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# The impact of violence prevention behaviour on threats and violence among child welfare social workers

## «Betydningen av voldsforebyggende atferd for forekomst av vold og trusler blant barnevernsansatte»

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### ABSTRACT

The aim of this study was to determine whether Violence Prevention Behaviour (VPB) at coworker-, supervisor-, and top-management levels is related to risk of exposure to threats and violence among child welfare social workers. The study design was a two-wave prospective questionnaire survey data of child welfare workers in Norway with a time-lag of six months between baseline ( $N = 678$ ) and follow-up ( $N = 424$ ). Overall cohort response rate was 34 per cent. Mean exposure to threats and violence was 10.08 ( $SD = 14.83$ ) events at baseline and 8.75 ( $SD = 13.61$ ) events at follow-up. A zero-inflated negative binomial model showed that Top management level VPB was associated with a significantly lower risk of exposure to threats and violence ( $\beta = -.22$ ,  $p < 0.01$ ) at baseline, and follow-up ( $\beta = -.19$ ,  $p < 0.01$ ). VPB at the coworker level was associated with higher levels of threats and violence at baseline ( $\beta = .19$ ,  $p < 0.01$ ), but not at follow-up. Supervisor VPB was not associated with levels of threats or violence. Efforts from top management to prioritise safety in decisions, and clearly communicating these safety prioritisations to staff, will strengthen VPB and thereby be beneficial for reducing the occurrence of threats and violence among child welfare social workers.

### SAMMENDRAG

Hensikten med denne studien var å undersøke om Voldsforebyggende atferd (VFA) på kollega-, leder- og toppledernivå er forbundet med forhøyet risiko for eksponering for vold og trusler blant ansatte i barnevernet. Studiedesign var en prospektiv spørreskjemaundersøkelse som inkluderte data fra norske barnevernsansatte. Tidsintervall mellom første kartlegging ( $N = 678$ ) og oppfølgingskartlegging ( $N = 424$ ) var seks måneder. Responsrate for kohort var 34%. Gjennomsnittlig eksponering for trusler og vold var 10.8 ( $SD = 14.83$ ) hendelser på første måletidspunkt og 8.75 ( $SD = 13.61$ ) hendelser ved oppfølgingskartlegging. En «zero-inflated» negativ binomialmodell viste at VFA på toppledernivå var forbundet med lavere risiko for eksponering for trusler og vold ( $\beta = -.22$ ,  $p < 0.01$ ) på første kartleggingstidspunkt og ved oppfølging ( $\beta = -.19$ ,  $p <$

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0.01). VFA på kolleganivå var forbundet med høyere rapportering av trusler og vold ved første kartlegging ( $\beta = .19, p < 0.01$ ), men ikke ved oppfølging. VFA på ledernivå var ikke forbundet med nivåer av trusler og vold. Forsøk fra toppledelse på å prioritere sikkerhet i beslutninger, samt å tydelige kommunisere disse sikkerhetsprioriteringene til ansatte, vil styrke VFA og dermed kunne bidra til å redusere forekomst av trusler og vold blant ansatte i barnevernet.

Exposure to threats and violence has been established as an especially focal occupational stressor in child welfare social work (Parveen et al., 2023; Radey & Wilke, 2021). It is well-established that the consequences of being exposed to threats and violence can be highly detrimental to workers (Rudkjoebing et al., 2020). In addition to the obvious potential of physical damage to employees and equipment, research shows that experiencing threats and violence is associated with mental health problems (King, 2021; Rudkjoebing et al., 2020), sickness absence (Hoffmann et al., 2020), turnover intent (Chang et al., 2018; Heponiemi et al., 2014), job dissatisfaction (Heponiemi et al., 2014) and reduced work ability (Littlechild et al., 2016). Due to these consequences and their related costs for both employees and employers, identifying effective preventive safety measures that can reduce the risk of exposure to threats and violence among child welfare workers is vital for maintaining optimal functioning among staff.

