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A relationship between teachers' perceptions and practices within an anti-bullying programme

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ABSTRACT

The academic literature suggests that teachers' perceptions of addressing bullying are linked to their actual practices of preventing and intervening in bullying incidents. The current study extends this statement by investigating the relationship between teachers' perceptions of, and their practices within, the various components of an anti-bullying programme at school, classroom and individual levels. The study also aims to investigate if there are differences between teachers' perceptions and practices within an anti-bullying programme and individual characteristics of the teachers. Teachers, working within the Olweus Bullying Prevention Programme in Norway (N = 82), completed a standardised online self-administered questionnaire. The results showed that teachers had a slightly more positive perception and put more effort into preventing bullying at the individual level in comparison to classroom and school levels of the programme. Primary education teachers generally put more effort into working with the anti-bullying programme than lower secondary education teachers. Female teachers put more effort into organisation of Olweus class meetings and

in following up bullying cases, and they had more positive perceptions of the effectiveness of the anti-bullying programme in comparison to male teachers. Finally, the study indicated a relationship between teachers' perceptions and practices within an anti-bullying programme.

INTRODUCTION

Although definitions of bullying vary, it is mostly agreed that bullying is an aggressive behaviour, characterised by three main criteria, namely, 1) intentionality (i.e. the pupils who bully know/understand that their behaviour is unpleasant or hurtful to the bullied pupils), 2) repetition, and 3) power imbalance between the bullied pupils and the pupils who bully, in favour of the latter (cf., Mazzone, Kollerová & O'Higgins Norman, 2021; Olweus, 1993; Olweus & Limber, 2010; Olweus, Limber, Riese, Urbanski, Solberg & Breivik, 2021). This phenomenon has negative health-related, academic, and social consequences not only for pupils who bully and for bullied pupils, but for bystanders as well (Menesini & Salmivalli, 2017; Wolke & Lereya, 2015) and overall, it damages the school environment (Cascardi, Brown, Iannarone & Cardona, 2014). Consequently, bullying has been considered a serious and systemic problem which requires complex and multifaceted prevention (Thornberg, Baraldsnes & Sæverot, 2018).

A review of academic literature revealed that whole-school-approach anti-bullying programmes (hereafter referred to as 'anti-bullying programmes'), which involve whole-school communities and encompass various preventive components at the school, classroom and individual levels, have been effective in reducing bullying perpetration and victimisation in schools (e.g., Gaffney, Ttofi & Farrington, 2021, 2019a b; Smith, Salmivalli & Cowie, 2012; Toffi & Farrington, 2011). It is imperative for teachers to be involved in the implementation of an anti-bullying programme (Rigby, 2020). Previous research findings highlighted teachers as an important contributor to the success of bullying prevention and intervention (e.g., Kallestad & Olweus, 2003; Yoon, Sulkowski & Bauman, 2016). However, only a few studies indicated that teachers' perceptions of an anti-bullying programme shape their adherence to the programme (Biggs, Vernberg, Twemlow, Fonagy & Dill, 2008). Thus, the current study aims

to investigate the relationship between teachers' perceptions and practices within an anti-bullying programme. Based on the results from the previous studies and theoretical assumptions (as they apply to *hypotheses* 1 and 2), the following hypotheses have been developed in order to achieve this aim:

- *Hypothesis* 1: There are significant differences between teachers' perceptions of the effectiveness of an anti-bullying programme and their practices within the programme.
- *Hypothesis* 2: Primary education teachers put more effort into school bullying prevention and have a more positive perception of the effectiveness of an anti-bullying programme compared to lower secondary education teachers.
- *Hypothesis* 3: Female teachers put more effort into school bullying prevention and have a more positive perception of the effectiveness of an anti-bullying programme compared to male teachers (cf. Bauman et al., 2008; Boulton, 1997; Yoon et al., 2011).
- *Hypothesis* 4: Teachers with longer teaching experience put more effort into school bullying prevention and have a more positive perception of the effectiveness of an anti-bullying programme compared to teachers with shorter teaching experience (cf. Borg & Falzon, 1990; Burger et al., 2015).
- *Hypothesis* 5: Higher levels of the teachers' perceived effectiveness of an anti-bullying programme are positively associated with greater anti-bullying efforts within the programme (cf. Biggs et al., 2008).

In the current study, teachers' perceptions of the effectiveness of a whole-school approach anti-bullying programme and their bullying prevention practices are explored in the framework of the Olweus Bullying Prevention Programme (hereafter referred to as the OBPP) (Olweus, 2001).

