

Personality and Social Psychology

Bullying in work groups: The impact of leadership

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Nielsen, M.B. (2013). Bullying in work groups: The impact of leadership. *Scandinavian Journal of Psychology* 54, 127–136.

The aim of this study is to examine whether and how laissez-faire, transformational, and authentic leadership styles are related to the occurrence of bullying in work groups. It is hypothesized that the investigated leadership styles have direct associations, as well as indirect associations through group cohesion and safety perceptions, with indicators of bullying among subordinates. Using a cross-sectional survey design, the variables were assessed in a randomly selected sample comprising 594 seafarers from two Norwegian shipping companies. Laissez-faire leadership was associated with an increased risk of exposure to bullying behavior, self-labeled victimization from bullying, and perpetrated bullying. Transformational leadership and authentic leadership were related to decreased risk of exposure to bullying behavior. Authentic leadership contributed to the variance in bullying beyond laissez-faire and transformational leadership. Analyses of indirect effects showed that the association between transformational leadership and bullying was fully mediated through safety perceptions, whereas a partial indirect association through safety perceptions was found for authentic leadership. This study makes a significant contribution to the literature by providing evidence for how leadership styles predict workplace bullying. The findings highlight the importance of recruiting, developing, and training leaders who promote both positive psychological capacities and positive perceptions among their subordinates.

Key words: Authentic leadership, laissez-faire leadership, transformational leadership, workplace bullying, safety perceptions.

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INTRODUCTION

In a series of pioneering studies on group dynamics from the 1930s it was established that patterns of aggressive behaviors in groups were dependent upon the leadership styles of the group leader (Lewin, Lippitt & White, 1939). To this date, this path of research has only been continued in a few studies, and there is a lack of knowledge about how organizational leadership is related to interpersonal aggression in contemporary working life. In order to advance the current body of research on this important topic, the main aim of this study is to investigate whether and how laissez-faire, transformational, and authentic leadership styles influence the occurrence of workplace bullying in small groups of employees. During the last decades, workplace bullying has been established as prevalent and especially detrimental form of interpersonal aggression (Einarsen, Hoel, Zapf & Cooper, 2011; Nielsen, Matthiesen & Einarsen, 2010) that is strongly related to individual health and well-being problems (Hershcovis, 2011; Nielsen & Einarsen, 2012). Bullying should therefore be a valid indicator of aggression in work groups. Building on the findings of Lewin *et al.* (1939) that aggression in groups is especially elicited by intragroup tension, narrow space of free movement, rigidity of the group structure, and style of living, leadership and bullying will be assessed in an occupational setting which fits these characteristics, namely seafaring. Seafaring is a specific occupation characterized by small groups of employees working tightly together on a restricted physical area (vessels) over a prolonged time period. Together with the long-term isolation from the larger society and the family, these factors make it likely that bullying could represent a significant job strain in seafarers (Malinauskiene & Jonutyte, 2008).

Scientifically, workplace bullying is defined as a situation where one or several individuals persistently, and over a period of time, perceive themselves to be on the receiving end of negative actions from superiors or co-workers, and where the target of the bullying

finds it difficult to defend him or herself against these actions (Einarsen & Skogstad, 1996; Olweus, 1993). Although there is no definitive list of bullying behaviors, bullying mainly involves repeated exposure to verbal hostility, being made the laughing stock of the department, having one's work situation hampered or being given unreasonable tasks, or being socially excluded (Einarsen *et al.*, 2011). Taking into consideration that estimates of the occurrence of bullying are dependent on factors such as measurement method and sample composition, a global prevalence rate between 11 and 18% has been established (Nielsen *et al.*, 2010). Yet, cross-cultural differences exist as prevalence rates of 2–10% have been found in the North European region (Nielsen *et al.*, 2010; Nielsen, Skogstad, Matthiesen *et al.*, 2009).

A number of cross-sectional and prospective studies have shown that workplace bullying has detrimental effects on the targets' health and well-being (Bowling & Beehr, 2006; Hershcovis, 2011; Nielsen & Einarsen, 2012). Among the observed individual consequences are psychosomatic and psychological symptoms such as social isolation, social maladjustment, low self-esteem, sleep problems, concentration difficulties, chronic fatigue, helplessness, anger, compulsions, psychological distress and despair (Finne, Knardahl & Lau, 2011; Nielsen, Hetland, Matthiesen, and Einarsen, 2012; Zapf, Knorz & Kulla, 1996). Clinical observations of victims of bullying have revealed that bullying is associated with symptoms of posttraumatic stress, and even suicidal thoughts (Leymann & Gustafsson, 1996; Matthiesen & Einarsen, 2004; Sterud, Hem, Lau & Ekeberg, 2008). Among seafarers, bullying has been found to be associated with musculoskeletal disorders, perceived stress, and posttraumatic stress disorder (Malinauskiene & Jonutyte, 2008).

The high prevalence rates of bullying and the severe negative effects of this phenomenon suggest that bullying represent a serious problem with regard to psychosocial safety for many employees in contemporary working life. Hence, identification of factors that influence the occurrence of bullying is of high importance.

Theoretical models, as well as empirical evidence, indicate that organizational leadership is an especially critical factor with regard to the occurrence of workplace bullying in a work group (Hershcovis, Turner, Barling *et al.*, 2007; Hoel, Glasø, Hetland, Cooper & Einarsen, 2010). According to the Full Range Model of Leadership (Avolio, Bass & Jung, 1999; Bass & Riggio, 2006), leadership can be described on a continuum from passive and ineffective leadership styles such as laissez-faire leadership to active and effective leadership styles such as transformational and authentic leadership. In the following, I will elaborate on the potential impact of laissez-faire, transformational, and authentic leadership on workplace bullying in work groups, the mechanism that explain the associations, and the study hypotheses.