To identify effective measures that can reduce the risk of threats and violence in child welfare work, it is necessary to understand the factors that determine employee safety. In a conceptual model on occupational safety, Christian et al. (2009) propose that safety outcomes, such as accidents and injuries, at the workplace are determined by a combination of person- and organisation/situation-related factors. Personality characteristics and job attitudes are described as the main person-related factors, whereas organisational factors include the management's commitment to employee health and safety, HRM procedures, safety systems, job risk, work pressure, and leadership practices. However, when using meta-analysis to determine the relative impact of these person- and organisational factors with regard to risk of accidents and injuries, the organisational factors occurred as the key predictors (Christian et al., 2009). This finding is in line with several primary studies which have shown that individual resources have limited protective impact regarding exposure to workplace aggression (e.g. Britton et al., 2012; Nielsen et al., 2008; Reknes et al., 2016). Hence, this indicates that efforts to protect employees against aggressive events at the workplace, including threats and violence, should be directed at organisational factors rather than leaving it to the individual employee to deal with the aggression themselves. Supporting this notion, a recent qualitative study of 101 Norwegian service workers found that organisational factors such as project administration and leadership involvement, anchoring and understanding of organisationally aligned and adjusted routines, and a generally increased focus on prevention and management of violence are highly important in dealing with violent behaviour (Elvegard & Almvik, 2024).

In line with the finding from the above studies, *violence-prevention behaviour (VPB)* has been proposed as an especially beneficial organisational factor for reducing the risk of violence and aggression at the workplace (Chang et al., 2012; Gadegaard et al., 2018). Formally, VPB refers to enacted organisational policies, practices, and procedures regarding the control and the elimination of workplace physical violence and verbal aggression (Gadegaard et al., 2018; Spector et al., 2007). More simply put, VPB reflects the degree to which colleagues, supervisors and the overall management prioritise, promote, and adhere to practices that can prevent the occurrence of threats and violence at the workplace. Hence, VPB is an indicator of whether the organisation and its members have an explicit focus on protecting their workers against the risk of threats and violence.

To be effective, VPB should be implemented and developed at all levels in an organisation, that is, the colleague-, supervisor-, and top-management levels. According to Gadegaard et al. (2018), VPB from *top management* may prevent future employee exposure to violence directly by

communicating safety priorities even under increased work pressure, by taking prevention into consideration in decisions concerning staffing and intake of clients, and by investing time and resources in violence prevention training for workers. The potential importance of top-level management in regard to implementing effective safety measures is supported by previous research on accidents and injuries (Huang et al., 2017; Zohar, 2002). Supervisors have day-to-day interaction with employees and their VPB may thus directly affect future exposure by encouraging formal reporting of incidents and taking reports seriously, thereby informing specific prevention strategies. Supporting the significance of supervisors in regard to employee safety, research indicates that leaders who are particularly oriented towards the enhancement of safety, promoting change, and exemplary safety role-modelling, are especially important for subordinates' levels of perceived risks and safety (Conchie et al., 2012; Hofmann et al., 2003; Nielsen et al., 2013). Finally, VPB at the *co-worker* level is important as this will serve as guide to correct attitudes and unwanted behaviour and can exercise pressure to conform to group standards and norms. In addition, coworkers represent an important source of emotional and instrumental support after exposure to threats and violence and in a study comprising 633 Italian healthcare workers it was shown that the risk of violence was lower at higher levels of social support (Balducci et al., 2020).

Although findings from other occupations than child welfare work support the notion that a strong VPB is beneficial for reducing the occurrence of violence (Gadegaard et al., 2018; Spector et al., 2015), and also for improving work functioning of employees (Chang et al., 2012, 2018), these findings may not necessarily be directly transferable to a high-risk group such as child welfare social workers as perception of what constitutes threats and violence may vary extensively between different occupations (Waddington et al., 2005). Importantly, compared to other high-risk occupations such as psychiatry, prison wards, and police, the child welfare service is organised differently and has different aims, clients, and work tasks. In addition, the child welfare work has specific requirements for employees. Specifically, the Norwegian Child Welfare Services is a public agency responsible for child protection and each Norwegian municipality is obliged to have available Child Welfare Services to secure the welfare of children and youths up to 18 years. The main work tasks for child service workers include preventive work, investigation, support service, approval of foster families, follow-up of children placed in foster families or institutions (Balducci et al., 2020; Nilsen et al., 2023). Workers are either employed at municipal offices that are responsible for receiving and investigating referrals, making decisions about voluntary services, preparing matters regarding out-of-home care for the county social welfare board and evaluating ongoing interventions, or at child welfare institutions responsible for children that are placed outside their homes after care orders (Storhaug et al., 2019). A bachelor's degree is required for employment at a child welfare institution, whereas a master's degree is required for work in the municipal child protective agencies. The requirements stemmed from the government's recognition of the need for professionals with specialised expertise in understanding children's needs and perspectives and the training programmes therefore aim to ensure progression in both the theory and practice of the work (Baugerud et al., 2018).