LITERATURE BACKGROUND
The relationship between teachers' perceptions and their practices for preventing and intervening in bullying

Overall, previous research findings suggest that from teachers' perspectives, bullying is a significant problem and a cause of concern (Bradshaw, Waasdorp, O'Brennan & Gulemetova, 2013). Teachers' beliefs, attitudes, and practices might have a significant impact on the development and maintenance of bullying (Veenstra, Linderberg, Huitsing, Sainio & Salmivalli, 2014). It is generally

agreed that teachers who consider themselves an important influence on pupils and understand addressing bullying to be a component of their roles as teachers, adopt more active and effective approaches to bullying (Mazzone et al., 2021). According to Yoon and Kerber (2003), teachers are more likely to intervene and to sanction bullying when they perceive incidents of it as serious. Similarly, teachers are unlikely to intervene when they believe that bullying is a normative behaviour, which in turn increases peer victimisation (Hektner & Swenson, 2012). The study, done by Hektner & Swenson (2012) with 340 third grade pupils and their 66 teachers in the United States, reported that teachers were less likely to intervene in bullying incidents if they perceived bullying as a part of normal development.

What teachers perceive or believe to be effective in addressing bullying has been linked to their reports of what they actually do. The theory of planned behaviour, developed by Ajzen (1991, 2012) suggests that behavioural, normative, and control beliefs collectively influence an individual's intention to perform the given behaviour. Moreover, intentions are assumed to capture the motivational factors that influence a behaviour (the stronger the intention to engage in a behaviour, the more likely should its performance be). However, a behavioural intention can find expression in behaviour, if the behaviour question is under volitional control (Ajzen, 1991). Consequently, it could be stated that behavioural achievement depends jointly on motivation (intention) and ability (behavioural control). Thus, teachers, who have higher perceived effectiveness beliefs concerning a whole-school approach anti-bullying programme should be more likely to actually implement the programme.

Factors related to teachers' practices for preventing and intervening in bullying

Several factors are crucial for increasing teachers' likelihood of preventing and intervening in bullying, as well as their practices within the anti-bullying programmes. Mazzone et al. (2021) highlighted these factors: raising the teachers' awareness of the bullying phenomenon by providing them with evidence-based knowledge; challenging teachers' false beliefs that bullying is just a normal part of growing up; fostering teachers' empathy and sense of responsibility to the bullied pupils; and, finally, providing training and guidelines to support teachers' self-efficacy to monitor, report, and handle bullying in cooperation with their colleagues, pupils, parents, and experts outside the school.

Although several individual and contextual factors affect teachers' perceptions, beliefs, attitudes and likelihood of intervening when bullying happens, the current study investigates only few individual factors, namely, teachers' gender, age or the duration of teaching experience, and teaching level (primary education teachers vs. lower secondary education teachers).

Teachers' gender is one of the individual factors associated with teachers' attitudes toward bullying. Female teachers are more likely to take action when confronted with a bullying incident, compared to male teachers (Boulton, 1997; Burger, Strohmeier, Spröber, Bauman & Rigby, 2015; Yoon, Bauman, Choi & Hutchinson, 2011). Moreover, female teachers were found more likely to work with the pupil who bullied other pupil(s) than male teachers did (Burger et al., 2015). However, contradictory findings that male teachers rated bullying as a significantly more serious phenomenon compared to female teachers were revealed in a previous study done by Borg and Falzon (1989).

Teachers' age or the duration of teaching experience might be another factor that influences teachers' attitudes and practices toward bullying prevention and intervention. The previous study of Borg and Falzon (1990) revealed that teachers with longer teaching experience tend to be more tolerant of misbehaviour and perceive fewer behaviours as problematic. Boulton (1997) found that the greater the length of service, the more negative was the expressed attitude toward bullied pupils. On the other hand, Burger et al. (2015) indicated that teachers with more than 25 years of teaching experience reported a greater likelihood of working with pupils who bully and with bullied pupils, as compared with inexperienced teachers who had just started their professional career.

Teachers' knowledge of bullying and anti-bullying training are also important factors. Mishna, Pepler, and Wiener (2006) stated that teachers' knowledge of and ability to recognise bullying affects their likelihood of intervening and contributes to a reduction in bullying. Meanwhile, Bauman, Rigby, and Hoppa (2008), concluded that after anti-bullying training, teachers were significantly less likely to ignore bullying. Several whole-school approach anti-bullying programmes include providing evidence-based knowledge of bullying to teachers and their training of an effective bullying prevention and intervention in bullying incidents.

