling for swift completion and long strings above 14, $N = 443$ persons were included in the analyses. The mean age was 54.72 ($SD = 14.28$) and 48.3% were female. Most (56.2%) were employed, 18.1% were members of a union, and 30.5% had already participated in a strike themselves. Of those who had already participated in a strike, only 9.6% reported that this strike had taken place within the last year.

Materials Unless otherwise noted, all scales were rated on a scale from 1 (do not agree) to 5 (agree). First, we used the 15 items from Study 2 to measure *strike attitudes and behavioral intentions* (i.e., three items for each factor). Items can be found in Table 4. For measuring *willingness to strike*, we developed four items following Akkerman et al. (2013), rated on a 5-point Likert scale ranging from "Not at all" to "Very likely." A sample item is "I would strike for better working hours."[2] *Attitudes towards unions* were assessed with a scale from Liepmann et al. (1984), consisting of five items. A sample item of this scale is "Trade unions are necessary for the enforcement of employee interests."

Membership in a union was measured with a single item that asked participants whether they were members of a union. *Union loyalty* was measured with four adapted affective commitment items from Felfe and Franke's (2012) scale. We adapted the items by changing the object of the commitment from the organization to the union; a sample item is "I am proud to be a member of my union." *Participation in strikes* was measured with a single item in which participants were asked whether they had ever taken part in a strike. *Political orientation* was measured with a single item (from Jost et al., 2012) that asked participants to rate their political orientation on a scale from 0 (left) to 11 (right). The personality dimensions openness to experience (e.g., "I am someone who is original, develops new ideas."), extraversion (e.g., "I am someone who is talkative, likes to talk"), and conscientiousness (e.g., "I am someone who does his/her chores thoroughly") were measured with 27 items from the Big Five Inventory (BFI, using the German version of Fell & König, 2016). Finally, *generalized self-efficacy* was measured using the established German brief scale "Kurzskala zur Erfassung allgemeiner Selbstwirksamkeitserwartungen" (Beierlein et al., 2012). This scale consists of three items that are rated on a 5-point Likert scale ranging from "Not at all" to "Absolutely." A sample item for this scale is "Most problems I can master well by myself."

Procedure After a welcoming page that included a short definition of strikes, participants first responded to the 15 items of the strike attitude and behavioral reactions scale. These items were followed by the willingness to strike items, the attitudes towards unions items, and the question on whether participants were members of a union. If participants were union members, they filled out the union loyalty items next. Otherwise, the participants were re-directed to the political orientation item. This item was followed by conflict style items,[3] the personality items, and the self-efficacy items. Finally, the participants completed demographic questions.

Results

Preliminary Analyses The reliability of the different scales was sufficient (Table 7).

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[2] We conducted an additional study to validate this self-developed willingness to strike scale. In this study, 122 employees participated (66 women, 56 men). The mean age was 36.82 ($SD = 13.92$). Twenty-five participants reported being union members. The willingness to strike scale showed good reliability (Cronbach's $\alpha = .81$, McDonald's $\omega = .82$ [.75–.88]), and a satisfactory model fit, $\chi^2(2) = 5.41$, $p = .067$, CFI $= .97$, TLI $= .91$, RMSEA $= .12$ [.00–.24], SRMR $= .04$. The inter-item correlations ranged from $r = .48$ to $r = .60$. Finally, the willingness to strike scale was significantly correlated with political orientation ($r = -.22$, $p = .016$); that is, participants who placed themselves on the left end of the continuum in political orientation were more willing to strike than participants who placed themselves on the right end of the continuum of the political orientation. This supports the convergent validity of the scale.

[3] To support open science (Open Science Collaboration, 2015), we preregistered this study. Initially, we assumed that conflict styles would be related to the strike attitude factors but a colleague made us aware of the fact that the scales we used to assess conflict styles focused on "the leader" instead of "the organization," which makes these measures rather irrelevant for this context. Thus, we followed the advice of the colleague and do not report these analyses here (but they can be made available upon request).