These requirements for formal training mean that child welfare workers should have clear preparedness and knowledge regarding the risk of threats and violence in the work setting, and these workers should therefore have a strong potential for understanding the importance of violence prevention as well as the specific measures that need to be taken to prevent the risk of threats and violence. Consequently, efforts of violence prevention from top management, supervisors, and colleagues should be effective. On the other hand, due to frequent interactions with clients in situations with high potential for conflicts and frustrations from the client's part, threats and violence are often considered as a normalised and expected aspect of the job in child welfare work (Littlechild, 2002). If workers perceive threats and violence as an integral part of their work tasks it may be more challenging for organisations to make the workers understand how and why establishing violence prevention behaviour (VPB) could impact the risk of exposure to threats and violence and efforts of violence prevention may be less effective.

Taken together, based on the above contrasting perspectives regarding the effectiveness of VPB and a lack of previous studies on the topic, it remains an open question whether VPB has an impact on the occurrence of threats and violence among child welfare workers. By using time-lagged data and by assessing VPB at coworker-, supervisor-, and top-management levels, the current study will advance previous research by addressing whether VPB influences the risk of exposure to threats and violence among child welfare social workers. Hence, the study will answer the following research questions:

- (1) Is VPB associated with the risk and levels of exposure to threats and violence in child welfare work?
- (2) Is VPB at the 'top management-', 'supervisor-' or 'colleague' level the most important regarding preventing employee against exposure to threats and violence in child welfare work?

## Methods

### *Design and sample*

The data in this study were collected as part of 'Oslo Workplace Aggression Survey' (OWAS), a collaborative project between the National Institute of Occupational Health (STAMI) in Norway and The vice mayor of education and child services in Oslo municipality. As described in the project protocol, the overarching aims of the project were to determine the impact of physical and psychological aggression on the well-being, health, and work ability of employees in the child welfare service and to establish whether a strong psychosocial safety climate and an ethical infrastructure are effective with regard to protecting employees against aggression (Nielsen et al., 2020). All employees ( $N = 1264$ ) working full or part-time in the child welfare service in Oslo municipality were invited to participate in the survey. The baseline assessment (T1) was conducted electronically in March 2020. The follow-up (T2) was conducted in September 2020. The project was approved by the Regional Committees for Medical and Health Research Ethics in Norway (project number 28496). In line with the General Data Protection Regulation (GDPR), the National Institute of Occupational Health acquired permission from the Norwegian Agency for Shared Services in Education and Research (SIKT; approval: 226309) to process the personal data in this project for research purposes. The respondents had to confirm their informed consent before responding to the questionnaire. This procedure for securing informed consent was approved by the ethics committee and SIKT. No personally identifiable information about respondents was available to the researchers, as data were de-identified prior to analyses.

At T1, 678 of 1264 of the invited respondents returned their questionnaires, yielding a response proportion of 54 per cent. At T2, 646 of 1200 invited respondents participated (response proportion 54 per cent). The difference in invited respondents between measurement points was due to 64 workers quitting or changing jobs. Altogether 424 persons participated at both T1 and T2, giving a cohort response proportion of 34 per cent. [Table 1](#) provides an overview of the participants and study variables. The cohort consisted of 77 per cent women and 23 per cent men. The mean age was 39 years ( $SD = 10.24$ ). Sixty-five-point-five per cent of the respondents were employed at a child welfare office, whereas 34.6 per cent were employed at a child welfare institution. A total of 85 per cent worked in a full-time position, 10 per cent in a part-time position, and 5 per cent were on-call staff. Altogether 16 per cent of the respondents had some sort of formal leadership responsibility. A one-way ANOVA ( $F = 12.40$ ;  $DF = 2$ ;  $p < 0.001$ ) showed that part time workers ( $M = 11.83$ ;  $SD = 13.99$ ;  $N = 61$ ) and on-call staff ( $M = 21.19$ ;  $SD = 19.59$ ;  $N = 36$ ) reported higher exposure to threats and violence at T1 when compared to full-time employees ( $M = 9.06$ ;  $SD = 14.08$ ;  $N = 517$ ). Part-time and on-call staff were therefore included for further analyses. Attrition analysis of demographic data and the study variables indicated that the T2 sample was representative of the T1 respondents when comparing responses at T1 for T2 participants and dropouts.