A brief overview of the Olweus Bullying Prevention Programme
The OBPP is a multi-level, multi-component whole-school approach anti-bullying programme which is built upon a solid evidence foundation and is an

internationally recognised programme, demonstrating a positive effect in reducing school bullying (Limber, Olweus, Wang, Masiello & Breivik, 2018; Olweus et al., 2021). A number of evaluations of the OBPP have documented a substantial reduction in bullying problems after eight to nine months of work with the programme, as well as long-term school level effects up to eight years after original implementation (Limber et al., 2018; Olweus et al., 2021). Moreover, the OBPP is not a "programme" in the narrow sense of this term, but rather a coordinated collection of research-based components that form a unified whole-school approach to bullying combined with selective interventions (Olweus et al., 2021, p. 412). All of the components of the OBPP are intended to decrease risk factors (such as low school commitment, poor academic performance, anti-social behaviour, etc.) and to increase protective factors (prosocial involvement, development of social skills, interaction with prosocial peers, etc.) (Olweus & Limber, 2010).

The main goal of the OBPP is to make school a safe and positive learning environment. Teacher practices within the OBPP and teachers' perceptions of the effectiveness of the OBPP have been investigated by identifying the following components of the OBPP: participation in staff meetings at the beginning and end of the school year in which school bullying-related issues are discussed (two items); participation in the Study and Supervision Groups for school staff (hereinafter referred to as SSG) to promote a whole-school approach to addressing school bullying (four items); organisation and evaluation of the results of anonymous pupils' self-reported Olweus questionnaire (two items); participation in adult supervision during recess (two items); and development of a holistic strategy and procedures/routines to prevent school bullying (five items). Components of the OBPP at the classroom level included: implementing and enforcing general class rules against bullying (four items); classroom management (six items); organisation of Olweus class meetings led by the class teacher (two items); implementing specific Olweus measures, namely, Olweus rules against bullying and an Olweus bullying circle (two items); and collaboration with parents, ranging from inviting parents to the parents' meeting to inviting parents to collaborate, so that they feel they are valuable members of a team that is helping pupils (four items). Finally, components of the OBPP at the individual level included the following: practices related to suspicion of bullying (five items); intervention in bullying

situations (three items); organisation of confrontational conversations with pupils involved in bullying and/or their parents (five items); and follow-up on cases of bullying (five items).

METHODOLOGY

Procedures

In the current study, a non-experimental, cross-sectional survey design was applied. The study was carried out using a *quantitative* survey approach, where data were collected through a standardised online self-administered question-naire in 2018. Permission to conduct the study was obtained and the researcher's obligations to the *Norwegian Centre for Research Data* (NSD) were strictly fol-lowed throughout the entire research process.

Participants

The two-stage cluster random sampling technique has been applied. During the first stage, 13 Olweus schools were randomly selected from a list of Olweus schools in Norway (altogether, 83), provided by the Norwegian Research Centre AS, which is responsible for the OBPP. During the second stage of selection, only primary and lower secondary education teachers responsible for the class and referred to as contact teachers in Norway, and who worked within the OBPP, were selected for the study.

In total, 278 contact teachers were invited to fill in an online self-assessment questionnaire, and 82 responded; the response rate was 29.5 % and varied from 4 in small to 28 in large schools. The majority of the participants were primary education teachers (82.9 %, $n = 68$), females (76.8 %, $n = 63$) who had a senior teachers' qualification (90.3 %, $n = 74$) and higher non-university bachelor (51.2 %, $n = 42$). Only 15 respondents had higher non-university or university master (11.0 %, $n = 9$ and 7.3 %, $n = 6$, respectively). The age of the sample ranged from 25 to 64, the mean age being 44.91 years ($SD = 9.91$). The range of the respondents' ages covered all teachers' age groups. The teaching expe-rience of the sample varied from 2 to 40 years, the mean teaching experience being 17.32 years ($SD = 9.10$). According to Statistics Norway (2019), in 2018, 75 727 teachers were teaching at Norwegian primary and lower secondary schools (74.8 % females). Thus, the distribution of the respondents according to gender corresponded to the national figures.

Measures

The items of the measure were constructed on the basis of the *OBPP Implementation Manual*[1], the *OBPP Manual for School Staff*[2] and the *OBPP Quality Assurance System Document* (QAS, 2010). The responses to each item were evaluated on a five-point Likert scale; for measuring teachers' perceptions of the effectiveness of the OBPP, response options varied from *Not at all effective* to *Extremely effective*. Meanwhile, for measuring teachers' practices within the OBPP, response options varied from *I do not do it* to *I do it very actively*.

The Cronbach's α of the teachers' perceptions of the OPP was as following: at the school level scale it was .91 (15 items, valid cases 82), at the classroom level it was .85 (18 items, valid cases 82), and at the individual level it was .92 (18 items, valid cases 82). Meanwhile, the Cronbach's α of the teachers' practices within the OBPP was as following: at the school level scale it was .80 (15 items, valid cases 57) (69.5 %), at the classroom level it was .78 (18 items, valid cases 82), and at the individual level it was .91 (18 items, valid cases 82).