Table 7 Correlations between Study 3 variables

Scale		M (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Negative reactions towards strikes	2.46 (0.18)	(.87)												
2	Legitimacy of strikes	4.00 (0.10)	−.59**	(.81)											
3	Informing oneself about strikes	3.61 (0.46)	−.23**	.41**	(.71)										
4	Strike-related social network behavior	1.70 (0.29)	−.16**	.18**	.33**	(.78)									
5	Support of strikers	3.24 (0.29)	−.51**	.65**	.58**	.36**	(.78)								
6	Willingness to strike	3.88 (0.39)	−.36**	.55**	.29**	.27**	.50**	(.85)							
7	Attitudes towards unions	4.16 (0.37)	−.41**	.62**	.31**	.15**	.57**	.55**	(.87)						
8	Union loyalty	3.48 (0.26)	−.12	.17	.59**	.38**	.48**	.34**	.32**	(.84)					
9	Political orientation	5.09 (2.11)	.27**	−.32**	−.31**	−.16**	−.39**	−.20**	−.30**	−.20	-				
10	Openness to new experiences	3.69 (0.39)	−.01	.03	.21**	.14**	.13**	.07	.06	.27*	−.24**	(.82)			
11	Extraversion	3.36 (0.27)	.07	.04	.15**	.14**	.05	.13**	.00	.29**	−.05	.43**	(.87)		
12	Conscientiousness	3.94 (0.35)	−.07	−.00	.13*	−.08	.02	.06	.06	.20	.11*	.29**	.31**	(.81)	
13	Self-efficacy	4.14 (0.06)	.10*	.03	.18**	.02	.07	.02	.08	.28*	−.07	.38**	.40**	.42**	(.84)

The numbers in the diagonal represent Cronbach's α of the scales. $N=443$ (with the exception of union loyalty where $n=80$). Higher values in political orientation refer to a more conservative orientation

$^*p<0.05$

$^{**}p<0.01$
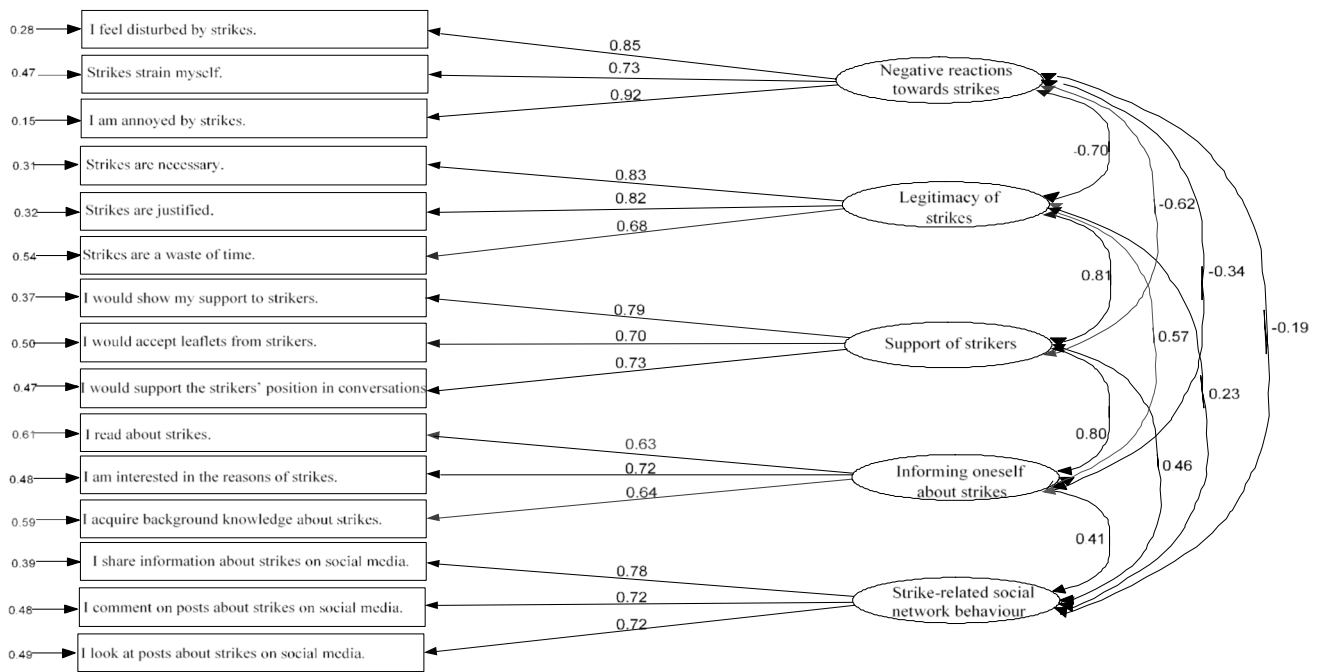
Note. Numbers represent standardized loadings.