Laissez-faire leadership refers to the avoidance or absence of leadership (Bass & Avolio, 1994), and is considered to be the most inactive, as well as the most ineffective leadership style. Opposed to constructive forms of leadership, laissez-faire leadership represents a non-transaction in the leader-follower dyad. Yet, recent findings indicate that laissez-faire leadership is a counterproductive leadership style rather than a zero type of leadership (Skogstad, Einarsen, Torsheim, Aasland & Hetland, 2007). For instance, a lack of adequate leadership, which is the case with laissez-faire leadership, may create frustration and stress within the work group, which may also result in interpersonal tensions, escalated conflict levels and antisocial behavior such as workplace bullying (Einarsen, 1999; Skogstad *et al.*, 2007). In addition, managers' ignorance and failure to recognize and intervene in bullying cases may indirectly contribute to bullying by conveying the message that bullying is acceptable (Skogstad *et al.*, 2007). The negative impact of laissez-faire leadership on workplace aggression has been substantiated by empirical findings showing that laissez-faire leadership is associated with interpersonal conflicts and bullying (Hauge, Skogstad & Einarsen, 2007; Hoel *et al.*, 2010; Nielsen, Matthiesen & Einarsen, 2005; Skogstad *et al.*, 2007). In order to replicate these findings, the following hypothesis will be tested:

H1: Laissez-faire leadership is positively related to workplace bullying

Transformational leadership is a form of leadership that involves binding people around a common purpose through reinforcing behaviors that follower gain from successfully achieving a task and from a reliance on intrinsic rewards (Oke, Munshi & Walumbwa, 2009). In doing so, transformational leaders are change drivers who are actively involved in creating a work environment and culture that fosters change and growth (Bass & Avolio, 1994). In addition to being concerned and involved in the work process, transformational leaders are also focused on helping every members of the group to succeed. Hence, by emphasizing the success and well-being of each individual member of the work group, transformational leaders should have low acceptance for interpersonal conflicts and workplace bullying:

H2: Transformational leadership is negatively related to workplace bullying

Assumed to extend the impact of transformational leaders, authentic leadership is defined as "a pattern of leader behavior that

draws upon and promotes both positive psychological capacities and a positive ethical climate to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development" (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008, p. 94). Authentic leaders have high moral standards, and function as strong role models promoting a positive climate within the organizations (Avolio & Gardner, 2005). They are seen to influence their followers through personal and social identification possesses, role modeling, and value based leadership (Avolio & Gardner, 2005). Hence, this form of leadership would most likely not be compatible with a work environment characterized by workplace bullying. This latter assumption is supported by empirical evidence showing that transformational and authentic leadership instill powerful social processes that positively influence individual priorities, moral perspectives, and stimulate followers' states, behavior, and performance (Judge & Piccolo, 2004; Walumbwa, Luthans, Avey & Oke, 2009; Walumbwa, Peterson, Avolio & Hartnell, 2010). To empirically investigate the impact of authentic leadership on the occurrence of workplace bullying, the following hypothesis will be tested:

H3: Authentic leadership is negatively related to workplace bullying

Although transformational and authentic leadership are overlapping constructs, previous studies have found that authentic leadership have an influence on subordinates beyond the impact of transformational leadership (Walumbwa *et al.*, 2008). Because authentic leaders use both aspects of transformational leadership, as well as leader-follower behavior that are unique to authentic leadership (e.g., relational transparency, balanced processing; Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans & May, 2004; Walumbwa *et al.*, 2008), authentic leadership is expected to contribute to the occurrence of workplace bullying beyond that of transformational leadership. Based on this reasoning, the following hypothesis is advanced:

H4: Authentic leadership is negatively related to workplace bullying when controlling for transformational leadership

Conditionally accepting that laissez-faire, transformational, and authentic leadership are associated with levels of bullying in work groups, a second question is how these leadership styles are related to bullying. That is, what are the mechanisms that can explain how leadership influences the occurrence of bullying in the workplace? Defining leadership as "the process of influencing the activities of an organized group toward goal achievement" (Rauch & Behling, 1984, p. 46) one such possible mechanism may team cohesion, that is, the degree to which members are attracted to a group, motivated to remain part of it, and work together to achieve common goals. Following theories on group dynamics, a group of individuals in the workplace typically behaves as a unit or as an "in-group" because of the group cohesiveness that keeps the members together and focused on the same goals. When these forces of cohesion fail, the group begins to disintegrate and ceases to be a group (Duffy & Sperry, 2012), and conflicts between group members may arise.