**Table 1.** Characteristics of participants and study variables.

Characteristics	%	Mean exposure to threats and violence at T1 (SD)	<i>T</i> ( <i>p</i> ) T1	Mean exposure to threats and violence at T2 (SD)	<i>T</i> ( <i>p</i> ) T2
Gender					
Female	77	8.94 (14.29)	−4.13 ( <i>&lt;</i> 0.001)	6.61 (11.05)	−6.08 ( <i>&lt;</i> 0.001)
Male	23	16.41 (18.77)		15.83 (18.23)	
Work site					
Office	65.5	4.81 (7.19)	−12.71 ( <i>&lt;</i> 0.001)	2.86 (4.74)	−14.96 ( <i>&lt;</i> 0.001)
Institution	34.5	22.68 (20.90)		19.78 (17.46)	
Leadership position					
No	84	11.42 (16.53)		9.85 (14.00)	3.56 ( <i>&lt;</i> 0.001)
Yes	16	8.31 (13.53)	1.38 (NS)	4.44 (10.15)	
Marital status					
Single	29	12.33 (15.36)	1.36 (NS)	10.25 (14.02)	1.37 (NS)
In a relationship/ partner/married	71	10.00 (15.91)		8.22 (13.50)	
Employment					
Full-time	85	9.59 (15.30)	−1.43 (NS)	7.69 (13.23)	−1.57 (NS)
Part-time	15	13.31 (14.96)		11.18 (14.11)	

Note: SD, Standard Deviation; *T*(*p*), *T* and *p*-values for difference test; NS, Not Significant.

## Instruments

Exposure to specific acts of client-perpetrated physical and verbal violence and threats of violence from children, youths, and their relatives during the last six months were assessed with a 22-item behavioural experience inventory. Most items were taken from two established instruments (Barling et al., 2001; Gadegaard et al., 2018), whereas some additional items were developed for this study to capture forms of violence that are more specific to child welfare work. Example items are 'Been threatened with a sharp object' and 'Someone threatened to kill you'. All items can be found in a recent study from the same dataset (Parveen et al., 2023). Response alternatives were given on an ordinal scale using the categories 0 'never', 1 'once', 2 'twice', 3 'three times', 4 'four times', and 5 'five or more times'. The responses were summarised into a total exposure scale with a score of 110 exposure events as the highest score.

VPB was assessed with a nine-item scale developed by Gadegaard et al. (2018). The scale measures three levels of VPB. The three items used to assess VPB at the *top management* level were 'Requires each manager to help improve violence-prevention in his or her department', 'Invests a lot of time and money in violence-prevention training for workers', and 'Considers violence-prevention in decisions concerning staffing and intake of clients'. VPB at the *supervisor level* was assessed with the following three items: 'Your supervisor encourages staff to report physical violence', 'Your supervisor encourages staff to report threats', and 'Your supervisor takes reports of workplace violence seriously'. Finally, VPB at the *colleague level* was measured with the three items: 'Among co-workers you are encouraged to report physical violence', 'Among co-workers you are encouraged to report threats', and 'Your co-workers give sufficient help and support after a violent or threatening incident'. Respondents were asked to rate how much they agreed with each statement using a five-point response scale ranging from 1 'not at all' to 5 'very high degree', supplemented with a 'do not know' alternative. This approach to measurement means that the inventory assesses the respondents' subjective perceptions of VPB. Close to 50 per cent of the respondents used the 'do not know' category for the questions about top management VPB, while 16 per cent used the category for supervisor and colleague level categories. In line with Gadegaard et al. (2018), respondents answering 'do not know', were excluded from the data analyses. This means that the analyses of the relative impact of the different VPB levels were limited to including those respondents that had some knowledge about VPB at all levels in the