Fig. 1 Resulting model of the confirmatory factor analysis in Study 3. *Note.* Numbers represent standardized loadings

Table 8 *T*-test results (Study 3)

	Union member ($n=80$)		Not a union member ($n=355$)				Strike participation ($n=135$)		No strike participation ($n=300$)			
	M	SD	M	SD	t(433)	d	M	SD	M	SD	t(433)	d
Negative reactions towards strikes	2.14	0.98	2.54	1.16	−3.20**	−0.37	1.90	1.01	2.71	1.11	−7.24***	−0.76
Legitimacy of strikes	4.36	0.69	3.91	0.95	4.88***	0.54	4.40	0.71	3.81	0.95	7.29***	0.70
Informing oneself about strikes	3.91	0.89	3.55	0.88	3.31**	−0.41	3.97	0.82	3.44	0.89	5.85***	0.62
Strike-related social network behavior	2.23	1.14	1.58	0.78	4.83***	0.67	2.07	1.09	1.53	0.73	5.27***	0.58
Support of strikers	3.72	0.93	3.12	1.03	4.79***	0.61	3.80	0.88	2.98	1.01	8.58***	0.87

Bonferroni corrected significance level = 0.05/5 = 0.01. Interpretation of effect sizes following J. Cohen (1988): |d|=0.2 small, |d|=0.5 medium, |d|=0.8 strong

*$p < 0.05$

**$p < 0.01$

***$p < 0.001$

Tests of Hypotheses First, a confirmatory factor analysis was conducted to confirm the hypothesized factor structure (H1, see Fig. 1). The model fit was good: $\chi^2(80) = 149.65$, $p < 0.001 < 2*df = 160$ (Ullman, 2013), CFI = 0.97, TLI = 0.96, RMSEA = 0.04 [90% CI: 0.03–0.05], and SRMR = 0.05. We tested again whether this five-factor model fit the data better than a three-factor model, as in Study 2. In the three-factor model, the factors informing oneself about strikes, strike-related social network behavior, and support of strikers were aggregated into a single behavioral reactions factor. Model fit indices of this model can be found in Table 6. The five-factor model showed a significantly better fit than the three-factor model, $\Delta\chi^2(7) = 196.36$, $p < 0.001$. Moreover, the five-factor model had a smaller AIC = 17,837.23 compared to the model with three factors (AIC = 18,183.55) and thus exhibited a better fit to the data (Sakamoto et al., 1986). We also tested whether our proposed five-factor model fits the data significantly better than a one-factor model. The current five-factor model

exhibited a significantly better fit, $\Delta\chi^2(10) = 466.32$, $p < 0.001$, $AIC_{one-factor} = 18,754.02$. Hence, hypothesis 1 was supported.

Regarding convergent validity, hypotheses H2a-e, H3a-e, and H4 a-e were all supported: Results (see Tables 7 and 8) showed significant correlations between the strike attitude and behavioral reactions scale and willingness to strike, attitudes towards unions, and significant mean differences between union members and non-members. As hypothesized, willingness to strike was negatively correlated with negative reactions towards strikes and positively correlated with legitimacy of strikes, informing oneself about strikes, strike-related social network behavior, and support of strikers. The same pattern emerged for attitudes towards unions. Union members reported significantly fewer negative reactions to strikes, saw strikes as more legitimate, informed themselves more about strikes, showed more strike-related social network behavior, and showed greater support for strikers compared to non-members.

Hypotheses 5 c-e were also supported: Union loyalty was positively correlated with informing oneself about strikes, strike-related social network behavior, and support of strikers. Hypotheses 5a and 5b were not supported because the correlations between the factors negative reactions to strikes and legitimacy of strikes and union loyalty were not significant (albeit going in the expected direction).

H6a-e and H7a-e were supported: As hypothesized, participants who had already participated in a strike reported fewer negative reactions towards strikes, found strikes more legitimate, informed themselves more about strikes, showed more strike-related social network behavior, and supported strikers more than participants who never took part in a strike. Political orientation correlated positively with negative reactions towards strikes and negatively with legitimacy of strikes, informing oneself about strikes, strike-related social network behavior, and support of strikers.