As both transformational and authentic leaders are associated with social processes that foster change and growth, and thereby function as role models promoting a positive climate within the organizations, such leaders should be able to generate high levels of cohesion and identity within work groups. Hence, based on this reasoning, transformational and authentic leaders ought to be associated to low levels of bullying through maintaining a favorable climate within the group that is characterized by positive attitudes between its members and a care for conflict resolution. Laissez-faire leaders, on the other hand, should by definition have little impact on group activities and achievements and may thereby facilitate a lack of cohesion within the work group displayed by competition, sub groups, and conflicts which subsequently fosters a group climate that accommodates aggressive behavior and bullying (Lewin *et al.*, 1939). In order to investigate the mediating effect of cohesiveness, the following hypothesis is subject for testing:

H5: The association between leadership and occurrence of workplace bullying is mediated through cohesion in the work group

Workplace safety conditions are another mechanism which may explain how group leadership is associated with workplace bullying. A growing body of evidence has firmly established that leaders play a central role in influencing safety-related attitudes and actions in the workplace (Zohar, 2002). For instance, in a study of the relationship between transformational leadership and safety outcomes, it was established that a safety-specific transformational leadership style was negatively related to occupational injuries (Barling, Loughlin & Kelloway, 2002). Similarly, a recent study on authentic leadership and safety found that this leadership style was negatively correlated with risk perception among employees in safety critical organizations (Nielsen, Eid, Larsson & Mearns, 2012). As for laissez-faire leadership, Zohar (2002) found that management by exception (passive) and laissez-faire leadership negatively impacted safety climate, which again resulted in prioritization of productivity over safety, and thereby increased injury rates. In another study it was established that passive leadership contributed incrementally to the prediction of safety-related variables, beyond that of transformational leadership alone (Kelloway, Mullen & Francis, 2006).

Following the frustration-aggression hypothesis (Dollard, Doob, Miller, Mowrer & Sears, 1939), stating that frustration causes aggression that gets displaced onto an innocent target when the source of the frustration cannot be challenged, it is suggested that members of work groups with high levels of safety are less frustrated with their working conditions, and that they thereby displays lower levels of aggression. In low safety groups, on the other hand, it is expected that concerns about the lack of safety leads to fear, uncertainty and frustration among group member. According to the frustration-aggression hypothesis, this frustration is manifested behaviorally through acts of aggression and bullying. Hence, whereas transformational and authentic leadership should decrease the level of bullying through developing positive safety perceptions among group members, laissez-faire leadership is expected to increase the levels of bullying in work groups through poor safety perceptions. In order to test safety as an intervening mechanism between different forms of leadership and safety, the following hypothesis will be tested:

H6: The association between leadership and occurrence of workplace bullying in work groups is mediated through group member's perception of safety

As described in the presentation of H4, authentic leadership is theoretically expected to have an impact on group characteristics beyond the effects of transformational leadership. In order to assess whether authentic leadership has indirect effects on workplace bullying through team cohesion and safety perceptions above the effects of transformational leadership alone, it is also proposed that:

H7: There is an indirect effect of authentic leadership on workplace bullying through team cohesion and safety perceptions when controlling for transformational leadership

METHOD

Design and procedure

The data utilized in this study is based on a survey among 817 crew members working on vessels belonging to two large Norwegian shipping companies. The maritime sector is Norway's second largest industry after the oil and gas industry, and employs about 31,000 persons, of which 17,000 are Norwegians (Norwegian Ministry of Trade and Industry, 2007). By being relatively large and well established companies that specialize within several segments of the industry (e.g., subsea, marine seismic, platform supply, and construction), the surveyed companies can be considered as typical for the maritime industry in Norway. As all crew members that were employed in the two companies at the time of the survey were invited to participate in the survey, the design can be considered as completely randomized.

Questionnaires were distributed to crew members during their offshore working period on the vessels, and the respondents were asked to complete the questionnaire towards the end of their stay onboard. The length of the work period varied between respondents, and captains worked shorter periods than subordinates. Participation in the survey was voluntary, and respondents could withdraw from the study without further explanation. Altogether 594 individuals from 40 vessels returned completed questionnaires. The response rate of 73% is higher than the mean response rate of survey studies in general (cf. Baruch & Holtom, 2008), and higher than the response rate for surveys conducted among employees similar industries such as the UK offshore petroleum industry (Mearns, Flin, Gordon & Fleming, 1998; Mearns, Whitaker & Flin, 2001). The survey was approved by the Norwegian Social Science Data Service.

Sample

With regard to nationality, the sample consisted of 55% Philippines and 26% Norwegians, whereas the remaining 19% had other European origins. Mean age in the sample was 40 ($SD = 10.0$) years with a range from 18 to 63. The sample was predominately male (99%). Altogether 30% had a permanent employment relationship with their company, 4% had a temporary employment, whereas 66% was employed through an employment agency. As for length of service in company, about 24% had less than one year, 32% between one and three years, whereas 41% had three years or longer seniority. Overall, the length of service under current captain was relatively short, as 68% had sailed with the captain for less than a year. About 8% ($n = 48$) of the respondents were captains on the vessels that were included in the survey, and 27% of the respondents had a position as employee representative.

Instruments

Within research on workplace bullying, a range of different methods have been used to assess the phenomenon. As all methods have strengths and limitations, it has been suggested that one always should use more than one approach to measure workplace bullying (Nielsen, Notelaers & Einarsen, 2011; Salin, 2001). Following this recommendation, bullying was assessed by the behavioral experience method, self-labeled victimization, observed bullying, and perpetrated bullying in the current study. Exposure to workplace bullying behaviors was measured by a 9-item version of the *Negative Acts Questionnaire Revised* (NAQ-R; Einarsen, Hoel & Notelaers, 2009). The respondents were asked to report the degree to which they have experienced typical acts of harassment and bullying (e.g., "Being ignored, excluded or being ostracized", "Persistent criticism of your work and effort", and "Someone withholding information which affects your performance") during the last six months. The items describe specific acts, without referring to terms like "bullying" and "harassment". The response categories were 1 "Never", 2 "Now and then", 3 "Monthly", 4 "Weekly" and 5 "Daily". Following the recommendations of Nunnally (1978), the internal consistency of the scale was good (Cronbach's alpha = 0.85).