**Table 2.** Descriptive statistics and correlations.

	Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1	Gender (Reference: Male)	–	–	–							
2	Age	39.26	10.66	–.03	–						
3	Work site (reference: Office)	–	–	–.36***	–.03	–					
4	Threats and violence T1	10.08	14.83	–.28***	–.08	.56***	–				
5	Threats and violence T2	8.75	13.61	–.31***	–.10*	.65***	.78***	–			
6	VPB Top management	3.08	1.16	.01	.05	.16**	–.12*	–.06	–		
7	VPB Supervisor	4–34	1.01	–.09*	.07	.18***	–.0	.01	.46***	–	
8	VPB Colleague	4.37	.86	.06	.02	.01	–.06	.09	.26***	.49***	–

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

organisation ( $N = 219$ ). Cronbach's alpha values at T1 were high for all subscales: Top-management level (three items): .86; supervisor level: (three items): .89; Co-worker level (three items): .91.

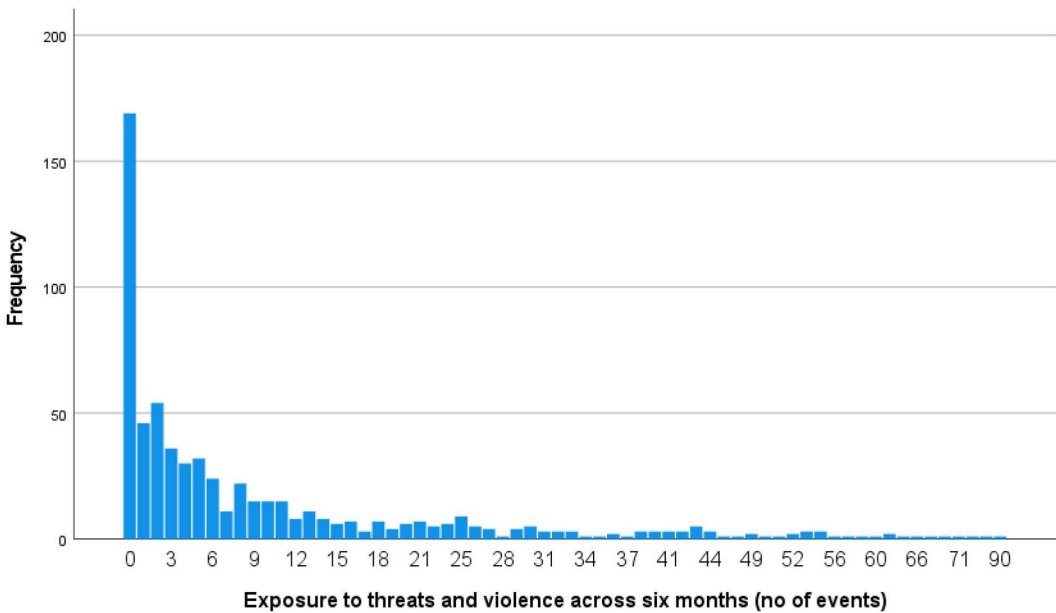
### Statistical analyses

Statistical analyses were performed in SPSS 28.0 (IBM Corp. Released, 2023) and STATA SE 18.0 (StataCorp., 2023). Coefficients were calculated with a Zero Inflated Negative Binomial model (ZINB). The ZINB model is capable of capturing both over-dispersion and excess of zero-values (Mullahy, 1986) and analyse data in a two-part process. First, a log-binomial regression analysis estimates the risk ratio of reporting at least one episode of threats and violence. Second, a zero-truncated negative binomial analysis produces incidence rate ratios for the number of the different types of threats and harassment the exposed respondents report. Analyses were adjusted for the respondent's age, gender, and work site (child welfare office vs institution) as these variables were significantly associated with reports of exposure to threats and violence (see Table 2). In line with recommendations for analysing data from longitudinal observational studies, we did not adjust for baseline levels of the outcome variable in the analysis of prospective data as this is likely to lead to biased effect estimates and problems with interpretation of results (Lydersen & Skovlund, 2021). However, the included separation in time between assessments of the presumed cause and effect variables allow for more confident causal conclusions and also reduce the risk of transient occasion factors that bias measures and serve as sources of common method variance (Spector, 2019).