Regarding discriminant validity, correlations between the three assessed personality dimensions, generalized self-efficacy, and the five factors of the SABeRS can be found in Table 7. H8a and b; H9a, b, and e; H10a, b, d, and e; and H11b, d, and e were fully supported. Hence, these constructs showed no significant correlation to the SABeRS. Openness to experiences was positively correlated with informing oneself about strikes, strike-related social network behavior, and support of strikers, but to a lower extent in comparison to convergent validities, thus, only partially confirming H8c-e. Extraversion was positively correlated with informing oneself about strikes and strike-related social network behavior, but to a lower extent in comparison to convergent validities, which only partially confirms H9c and d. Conscientiousness was positively correlated with informing oneself about strikes but to a lower extent in comparison to convergent criterion-related validities (i.e., only partially confirming H10c). Finally, generalized self-efficacy was positively correlated with negative

reactions towards strikes and informing oneself about strikes, but to a lower extent in comparison to convergent validities, which only partially confirms H11a and c.

Discussion

In sum, Study 3 results provide support for the five-factor structure of the SABeRS and its convergent and discriminant validity. Legitimacy of strikes, informing oneself about strikes, strike-related social network behavior, and support of strikers were found to be positively related to willingness to strike, attitudes towards unions, and a left-oriented political orientation, whereas negative reactions towards strikes were negatively related to all these constructs. Furthermore, union members and persons who already participated in a strike showed significantly more positive attitudes and reactions to strikes than persons who were not members of a union or who had never participated in a strike. Regarding discriminant validity, the negative reaction towards strikes and legitimacy of strikes factors did not show a significant relationship with any of the three personality dimensions. Support of strikers was not related to extraversion or conscientiousness, and strike-related social network behavior was not related to conscientiousness. Finally, neither legitimacy of strikes, strike-related social network behavior, nor support of strikers was related to generalized self-efficacy. Only informing oneself about strikes was related to all the measures used to assess discriminant validity but to a lower extent in comparison to those used to assess convergent validities.

Study 4—Validity Study with a Specific Strike

Theoretical Background

To further validate the SABeRS, we decided to collect data during and shortly after a 1-day warning strike in the German public transport sector at the end of September/start of October 2020. The aim of this fourth study was to ensure that the SABeRS also works for specific strikes and, hence, to enhance its field of application from the general attitude object of strikes to the attitude object of specific strikes and the respective behavioral reactions. Thus, we formalize the first hypothesis of this study as follows: *The factor structure of the SABeRS can be replicated for a specific strike (H12).*

Next to the confirmation of the factor structure, another goal of this study was to validate the scale by testing additional assumptions about strike attitudes of strikers, strike-affected third parties, and strike-unaffected third parties. In our context, strikers were the people who directly participated in public transport's warning strike; strike-affected third parties were the people who were directly affected by the strike, such as passengers of buses and trams, commuters who usually use public transport, or parents of children whose buses

were affected. Strike-unaffected third parties were the people who were neither strikers nor in any way affected by the warning strike. Based on our results from Study 3 that union members and people who had already participated in a strike showed more positive attitudes and more behavioral reactions to strikes than non-union members and persons who had never taken part in a strike, we expected that in this study, strikers would report more positive attitudes and more behavioral reactions to this warning strike than strike-affected and strike-unaffected third parties. Strike-unaffected parties are rather in an observer role, as they are neither participants nor affected by the strike, and they thus might report rather neutral attitudes to this warning strike, whereas strike-affected third parties suffer due to the canceled public transport and might feel helpless in this situation. Hence, we expected that strike-affected third parties would report more negative attitudes to this strike. More formally, we hypothesize: *Participants of the warning strike report more positive attitudes and more behavioral reactions to this warning strike than strike-unaffected third parties, who report more positive attitudes and more behavioral reactions to this warning strike than strike-affected third parties (H13).*

Method

This study was preregistered (available at https://aspredicted.org/gy5vv.pdf).

Sample Participants were recruited online via social networks and via ver.di's (i.e., the union's) e-mail distribution lists across Germany during and after a warning strike in the public transport and later on the same day. The questionnaire was completed by 541 people. At the last page of the questionnaire, participants were asked whether they responded honestly and whether their data could be used for scientific purposes (Meade & Craig, 2012). Participants who selected "no" were excluded from further analyses ($n = 128$). No participants responded to the items at a rate faster than 2 s per items; thus, no participants were excluded due to this criterion (Huang et al., 2012). This exclusion procedure was conducted following the specification in the preregistration of this study. Thus, 413 participants were included in the analyses, of which 64 were strikers, 124 were strike-affected third parties, and 225 were strike-unaffected third parties. The mean age was 47.43 years ($SD = 13.11$), and 61.3% were male. Almost all participants (94.9%) were members of a union. Of the non-strikers, 80.8% had already participated in a strike themselves.