After the completion of NAQ-R, the respondents were presented to a global definition of bullying, in line with Einarsen and Skogstad (1996) and Olweus (1993): "Bullying takes place when one or more persons systematically and over time feel that they have been subjected to negative treatment from the part of one or more persons, in a situation in which the person(s) exposed to the treatment have difficulty in defending themselves against them". This definition was immediately followed by the query: "using the above definition, please state whether or not you have been bullied at work over the last 6 months". Response categories were: 1 "No", 2 "Yes, occasionally", 3 "Yes, now and then", 4 "Yes, weekly" and 5 "Yes, several times a week". Whereas the NAQ measures exposure to specific bullying behaviors, this single question approach assesses self-labeled victimization from bullying. That is, whether or not the respondent perceives him or herself as not able to defend oneself against the perceived bullying behavior. In addition, based on the above definition, respondents were asked single item questions about whether they had observed bullying of others at the workplace and if they had acted as a perpetrator of workplace bullying during the last six months.

Three indicators of leadership were employed in the present study. Laissez-faire leadership was measured by five items (Cronbach's alpha = 0.72) from the Multifactor Leadership Questionnaire (Bass & Avolio, 1990). Transformational leadership was assessed by the Global Transformational Leadership scale (GTL) which is a seven item scale assessing transformational leadership as a single construct (Carless, Wearing & Mann, 2000). The scale had good internal consistency (Cronbach's alpha = 0.86). Authentic leadership was measured by the 16 item Authentic Leadership Questionnaire, measuring the first order factors of transparency, self-awareness, balanced processing, and moral perspective (Walumbwa et al., 2008). The scale demonstrated strong internal reliability as measured by Cronbach's alpha (0.89). This measure of authentic leadership has also been established as a highly valid and reliable instrument in other studies (Clapp-Smith, Vogelgesang & Avey, 2009; Walumbwa, et al., 2008). All leadership items were measured on a five-point scale ranging from 1 "Not at all" to 5 "frequently, if not always". Items measuring authentic, transformational, and laissez-faire leadership were distributed randomly among each other in order to avoid response set and positive/negative affect bias. Crew-members were asked to rate the leadership style of their captain, whereas captains rated their own leadership style.

Team cohesion was assessed with four items from the Platoon Cohesion Index (Siebold & Kelly, 1988) which were reworded and adapted to the maritime context. Responses were given on 5-point scale ranging from 1 "Totally disagree" to 5 "Totally agree". Sample items are "I am in a work group that supports me" and "The people in my work group cooperate with each other". Cronbach's alpha for the scale was satisfactory (0.83).

Safety perceptions was measured with the 35-item "Norwegian offshore risk and safety climate inventory" (NORSCI; Høivik, 2009;

Hope, Øverland, Brun & Matthiesen, 2010; Tharaldsen, Olsen & Rundmo, 2008) respondents were asked to rate their agreement with statements concerning elements such as individual conditions for safe work execution, behavior characteristics relevant for safety, and situational aspects that influence safety behavior. The ratings followed a five-point scale, ranging from 1 "Fully agree" to 5 "Fully disagree". To counteract response style bias, both positively (e.g. "I have the necessary competence to perform my job in a safe manner") and negatively keyed items are included in the inventory (e.g. "Lack of maintenance has resulted in reduced safety"). The positively formulated items were reversed. Hence a score of 1 would indicate negative perceptions of the safety, whereas a score of 5 would indicate positive perceptions. Cronbach's alpha for the NORSCI was 0.85.

Statistical analyses

Frequency analyses were used to assess the prevalence of workplace bullying, whereas correlation- and logistic regression analyses were utilized to investigate the impact of leadership on the different indicators of workplace bullying. Predictor variables were standardized in order to determine the relative importance of the continuously distributed predictors. To test the hypotheses about mediating effects of team cohesion and safety perceptions, we followed the guidelines described by Preacher and Hayes (2008). This approach has high statistical power and several advantages compared to traditional approaches to testing mediators (Hayes, 2009): First, the approach is considered more rigorous than typical stepwise regression techniques as all paths are measured simultaneously rather than step by step. Secondly, it is a non-parametric test and can be used on small samples ($N > 25$). Thirdly, this approach allows for multiple mediators, statistical control of covariates, pair wise comparisons between indirect effects, as well as bias-corrected and accelerated bootstrap confidence intervals (Preacher & Hayes, 2008). Bootstrapping is a statistical procedure that allows the calculation of effect sizes and hypothesis tests for an estimate even when the underlying distribution is unknown. Using bootstrap methods to assess mediation is especially recommended in small to moderate samples (Shrout & Bolger, 2002). Preacher and Hayes (2008, p. 881) list several advantages of specifying and testing a single multiple mediation model: Including multiple mediators simultaneously: (1) 'purifies' indirect effects by controlling for all the other mediators; (2) reduces the alpha inflation that would result from using a series of single mediator models; and (3) allows the researcher to determine which mediators are more successful than others. Statistical analyses were conducted with SPSS 20.0 (IBM, Armonk, NY) and the supplemental "PROCESS" macro script (Hayes, 2012). The level of significance was set to $p < 0.05$.