### Results

Since detailed findings on the prevalence of threats and violence from the baseline sample have previously been presented elsewhere (Parveen et al., 2023), only the key numbers will be repeated here. Tables 1 and 2 report descriptive statistics, zero-order correlations, and group differences for the study variables. At T1, mean exposure to threats and violence across a six months' time frame was 10.08 ( $SD = 14.83$ ) events. At T2, the corresponding mean exposure was 8.75 ( $SD = 13.61$ ) events. The correlation analyses showed that only VPB at top management level was significantly associated with reports of threats and violence at T1 ( $r = -.12$ ;  $p < 0.05$ ). None of the VPB variables were bivariately associated with threats and violence at T2. As displayed in Table 1, *T*-tests analyses of group differences show that employees working at a child welfare institution reported significantly higher exposure to threats and violence at both T1 and T2 compared to those working at a child welfare office. The analyses further showed that male respondents reported higher exposure to threats and violence compared to female respondents at both T1 and T2.

Figure 1 displays the frequency distribution of threats and violence at T1. Altogether 27 per cent reported zero exposure to threats and violence. A similar distribution was found at T2. The skewed distribution with an excessive amount of zero values indicates that a ZINB model is an appropriate



**Figure 1.** Exposure to threats and violence at T1.

analytic approach. [Table 3](#) shows the ZINB model results with exposure to threats and violence at T1 as the outcome. The count model analysis, which analyses levels of exposure, showed that working at a child welfare institution ( $\beta = 1.30, p < 0.001$ ) was associated with a significantly higher exposure to threats and violence. Age and gender were not associated with levels of exposure. As for the VPB variables, VPB at the Top management level was associated with significantly lower exposure to threats and violence at T1 ( $\beta = -.22, p < 0.01$ ), whereas VPB at the colleague level was significantly associated with higher exposure ( $\beta = .19, p < 0.05$ ). VPB at the supervisor level was not associated with reports of threats and violence at T1. VPB was not associated with levels of exposure of threats and violence in the subsequent logit model.

A similar ZINB analysis of exposure to threats and violence at T2 ([Table 4](#)), showed that working at a child welfare institution ( $\beta = 1.48, p < 0.001$ ) was associated with higher levels of threats six months later, whereas VPB at the Top management level ( $\beta = -.19, p < 0.05$ ) was associated with lower levels of threats and violence across the six-month period. The VPB variables were not associated with changes in levels of threats and violence across time. Only higher age ( $\beta = .07, p < 0.001$ ) and working at a child welfare office ( $\beta = -2.97, p < 0.001$ ) were significantly associated with levels of threats and violence in the logit model.

**Table 3.** Zero-inflated negative binomial regression results for the frequency of threats and violence at T1.

Predictor variables	Count model					Logit model				
	B	SE	z	$p >  z $	95% CI	$\beta$	SE	z	$p >  z $	95% CI
Age	-.01	.01	-1.16	.25	-.02 – .01	-.01	.02	-.30	.77	-.03 – .03
Male gender	-.23	.15	-1.50	.13	-.53 – .07	.70	.49	1.43	.15	-.25 – 1.65
Work site institution	1.30***	.15	8.78	.000	1.01–1.60	-.91*	.44	-2.08	.04	-1.77 – -.05
VPB Top management	-.22***	.07	-3.11	.002	-.36 – -.08	.19	.18	1.07	.28	-.16 – .54
VPB Supervisor	.01	.08	-.08	.94	-.16 – .14	-.06	.20	-.29	.77	-.45 – .33
VPB Colleagues	.19*	.08	2.33	.02	.03 – .35	.05	.24	.21	.84	-.42 – .52

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

Note reference category for Work site institution is 'Child welfare office'.