Materials and Procedure First, to assess the *attitudes and behavioral reactions to this specific strike*, we adapted the fifteen-item scale from Study 3 so that they referred to "this warning strike" instead of strikes in general (e.g., "This

warning strike is justified"). Participants should indicate "On a scale from 1 (do not agree) to 5 (agree), please indicate to what extent you agree with these statements." as in Studies 1 to 3. Next, strikers were asked to indicate reasons for their participation in the strike in an open textbox.[4] Then, *membership in a union* was measured with a single item, as in Study 3. At the end, participants had to fill out socio-demographics such as gender, age, highest level of education, and whether they had personally participated in a strike before. Then, they were thanked for their participation, could leave some comments, and indicated whether their data could be used for scientific purposes.

Results

Preliminary Analyses The reliability of the different scales was satisfactory. The reliabilities and the correlations can be found in Table 9.

Test of Hypotheses To answer hypothesis 12—whether the factor structure of the SABeRS can be confirmed regarding a specific strike—we conducted a confirmatory factor analysis. The model fit was satisfactory: $\chi^2(80) = 188.53 > 2*df = 160$ (Ullman, 2013), $p < 0.001$, CFI = 0.93, TLI = 0.91, RMSEA = 0.06 [90% CI: 0.05–0.07], and SRMR = 0.06. In this study, we also tested whether this five-factor model showed a better fit to the data than a three-factor model in which the three behavioral factors were aggregated (model fit indices of the respective models can be found in Table 6). The five-factor model fit the data significantly better, $\Delta\chi^2(7) = 185.36$, $p < 0.001$. Furthermore, the five-factor model fit the data significantly better than a single-factor model, $\Delta\chi^2(10) = 305.59$, $p < 0.001$. Hence, hypothesis 12 was supported. We also conducted a confirmatory factor analysis without participants who were on strike. As the results were very similar, we decided to report the results with all participants.

Regarding hypothesis 13, we conducted a multivariate analysis of variance (MANOVA) with the five subscales of the SABeRS as the dependent variables and the group membership as independent variable. We expected that strikers would report more positive attitudes and more behavioral reactions to this strike than strike-unaffected third parties and that these strike-unaffected third parties would report

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[4] We initially planned to assess two aims with study 4: First, to further establish the construct validity of the scale and second to learn more about differences in union attitudes (as in Study 3) and commitment (using an adapted measure of Felfe and Franke's [2012] commitment scale) in the light of a specific strike. As this second aim reduced the clarity of the manuscript, we decided to remove the respective hypotheses and analyses.

Table 9 Correlations and internal consistencies Study 4

Factor	1	2	3	4	5	6	7	8	9	10	11
1 Negative reactions towards strikes[a]	(.79)										
2 Legitimacy of strikes[a]	−.39**	(.74)									
3 Informing oneself about strikes[a]	−.23**	.38**	(.67)								
4 Strike-related social network behavior[a]	−.13**	.20**	.40**	(.86)							
5 Support of strikers[a]	−.33**	.60**	.56**	.41**	(.78)						
6 Attitudes towards unions[a]	−.26**	.56**	.32**	.13*	.45**	(.72)					
7 Union commitment – union loyalty[b]	−.30**	.32**	.32**	.30**	.41**	.38**	(.84)				
8 Organizational commitment[c]	−.12	.17	.03	.33**	.23	.11	.32**	(.78)			
9 Positive subjective well-being[a]	−.16**	.07	.08	.06	.12*	.08	.22**	.49**	(.95)		
10 Negative subjective well-being[a]	.09	.02	−.06	.03	.02	.01	−.15**	−.16	−.69**	(.95)	
11 Willingness to strike[d]	−.20**	.37**	.29**	.29**	.47**	.45**	.35**		.10	.04	(.76)
M	1.54	4.72	4.39	2.90	4.34	4.81	4.26	4.00	4.99	2.91	4.64
SD	0.90	0.66	0.74	1.40	0.97	0.37	0.85	0.90	1.26	1.32	0.59
McDonald's ω	.80 [.75–.86]	.76 [.66–.86]	.67 [.60–.75]	.86 [.83–.88]	.79 [.73–.84]	.71 [.55–.86]	.85 [.82–.88]	.82 [.74–.89]	.95 [.94–.96]	.95 [.94–.96]	.77 [.69–.86]

Numbers in the diagonal line represent Cronbach's α of the respective factors. Numbers in square brackets represent the 95% confidence interval. Positive and negative subjective well-being were rated on a scale from 1 to 7. All other constructs were rated on scales from 1 to 5