RESULTS

Descriptive statistics and intercorrelations for continuous study variables are presented in Table 1. The intercorrelations show that laissez-faire leadership is positively associated with bullying behaviors, whereas both transformational and authentic leadership are negatively related to bullying behaviors. A small, but significant, correlation is found between exposure to bullying behaviors and group cohesion, whereas positive correlations are found between transformational and authentic leadership and cohesion. Negative associations are found between laissez-faire leadership and team cohesion and between exposure to bullying behaviors and safety perceptions. As for leadership styles, positive associations with safety perceptions are found for transformational and authentic leadership, whereas no relationship is established between laissez-faire leadership and safety perceptions.

Altogether 52% of the respondents report to have been the target of one or more of the nine behaviors included in the NAQ-R

Table 1. Means, standard deviation, inter-correlations (Pearson's *r*) and Cronbach's alphas (in bold along the diagonal) for continuous measures

Variables	M	SD	1	2	3	4	5	6	7
1. Age	40.4	10.0	–						
2. Bullying behaviors	1.24	0.40	–0.07	0.85					
3. Laissez-faire leadership	3.17	0.53	–0.11*	0.19**	0.72				
4. Transformational leadership	4.19	0.61	–0.12*	–0.15**	0.50**	0.86			
5. Authentic leadership	4.02	0.58	–0.18**	–0.14**	0.40**	0.71**	0.89		
6. Group cohesion	4.23	0.53	–0.05	–0.13**	–0.21**	0.40**	0.34**	0.83	
7. Safety perceptions	4.18	0.41	0.00	–0.28**	–0.06	0.35**	0.30**	0.32**	0.85

Note: *Correlations are significant at $p < 0.05$ (2-tailed), **Correlations are significant $p < 0.01$ (2-tailed).

during the last six months. By using the frequently cited cut-off criterion for bullying behaviors suggested by Leymann (1996), that is, being exposed to at least one bullying behavior per week within a six months period, 8% of the sample is classified as targets of bullying. A total of 7.4% of the respondents claimed to have been victimized by workplace bullying during the last six months before the survey. Fifteen percent had observed bullying of others, whereas 3.5% admitted being perpetrators of bullying. No significant differences are established between captains and crew-members with regard to the four indicators of workplace bullying.

A series of four separate logistic regression analysis with the leadership style variables as predictors and the four measures of workplace bullying as outcomes were conducted to investigate the relationships between leadership and occurrence of bullying (Table 2). Having rated their own leadership style, captains were excluded from these analyses in order to avoid self-perception bias in the results. Using exposure to at least one negative act per week as a cut-off criterion for exposure to workplace bullying behaviors, significant relationships are established between all three leadership styles and bullying behaviors. Compared to respondents experiencing lower levels of laissez-faire leadership, high levels of laissez-faire leadership is associated with a three times higher risk of being exposed to bullying behaviors (OR = 3.25; 95% CI = 2.21–3.25). Both higher levels of transformational leadership (OR = 0.58; 95% CI = 0.36–0.95) and authentic leadership (OR = 0.50; 95% CI = 0.33–0.78) are associated with decreased risk of exposure to bullying behaviors. Although the odds ratios show that transformational and authentic leadership have unique contributions to the occurrence of bullying

behaviors, the overlapping confidence intervals indicate that contributions are about equally strong. Following the Cox & Snell R-Square and the Nagelkerke R Square, the leadership styles explain between 10 and 22% of the variance in exposure to bullying behavior. A significant chi-square test ($X^2 = 51.7$; $df = 3$; $p < 0.001$) and a non-significant Hosmer and Lemeshow Test ($X^2 = 8.41$; $df = 8$; $p > 0.05$) support the model. With regard to both self-labeled victimization from bullying (chi-square test: $X^2 = 9.22$; $df = 3$; $p < 0.05$ / Hosmer and Lemeshow Test: $X^2 = 7.24$; $df = 8$; $p > 0.05$) and perpetrated bullying (chi-square test: $X^2 = 6.47$; $df = 3$; $p > 0.05$ / Hosmer and Lemeshow Test: $X^2 = 9.96$; $df = 8$; $p > 0.05$), laissez-faire stands out as the only significant predictor. The leadership variables explain between 2 and 4.4% of the variance in self-labeled victimization and 1.3 to 4.7% of the variance in perpetrated bullying. None of the leadership styles predict observed bullying.

A series of independent multiple mediation analyses, with team cohesion and safety perceptions as the mediators, and exposure to workplace bullying behavior as the outcome, were performed to investigate how laissez-faire, transformational and authentic leadership are related to workplace bullying (see Table 3). Bootstrapping was set to 1,000 re-samples with a 95% confidence interval. Exposure to bullying, again dichotomized by the Leymann criterion, was employed as the outcome variable in the analyses as this was the only measure of bullying that was directly associated with all the investigated leadership styles.

No mediating effects are found through group cohesion ($Z = -0.05$; $p > 0.05$) or safety perceptions ($Z = 1.35$; $p > 0.05$) for the association between laissez-faire leadership and exposure to bullying, thus indicating a direct rather than indirect effect of

Table 2. Testing the effects of leadership styles (predictor) on occurrence of workplace bullying (outcome) using binary logistic regression analysis (standardized predictor variables)

Leadership variables	Bullying variables							
	Exposure to bullying Behaviors ^a		Self-labeled victimization		Observed bullying		Perpetrated bullying	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Laissez-faire leadership	3.25**	2.21–4.79	1.57*	1.09–2.25	0.96	0.72–1.28	1.85*	1.13–3.01
Transformational leadership	0.58*	0.36–0.94	0.74	0.46–1.20	0.77	0.54–1.10	0.77	0.39–1.53
Authentic leadership	0.50*	0.33–0.78	0.77	0.49–1.21	0.95	0.68–1.34	0.77	0.41–1.43

Notes: ^aUsing the Leymann criterion of exposure to at least one negative act per week. **Level for significance is $p < 0.001$. *Level for significance is $p < 0.05$.