**Table 4.** Zero-inflated negative binomial regression results for the frequency of threats and violence at T2.

Predictor variables	Count model					Logit model				
	$\beta$	SE	$z$	$p >  z $	95% CI	$\beta$	SE	$z$	$p >  z $	95% CI
Age	-.01	.01	-1.29	.20	-.03 – .01	.07**	.03	2.68	.001	.02 – .13
Male gender	-.33	.20	-1.67	.09	-.72 – .06	.34	.67	.05	.62	-.98–1.66
Work site institution	1.48***	.20	7.59	.000	1.10–1.87	-2.97***	.80	-3.72	.000	-4.54 – -1.41
VPB Top management	-.19*	.09	-2.10	.05	-.37 – -.01	.01	.27	.07	.95	-.52 – .55
VPB Supervisor	.09	.10	.91	.36	-.10 – .28	.34	.34	1.01	.31	-.32–1.01
VPB Colleagues	-.11	.12	-.89	.37	-.34 – .13	.25	.38	.66	.51	-.49–1.00

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

Note reference category for Work site institution is 'Child welfare office'.

## Discussion

Having examined associations between VPB at three different levels, i.e. coworker, supervisor, and top management, the findings of this study show that only the top management level seems to have the potential to reduce the occurrence of threats and violence among child welfare workers. Specifically, we found that respondents with a positive evaluation of top management VPB reported significantly fewer incidences of threats and violence across a six-month time-period compared to colleagues with a more negative impression of the top management VPB. In addition, and somewhat counterintuitive, we also found that higher VPB at the coworker level was associated with higher exposure to threats and violence at the baseline assessment. In the following, we will compare the findings with previous research, provide explanations for our results, and offer some suggestions for upcoming studies on violence and violence prevention.

While the existing body of research on the impact of VPB on occurrence of violence is rather small, our finding that only top management VPB prevents incidents of threats and violence corresponds with the results from a Danish study that examined VPB and workplace violence in four different high risk work sectors, namely psychiatry, special schools, eldercare, and the prison and probation services (Gadegaard et al., 2018). The findings are also in line with a US study which found that VPB, as promoted by organisational policies and prompt management responses to assaults, was associated with lower levels of violence (Chang et al., 2012). In addition, by considering exposure to threats and violence as an indicator of workplace safety, the finding that top management VPB is associated with lower incidence of threats and violence corresponds to research on the related construct safety climate which is conceptualised as the shared perceptions with regard to safety policies, procedures, and practices at a workplace (Zohar, 2011). A reoccurring finding in this line of research is that top-level management safety climate is a main precursor of safety outcomes (Huang et al., 2017; Peker et al., 2022; Zohar & Luria, 2005). Taken together, when seen in conjunction with previous research, our results indicate that when managing workplace violence in high-risk areas of human service work, there should be a special emphasis on the use of violence prevention behaviours and strategies from the top management.

One reason why top management VPB turned out as the key predictor of threats and violence is that higher level management has stronger means for creating a safer workplace, for instance through addressing heavy workload, act regarding intake of clients, determine work schedules, and recruit more workers. Top management is also more likely to make decisions on the policies, practices, and procedures in the organisation. The importance of the top management in regard to safety outcomes such as threats and violence may be further explained through social learning theory (Tucker et al., 2016). This theory explains how people acquire information about appropriate behaviours by observing salient role models perform behaviours that are expected and reinforced (Bandura, 1977). For behaviours to be adopted, the observer must be aware of and pay attention to the role model to activate the social learning process and reinforcements are essential to direct the observer's attention to the desired role behaviour. Extending social learning to an organisation, the concept *collective social learning* reflects shared observations and vicarious learning that occurs

between groups of organisational actors (Tucker et al., 2016). Developing VPB in organisations requires group members to internalise shared cognitions regarding priorities and expectations related to violence prevention through vicarious learning. Taking into consideration that people tend to model their behaviour after higher-status individuals (Mayer et al., 2009), it is reasonable that top management has a central role in this regard. That is, if the top management engages in behaviours consistent with their espoused priority on violence, establishes high safety standards, and uses reinforcements to promote these standards, this will have a trickle-down effect on lower hierarchy members (Tucker et al., 2008).