[a] $N = 413$

[b] $N = 392$

[c] $N = 64$

[d] $N = 349$

** $p < 0.01$

more positive attitudes and more behavioral reactions to this strike than strike-affected third parties. The three groups differed significantly in their attitudes and behavioral reactions to this strike, Wilks-$\lambda = 0.69$, $F(10, 812) = 16.84$, $p < 0.001$, $\eta_p^2 = 0.17$. Specifically, strikers ($M = 1.29$, $SD = 0.55$) and strike-unaffected third parties ($M = 1.31$, $SD = 0.61$) reported fewer negative reactions towards this strike than strike-affected third parties ($M = 2.09$, $SD = 1.20$), $F(2, 410) = 38.66$, $p < 0.001$, $\eta_p^2 = 0.16$. The three groups did not differ significantly in their assessment of the legitimacy of the warning strike, $F(2, 410) = 0.45$, $p = 0.632$, $\eta_p^2 = 0.002$. Furthermore, strikers ($M = 4.80$, $SD = 0.49$) reported that they informed themselves more than strike-affected third parties ($M = 4.42$, $SD = 0.74$), and these informed themselves more than strike-unaffected third parties ($M = 4.27$, $SD = 0.76$), $F(2, 410) = 10.10$, $p < 0.001$, $\eta_p^2 = 0.05$. The same pattern emerged for the strike-related social network behavior: That is, strikers ($M = 4.08$, $SD = 1.00$) reported more of this behavior than strike-affected third parties ($M = 2.91$, $SD = 1.41$), and these reported more than strike-unaffected third parties ($M = 2.55$, $SD = 1.30$), $F(2, 410) = 34.64$, $p < 0.001$, $\eta_p^2 = 0.15$. Finally, strikers reported the highest support for strikers ($M = 4.73$, $SD = 0.67$), followed by strike-affected third parties ($M = 4.34$, $SD = 1.03$), and strike-unaffected third parties ($M = 4.24$, $SD = 0.98$), $F(2, 410) = 6.71$, $p = 0.001$, $\eta_p^2 = 0.03$. Thus, hypothesis 13 was mostly supported, especially that strikers will report the most positive strike attitudes and behavioral reactions. However, some results were not as hypothesized and warrant further research.

Discussion

In Study 4, we were able to show that the SABeRS can also be used for specific strikes by demonstrating that the five-factor structure was supported in this study as well. The five-factor structure was again confirmed (with and without strikers in the sample). Furthermore, we showed that strikers reported more positive attitudes and more behavioral reactions to this warning strike than strike-affected and strike-unaffected third parties (hypothesis 13). Specifically, strikers showed the lowest negative reactions towards this warning strike, reported the highest legitimacy of this warning strike, informed themselves the most about the warning strike, showed the most strike-related social network behavior, and also reported the most support for strikers compared to strike-affected and strike-unaffected third parties. These effects for negative reactions towards this warning strike and the strike-related social network behavior can be considered large effects (J. Cohen, 1988). The legitimacy of the warning strike factor was the only factor of the general strike attitude scale for which we could find no significant difference between the three groups.

General Discussion

The current paper introduces the strike attitude and behavioral reactions scale (SABeRS) as a measure to assess general attitudes and behavioral reactions to strikes as well as attitudes and behavioral reactions to specific strikes. We followed Hinkin's (1995, 1998) guidelines for scale development and showed with four studies that the SABeRS is a reliable and valid measure of attitudes and behavioral reactions to strikes both in general and for specific strikes. The scale consists of five factors, a structure that consistently appeared in all four studies (negative reactions towards strikes, legitimacy of strikes, informing oneself about strikes, strike-related social network behavior, and support of strikers). The differentiation of these five factors helps to enhance our understanding of the strike attitude and behavioral reactions concept: For example, people can have negative reactions towards strikes but evaluate them as legitimate at the same time. Additionally, people might not participate in a strike, but express intentions to support strikers if they meet them face to face or inform themselves about the circumstances of strikes.