Table 3. Mediation of the relationship between laissez-faire, transformational and authentic leadership and workplace bullying through team cohesion and safety perceptions (indirect effects)

	Percentile 95% CI			
	Point estimate	SE	Lower	Upper
Laissez-faire leadership				
Group cohesion	-0.00	0.07	-0.14	0.15
Safety perceptions	0.07	0.05	-0.02	0.18
Total	0.07	0.10	-0.10	0.28
Transformational leadership				
Group cohesion	0.19	0.14	-0.07	0.51
Safety perceptions	-0.35	0.13	-0.63	-0.14
Total	-0.16	0.15	-0.45	0.13
Authentic leadership				
Group cohesion	0.18	0.12	-0.04	0.42
Safety perceptions	-0.30	0.11	-0.53	-0.13
Total	-0.12	0.12	-0.34	0.10

Notes: Confidence intervals are bias corrected; 1,000 bootstrap samples. Unstandardized coefficients.

laissez-faire leadership on bullying. Based on the Cox & Snell and the Nagelkerke estimates, the variables explain between 6 and 13% of the variance in bullying.

A non-significant association between transformational leadership and bullying emerges when cohesion and perceptions of safety are included in the analysis. Inspection of the indirect effects (Table 3) shows that whereas the effect of group cohesion is non-significant ($Z = 0.19$; $p > 0.05$), the indirect effect of safety perceptions on the relationship between transformational leadership and bullying is negative and significant ($Z = -0.35$; $p < 0.001$). Hence, these findings suggest that the association between transformational leadership and bullying is fully mediated by perceptions of safety in that transformational leadership is related to decreased levels of bullying through a strong perceptions of safety (Cox & Snell = 0.04; Nagelkerke = 0.09).

With regard to authentic leadership, the direct effect of this leadership style sustains after controlling for the mediators ($b = 0.73$, $SE\ b = 0.26$; $p < 0.01$). While no indirect effect is established through group cohesion ($Z = 1.65$; $p > 0.05$), a significant negative indirect effect is found for safety perceptions ($Z = -3.19$; $p < 0.01$), thus indicating that authentic leadership has both a direct, as well as an indirect effect through safety perceptions, on exposure to workplace bullying. The independent and mediating variables explain 5 to 11% of the variation in bullying. In order to investigate whether authentic leadership has an indirect effect on workplace bullying beyond the effect of transformational leadership, the previous analysis was repeated with transformational leadership as a statistical control variable. Although the direct effect of authentic leadership on bullying remains significant ($b = -0.85$; $SE\ b = 0.36$; $p < 0.05$), no mediating effect is established for cohesion ($Z = 0.68$; $p < 0.05$) or safety perceptions ($Z = -1.61$; $p < 0.05$) when transformational leadership is controlled for.

DISCUSSION

The aim of the present study was to investigate the associations between positive and negative forms of leadership and occurrence of workplace bullying in work groups. It was hypothesized that

laissez-faire, transformational, and authentic leadership have direct, as well as indirect effects through group cohesion and safety perceptions, on workplace bullying. By examining these relationships, this study extends previous research on leadership and bullying (Hauge *et al.*, 2011; Hoel *et al.*, 2010; Skogstad *et al.*, 2007) by showing both whether and how different leadership styles are related to aggression and bullying in work groups. Using four different indicators of workplace bullying, support was found for the proposed hypotheses about direct of leadership on occurrence of bullying in that laissez-faire leadership is positively related to exposure to bullying behavior, self-labeled victimization, and perpetrated bullying, whereas both transformational leadership styles and authentic leadership styles are negatively associated with exposure to bullying behavior among subordinates. It should be noted that transformational and authentic leadership were not associated with self-labeled victimization or perpetrated bullying, and that none of the leadership styles were related to observations of bullying. With regard to the indirect effects, bootstrapped estimates showed that the association between transformational leadership and bullying was fully mediated by safety perceptions, whereas the association between authentic leadership and bullying was partially mediated by safety perceptions. Laissez-faire leadership had no indirect effects on bullying, and contrary to expectations, group cohesion did not function as a mediator between any of the leadership styles and bullying.

The strong direct relationships between laissez-faire leadership and the different assessments of bullying are in line with the existing literature (Hauge *et al.*, 2007; Hoel *et al.*, 2010; Skogstad *et al.*, 2007) and clearly suggest that when leaders give up their responsibility for the work tasks, show little concern for their subordinates well-being, and avoid dealing with problems, this may increase the risk of workplace bullying. Following Lewin *et al.* (1939), an explanation for this finding is that absence of leadership fosters intragroup tensions and conflicts that, in line with the frustration-aggression hypothesis, subsequently develop into aggression and bullying. However, little support for such an explanation was found in the current study as no indirect effects of laissez-faire leadership on bullying through group cohesion and

safety perceptions were established. Consequently, other explanations need to be considered. One such explanation may be that laissez-faire leadership leads to higher levels of role stress in the form of role conflict and role ambiguity, and that this role stress is a risk factor of bullying. Such an explanation is supported by several studies showing evident relationships between role stress and occurrence of bullying (Baillien & De Witte, 2009; Hauge, Skogstad & Einarsen, 2010). Yet, based on the direct association between laissez-faire leadership and bullying, it may simply be that subordinates interpret their leader's avoidance of leadership responsibilities as a form of social ostracism, and that they therefore feel bullied through being ignored and excluded.