A somewhat surprising finding from the baseline analyses in this study was that colleague-level VPB was associated with higher levels of exposure to threats and violence. A possible explanation for this finding is that efforts among colleagues to prevent threats and violence, may lead to an increased awareness of the exposure and that this thereby makes workers more attentive to incidences of threats and violence, something which subsequently is reflected through higher levels in reports such as the current survey.

We found no effect of supervisor VPB on reports of threats and violence. An explanation could be a lack of sensitivity in the utilised survey questionnaire. An inspection of the individual items in each of the subscales shows that they measure whether supervisors encourage staff to report threats and violence and whether exposed workers are given help and support after a violent or threatening incident. Hence, this scale seems to assess secondary prevention strategies that is used after an incidence, rather than primary prevention before threats and violence occur. Thus, although important regarding handling of cases, such strategies are unlikely to reduce the prevalence of threats and violence. This highlights the importance of also having available effective primary preventive strategies.

### ***Methodological limitations***

There are some methodological limitations that should be considered in the interpretation of the findings. The use of self-report survey instruments to measure the key constructs increases the risk of response and recall bias. Furthermore, because of the correlation design, there may be important unobserved confounding factors that can have influenced the findings. Although the baseline response rate of 53.6 per cent is higher than the average response rate in organisational research (Baruch & Holtom, 2008; Stedman et al., 2019), altogether 46.4 per cent of the invited sample did not participate in the questionnaire survey. The external validity of the findings may therefore be questioned. A related issue is that a fairly high number of respondents answered the 'do not know' response category for questions about top management VPB, at least when compared to the two other VPB levels. While the fact that many employees seem to have limited knowledge about how the top management prioritise VPB is an interesting finding by itself, it limits the overall statistical power of the study. Due to inadequate information about the team structure among the respondents, data were analysed at the individual level and the findings therefore reflect subjective perceptions of VPB. Examining VPB at the group and organisational level would have provided additional information about the effectiveness of VPB regarding the occurrence of workplace threats and violence.

It should be noted that the data for this study was collected at the very initial stages of the Covid-19 pandemic and the survey was already distributed to the participants when Norway went into lockdown. As the T1 survey was to be answered retrospectively, the questions referred to perceptions of VPB and exposure to threats and violence before the pandemic. The results from T1 should therefore not be influenced by the pandemic. In addition, although the Covid-19 pandemic led to changes in the organisation of work and working life, the Norwegian government classified the child welfare service as part of the critical societal functions meaning that the child welfare service was not restricted in the same way as many other occupations throughout the pandemic. Hence, while the pandemic may have brought about many changes and uncertainties, it probably had less

impact on the work tasks in child welfare than on other occupations. Nonetheless, the specific societal situation following the Covid-19 measures should be taken into consideration in the interpretation of the results.

## Conclusions and suggestions

Despite these limitations, our findings do indicate that investment in a strong VPB is likely to have some benefits for the safety and health of child welfare workers, and especially if the top management engages in violence prevention. A practical implication of the current study is therefore that employers in child welfare prioritise violence prevention and that the top management aims to communicate their safety standard to frontline workers and supervisor through an explicit emphasis on efforts for preventing threats and violence. Developing and drafting effective organisational policies to prevent and address workplace violence is a practice and policy area in which organisational leaders can show their involvement (Chang et al., 2018). Without clear statements proscribing the prevention of threats and violence, supervisors and frontline workers are left to fend for themselves and respond on a case-by-case basis without an overarching plan for prevention and intervention (Duffy, 2009). Having an incentivised reporting system available is another important tool for fostering VPB.

In summary, this study extends previous research by addressing the role of VPB in child welfare social work. Our findings on reported levels of threats and violence support the claim that child welfare social work is an especially high-risk occupation regarding threats and violence (King, 2021). However, our results also point to the role of top management VPB as a potential remedy that may be beneficial for reducing the occurrence of threats and violence in this occupation. This study represents a single contribution to the understanding of the role of VPB in child welfare social work and should therefore be replicated with other samples, measurement instruments, and research designs. An especially important venue for upcoming studies on VPB is to determine the conditions, i.e. moderators, that can explain when and for whom VPB is most effective.

## Disclosure statement

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

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