Across the four studies, we showed evidence for the psychometric qualities of the new scale. In Study 1, we used exploratory factor analysis to reduce the generated item pool to 16 items. Study 2 confirmed the obtained five-factor structure from Study 1 with a confirmatory factor analysis in a second sample. Following this confirmatory factor analysis, one additional item was excluded from the scale. The resulting fifteen-item scale had sufficient reliability (Cronbach's α above 0.76 for all factors). Studies 3 and 4 supported the five-factor structure again in a third and fourth sample. Thus, the scale demonstrated a consistent internal structure as the five-factor structure was consistently found in four different studies across four different samples delivering support for its construct validity. The correlations between the five factors were fairly substantial, indicating that they measure the same attitude object, but in most cases low enough to ensure a unique contribution of every factor to the scale. The convergent validity of the SABeRS was supported in Study 3 by demonstrating that the five factors were significantly correlated with related constructs. For example, willingness to strike was positively correlated with legitimacy of strikes, informing oneself about strikes, strike-related social network behavior, and support of strikers, while it was negatively correlated with negative reactions towards strikes. The same pattern was found for attitudes towards unions and union loyalty (for union members only) and left-wing political orientation. Regarding discriminant validity, the correlations of the five factors with extraversion, openness to new experiences, and self-efficacy were

not significant or at least lower than the convergent validities, thus, also confirming the discriminant validity of the five factors. With Study 4, we could show that the scale can also be used for specific strikes. In this study, we were able to show differences between strikers, strike-affected third parties, and strike-unaffected third parties in their strike attitudes and behavioral reactions, as expected.

For the revival and further evolution of strike research from a psychological perspective, we need a psychometrically sound measure of attitudes and behavioral reactions to strikes, and the new SABeRS could be such a valuable tool. Strikes are a largely unexplored working life phenomenon that warrants further attention from I-OP researchers, especially from those who believe that I-OP should pay more attention to employees and their working experiences and less to managers (Bergman & Jean, 2016; Ruggs et al., 2013). For example, the consequences of strikes on workplace relationships before, during, and after a strike can be serious for strikers and managers. Strikers might suffer from reduced job satisfaction (Chaulk & Brown, 2008), decreased organizational commitment (Chaulk & Brown, 2008), or reduced psychological well-being (Barling & Milligan, 1987). At the same time, managers might experience pressure from business owners or top management and fear less informal workplace relationships after the end of a strike (Scales et al., 2014). Furthermore, strikes can also influence the identities of employees. An "us-against-them" feeling might emerge in the employees during a strike: Strikers might report increased ingroup identification due to the shared experience, whereas the identification with the company would decrease (cf. Tajfel & Turner, 1986). Finally, although public support for strikes is crucial for unions (Kelloway et al., 2008), the question of when a strike is seen as legitimate by the public has yet to be addressed.

The consequences of strikes on third parties have not been sufficiently studied either. This is especially interesting because more than three quarters of strike days take place in the service sector (Bewernitz & Dribbusch, 2014), thus regularly affecting third parties. The consequences for both the strikers themselves and the affected public can be severe and stressful. According to the transactional stress model (Lazarus & Folkman, 1984), one possibility to change stress is the appraisal of the stressful event, and hence, attitudes to strikes and behavioral reactions might play a crucial role in the perception of strikes as daily hassles and necessary evils. Furthermore, public perception of the legitimacy of strikes as well as other attitudinal factors are important to the unions and their success in the collective bargaining process (Kelloway et al., 2008). Institutional theory suggests that the survival of unions depends to some extent on the public approval of strikes (DiMaggio & Powell, 1983; Meyer & Rowan, 1977).

This scale could also be used by unions to gauge public support for a specific strike. As has been shown by Study 4, the SABeRS can be applied to specific strikes as well. This could be helpful for unions because it enables them to assess the attitudes and behavioral reactions of relevant third parties (e.g., passengers of public transport, patients in hospitals) to a specific strike beforehand. With this information, they could ensure that they have the support of these relevant third parties before conducting the strike. As unions rely heavily on public support of their strike to place pressure on employers during the collective bargaining process, union actions would then be better informed about the support they have from the population and possible negative public reactions to mitigate. For instance, they could prepare their media strategy to increase the behavioral support of the public and at the same time minimize the negative reactions to the pending strike.

One aspect that warrants further discussion is the exclusion of all positive affective items in Study 1. It might be rightly assumed that people should also report positive next to negative feelings towards both, strikes and striking people. In our initial item pool, we had three items assessing positive affect, one referred to strikes ("Strikes give me a positive feeling) and the other two referred to strikers ("It makes me feel happy when strikers stand up for their claims"; "I admire strikers"). This slight change in referent, compared to most of the other items in which strikes are the referent, might have been one reason why these items did not exhibit satisfying psychometric properties: Feeling happy about a strike might be different from feeling happy about people striking. Furthermore, other positive affect such as feeling proud of people participating in strikes or feeling inspired by strikes was not included in our item pool. Nonetheless, our scale is likely able to assess relevant aspects of positive attitudes towards strike (i.e., the legitimacy assessment is positively framed, and the items regarding the negative reactions towards strike can be negated by respondents). In combination, these subscales allow for interpretation whether people are rather positively attuned to strikes (low negative reactions and high legitimacy) or neutral attuned to strikes (neither low nor high negative reactions and legitimacy evaluations). Future research could, however, assess whether other positive affect that were not included in these studies lead to a better result and whether the slight change in referent influences response pattern.