While laissez-faire leadership was positively related to workplace bullying, both transformational and authentic leadership styles were found to be associated with a lowered risk of being exposed to bullying behaviors. This suggests that the presence of morally strong superiors, who are concerned with and involved in the work environment and their employees, are important with regard to reducing workplace bullying. As for how transformational and authentic leaders are related to bullying, the established mediating effect of safety perceptions shows that transformational and authentic leadership are associated with less bullying because authentic leadership is related to positive perceptions of safety, which again is related to lower levels of bullying. Taking the characteristics of transformational and authentic leadership styles into consideration, this mediating effect demonstrates that a leader's concern for promoting a transparent, fair, and ethical relationship with followers is important with regard to creating a safe work climate. Going back to the frustration-aggression hypothesis, one explanation for this mechanism is that the positive leader-follower exchange reduces the potential for frustration among group members and thereby also the potential for aggression. Since our findings point to a mechanism for how organizations may reduce workplace bullying among their personnel, this study indicates that transformational leadership, authentic leadership, and a positive perception of safety are important constructs to be further investigated in terms of their actual relationships with work environment factors such as workplace bullying.

Surprisingly, team cohesion did not mediate the relationships between leadership styles and bullying. Hence, contrasting the study hypotheses, the findings do not support cohesion as a mechanism that can explain how leadership is related to bullying. However, team cohesion may still play an important role in the understanding of the bullying phenomenon. As previous studies have found that social support protects against the negative effects of bullying (Einarsen, Raknes, Matthiesen & Hellesøy, 1996), it may be that team cohesion may have a similar protective function. Yet, following theories on group dynamic, high levels of team cohesion may also be a risk factor for bullying, in that a strong in-group orientation could in some cases mean that a single individual who is perceived as different and as a part of an out-group could be at risk of being bullied by others in the work group.

In accordance with the fourth study hypothesis, it was found that authentic leadership has direct contributions to the occurrence of workplace bullying beyond that of transformational leadership. This finding is in line with previous studies (Walumbwa *et al.*, 2008), and suggests that authentic leadership represent an unique perspective on leadership that should be taken into consideration

in assessment and theory. Moreover, the finding indicates that authentic leadership is a valid perspective on management practices that extends existing measures of related leadership constructs, and supports emerging empirical research suggesting that authentic leaders influence supervisor-rated organizational citizenship behavior and work engagement in workers (Walumbwa *et al.*, 2010). Nonetheless, as there was a large overlap in confidence intervals for the standardized odds ratios of authentic leadership and transformational leadership (cf. Table 2), it cannot be concluded that one of the styles is more effective than the other. Finally, as the partially mediating effect of safety perceptions on the association between authentic leadership and bullying disappeared when controlling for transformational leadership, it should be emphasized that the direct effect of authentic leadership on bullying seems to be stronger and more robust than the indirect effect.

Whereas laissez-faire leadership was associated with exposure to bullying behaviors, self-labeled bullying, and perpetrated bullying, transformational and authentic leadership were only associated with bullying behaviors. None of the leadership styles were related to whether the respondents had witnessed bullying of others. These differences between assessment methods of bullying may be due to both content and measurement issues. For instance, as workplace bullying can be considered as a developing process where exposure to bullying behaviors precedes the self-labeling mechanism, the behavioral experience and self-labeling method may actually measure different aspects of the bullying phenomenon (Nielsen *et al.*, 2011). Hence, in line with the conclusion that negative events have a stronger impact than positive events (Baumeister, Bratslavsky, Finkenauer & Vohs, 2001), one interpretation of the findings may be that the impact of laissez-faire on bullying is so much stronger than positive forms of leadership that this leadership style also has consequences for whether the target of bullying behaviors also self-label as a victim.

Yet, questioning the nature of the associations between leadership and exposure to bullying established in the current study, it should be noted that the non-significant associations between the leadership styles and observed bullying may suggest that the relationship between laissez-faire leadership and being a target of bullying is a consequence of the targets' own exposure to bullying. That is, as long as those who observe bullying do not rate their leaders as laissez-faire it might be that the actual perception of being exposed to bullying make the targets rate their leaders in a more negative way than non-bullied employees. Related to this, as the organizational status of the bully was not investigated in the current study, it is important to emphasize that the established associations between leadership styles and bullying could be influenced by whether or not the respondents have been bullied by their leaders. That is, it might be that ratings of positive leadership only mean that the leader does not engage in bullying him or herself, whereas ratings of negative leadership reflect the fact that the respondent has been bullied by the leader. However, these interpretations are counterweighted by the fact that perpetrators of bullying also rate their leaders as more laissez-faire compared to non-perpetrators. In addition, the difference in ratings of leadership styles between targets and observers is in line with previous findings showing that perceptions of leadership differ between targets and witnesses of bullying (Hoel *et al.*, 2010).

As for practical implications of this study, the findings indicate that workplace bullying represents a significant problem in the maritime industry. Almost one out of ten respondents labeled themselves as victims of systematic and persistent workplace bullying and 15% reported to have witnessed bullying on their vessels. Although the numbers in the present study are high, they are comparable to prevalence figures reported in other studies. For instance, in a representative study of the Norwegian onshore workforce that applied the same assessment and measurement methods as utilized in the present study, 4.4 per cent of the respondents labeled themselves as a victim of bullying during the last six months, whereas 13% had observed the bullying of others (Nielsen *et al.*, 2009). In a representative study from Denmark, more than 8% labeled as victims of bullying (Ortega, Høgh, Pejtersen & Olsen, 2008). As for bullying behaviors, previous studies have found that the prevalence is dependent on the numbers of items in the questionnaire (Agervold, 2007; Nielsen *et al.*, 2009). Hence, comparisons with previous studies are not made since a short version of the NAQ-R was employed in the present study.

The established prevalence rates of bullying in the maritime industry suggest that measures and interventions are needed in order to strengthen the psychosocial safety climate within this occupational setting. Compared to perceptions of physical safety, which are measured in the current study, psychosocial safety climate is a facet specific component of organizational climate that supports the psychological well-being of workers, and is argued to play an antecedent role in the development of psychologically safe working environments, work cultures, and working conditions (Dollard & Bakker, 2009). The impact of psychosocial safety climate with regard to bullying is indicated by research findings which have shown psychosocial safety climate as an effective buffer against work environment stressors. For instance, psychosocial safety climate has been found to moderate the relationship between emotional demands and emotional exhaustion (Dollard & Bakker, 2009), the relationship between bullying and symptoms of posttraumatic stress (Bond, Tuckey & Dollard, 2010), as well as the positive relationship between bullying/harassment and psychological health problems, and the negative relationship between bullying/harassment and engagement (Law, Dollard, Tuckey & Dormann, 2011). As leadership is considered as a main predictor of safety climate, future studies should elaborate on the link between psychological safety climate and leadership styles that are specific to the psychological health and well-being of workers.

METHODOLOGICAL IMPLICATIONS

A notable strength of this study is that it is based on a relatively large and randomly drawn sample with an adequate response rate, applying internationally recognized instruments with satisfactory psychometric properties, which strengthen the validity of the findings. Hence, the findings should be generalizable to the larger population, as well as research on leadership and bullying in general. The use of several methods for assessing workplace bullying is in line with recommendations (Nielsen *et al.*, 2011), and should therefore reduce the potential for measurement bias.

Nonetheless, some caution is needed when interpreting the results from this study. First, the data is based on self-reports, with

common-method variance as a possible problem (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). Second, the data was cross-sectional, which implies that one cannot draw conclusions about causal relationships. Hence, longitudinal studies should be conducted to attain more knowledge about the causality of the relationships between leadership and bullying. For instance, although the present study is based on the theoretical assumption that leadership styles influence the occurrence of workplace bullying, a reversed relationship between the variables is also plausible. The strong relationship between laissez-faire leadership could for example be caused by a negative perception mechanism where bullied workers report less favorable leadership characteristics because they evaluate their work environment more negatively than other employees.

Although the sample is randomly selected, a problem for the study is that the data is likely to be nested. That is, there are several respondents that are influenced by the same leader. This problem is usually solved by the use of hierarchical linear modeling. However, due to issues of anonymity and confidentiality in the data collection, it was not possible to acquire the information about work units and their leaders that is needed for hierarchical linear modeling. Also due to anonymity, no information about the formal status of the bully was collected. Consequently, as noted earlier, a limitation of the study is that it was not possible to identify whether the perpetrator of bullying was a superior or subordinate. Finally, it must be noted that the study is based on a more or less all male sample. Hence, the findings should be generalized to other populations with caution. Yet, as many studies on workplace bullying have been undertaken in female dominated fields, such as health care, manufacturing industry, and education (Eriksen & Einarsen, 2004; Lind, Glasø, Pallesen & Einarsen, 2009; Mikkelsen & Einarsen, 2001), the all-male sample may actually turn out to be a strength in that the results of the present study provide an alternative picture of bullying which may advance our understanding of male-to-male bullying.

CONCLUSIONS

The core assumption of Leymann's (1992) work environment hypothesis is that bullying is primarily a consequence of prevailing environmental conditions within organizations, and that its underlying causes are not to be found in characteristics of the targets. Organizational leadership is considered to be an important antecedent to psychosocial well-being among subordinates, and should therefore be a strong environmental predictor of bullying. All in all, the results of the present study provide support for this assumption in that laissez-faire leadership was positively associated, whereas transformational and authentic leadership were negatively associated, with the occurrence of workplace bullying in work groups. With regard to how transformational and authentic leaders influence work environment, safety perceptions seem to be an important mechanism. In order to combat the workplace bullying problem organization should therefore consider recruiting, training, and developing transformational and, especially, authentic leaders in order to foster a positive psychosocial work environment with low acceptance for bullying.

Reducing the level of bullying is of course important for many reasons. For instance, bullying is strongly related to individual

health and well-being (Nielsen & Einarsen, 2012), and may therefore have effects on absenteeism, production, and efficacy. Since bullying is strongly related to health and well-being, it may also have indirect effects on workplace safety in safety critical industry such as maritime organizations. In this kind of industry, workplace bullying may complicate communication and collaboration between personnel in safety critical operations, and may thereby indirectly create dangerous situations by reducing the vigilance, communication, coordination, and job performance of employees (Nielsen, Glasø, Matthiesen, Eid & Einarsen, 2012). Although this study points to leadership as an important factor for reducing workplace bullying, additional research, including moderating and mediating variables, is however needed to more fully understand the relationships between leadership and bullying. I hope that the current study helps stimulating further research in this area.

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Received 20 March 2012, accepted 27 August 2012