Limitations

At least two limitations warrant mentioning. First, the informing oneself about strikes factor was correlated with all measures of personality and self-efficacy in Study 3; hence, the discriminant validity of that factor was not completely supported. The correlations of this factor with the

personality and self-efficacy measures ranged from $r = 0.13$ with conscientiousness to $r = 0.21$ with openness to new experiences. However, the discriminant validities were all lower than the convergent validities of that factor. Thus, although the evidence could have been stronger, the overall construct validity can be presumed. Second, the scale was developed with German samples. This might reduce the generalizability of the scale. The general attitudes and behavioral reactions to strikes could vary across countries due to factors such as strike history or legal aspects. For instance, a comparison of striker attitudes and behavioral reactions between Germany and France could be of interest, as these two neighboring countries display very different strike behaviors, quantitatively as well as qualitatively (Dribbusch, 2016; International Labour Organization, 2020). Hence, the scale needs to be further tested and validated in other countries with different legal situations as well.

Future Research on the New Scale

There are several avenues future research could tackle. In particular, the SABeRS is constructed in a way that allows it to be used to assess the attitudes and behavioral reactions to strikes in general or regarding a specific strike. Strikes can differ in several aspects, for example, the venue could be either an industrial plant or a hospital. Other than venue, the relevance of these strikes could also be different for individuals—a strike at the industrial plant could go almost unnoticed, whereas a hospital strike would directly affect more people. Hence, taking a further look at specific strikes is also important. Some differences between general and specific strike attitudes and behavioral reactions might occur due to aspects like empathy with the specific strikers or more knowledge about that specific strike and its circumstances. In Study 4, we tested the specific strike attitudes and behavioral reactions among strikers, strike-affected third parties, and strike-unaffected third parties. However, one might rightly argue that union members who have been on strike some time in the past might not be third parties in the sense that they might not have negative attitudes or less behavioral reactions towards a specific strike. Hence, future research should also test our hypotheses from Study 4 with non-union members as third parties. Further, the SABeRS was constructed in a way that allows for easy translation to English and French (e.g., by employing rather simple language and no idioms), so that it could be used in other countries than Germany.

Moreover, as strikes can be understood as an event that takes places in working life, affective events theory (Weiss & Cropanzano, 1996) would posit that this work event produces emotions, for example, anger or fear, and that these emotions elicit behavioral reactions that potentially change attitudes related to work and to strikes. Future research could assess how these changes are reflected in attitudes towards work, towards the union, but also in relevant variables such as performance or commitment. In addition, following affective events theory, strikes can also be the output of negative work events that elicited negative affective reactions. Further research is needed in order to understand which work events might be antecedents of willingness to strike or positive attitudes to strikes and more behavioral reactions.

Finally, another aspect of strikes as a work life event is that they can produce stress. Following Lazarus and Folkman (1984) and their transactional stress model, the appraisal of such events can especially influence perceptions of stress. Previous studies showed that strikers report a reduced well-being after the strike (Barling & Milligan, 1987). Strike-affected third parties might also suffer from a reduced subjective well-being, because the strike interferes with their daily routine and leads to some hassles. Furthermore, Day et al. (2006) have shown that the threat of a strike can lead to strain reactions among third parties. Hence, longitudinal research about attitudes and behavioral reactions to strikes (e.g., how these attitudes and behavioral reactions change due to strike participation or to experiences with strikes as a third party) could be of great value to further understand the impacts of strikes.

Conclusion

The aim of these studies was to develop a psychometrically sound scale to assess attitudes and behavioral reactions to strikes. The new scale provides many opportunities for further research in the employee-centered area of strikes and is hopefully a first step in the revival of psychological strike research.

Data Availability Data of the studies is available in the Open Science Framework repository at https://osf.io/3tbx2/. This project will be made public upon publication.

Declarations

Consent Informed consent was obtained from all individual participants included in the studies.

Conflict of Interest The authors declare no competing interests.

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