Data analysis

The results were analysed using IBM SPSS-26 version. Descriptive analysis, one-way analysis of variance, independent-samples *t*-test, and simple linear regression analysis were conducted.

FINDINGS

The descriptive analysis revealed that the highest mean of the teachers' perception of the effectiveness of the OBPP at the individual level (M = 4.00, SD = .45, Mmin = 2.94, Mmax = 4.95) and the lowest at the school level (M = 3.60, SD = .52, Mmin = 1.93, Mmax = 4.93). The teacher perception of effectiveness of the OBPP at the classroom level was M = 3.68, SD = .38, Mmin = 2.83, Mmax = 4.50, meanwhile the aggregated mean of those three scales was 3.77, SD = .36, Mmin = 2.86 and Mmax = 4.65. The teachers' practices for preventing school bullying at the school, classroom, and individual levels also showed

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1   Olweus, D., Limber, S.P., Flerx, V.C, Mullin, N., Riese, J. & Snyder, M. (2008). *Olweus patyčių prevencijos programos įgyvendinimo mokykloje vadovas* [The manual of the implementation of the OBPP in school]. Specialiosios pedagogikos ir psichologijos centras.

2   Olweus, D., Limber, S.P., Flerx, V.C., Mullin, N., Riese, J. Snyder, M., Baraldsnes, A. & Thyhold, R. (2008). *Olweus patyčių prevencijos programos vadovas mokyklos darbuotojams* [A handbook of the OBPP for school staff]. Specialiosios pedagogikos ir psichologijos centras.

the greatest effort at the individual level (M = 4.32; SD = 0.39, Mmin = 3.44, Mmax = 5.00). However, teachers' put the least effort into prevent bullying at the classroom level (M = 3.96; SD = 0.36, Mmin = 3.22, Mmax = 4.78). The mean of the teachers' practices to prevent school bullying at the school level was 4.01, SD = .48, Mmin = 2.29 and Mmax = 4.93 and the aggregated mean of those three scales was 4.10, SD = .32, Mmin = 3.20 and Mmax = 4.59.

The current study aimed to find out whether there were significant differences between teacher practices within the OBPP and their perceptions of the effectiveness of the programme. A one-way ANOVA indicated that there was a statistically significant difference between teacher practices within OBPP at all-level (M = 4.01, SD = .32) and their general perceptions of the effectiveness of the OBPP (M = 3.77, SD = .36), Wilks' Lambda = .48, $F(1, 81)$ = 89.39, p < .001, multivariate partial eta squared .53. Bonferroni correction indicated that teachers make more effort within the OBPP than their perceptions of the effectiveness of the programme (I-J = .34, SD = .04, p < .001). Similar tendencies were obtained between teachers' practices within OBPP at school level (M = 4.01, SD = .48) and their perceptions of the effectiveness of OBPP at the same level (M = 3.60, SD = .52), Wilks' Lambda = .51, $F(1, 81)$ = 77.03, p < .001, multivariate partial eta squared .49; with Bonferroni correction (I-J = .41, SD = .05, p < .001); between teacher practices within OBPP at classroom level (M = 3.96, SD = .36) and their perceptions of the effectiveness of OBPP at the same level (M = 3.68, SD = .38), Wilks' Lambda = .66, $F(1, 81)$ = 41.91, p < .001, multivariate partial eta squared .34; with Bonferroni correction (I-J = .28, SD = .04, p < .001); and between teachers' practices within OBPP at individual level (M = 4.32, SD = .39) and their perceptions of the effectiveness of OBPP at the same level (M = 4.00, SD = .45), Wilks' Lambda = .57, $F(1, 81)$ = 60.77, p < .001, multivariate partial eta squared .43; with Bonferroni correction (I-J = .33, SD = .04, p < .001).

The current study aimed to find out whether there were significant differences between teacher practices within the different components of the OBPP and their perceptions of the effectiveness of the different components of the programme. The descriptive statistics and the results of one-way analyses of variance are presented in Table 1.1.

Table 1.1   Means, standard deviations, and one-way analyses of variance in teacher practices within the different components of the OBPP and their perceptions of the effectiveness of the different components of the OBPP at school, classroom and individual levels (N = 82).

OBPP level	Components	Teacher practices with OBPP		Teacher perceptions of the effectiveness of OBPP		Λ	F(1, 81)	η²
		M	SD	M	SD			
School level	Participation in the staff meetings	4.16	.32	3.62	.66	.60	53.19***	.40
	Participation in the SSG	3.90	.63	3.45	.65	.67	40.45***	.33
	Organisation and evaluation of Olweus survey	3.87	1.00	3.49	.76	.86	13.51***	.14
	Participation in adult supervision	4.43	.51	4.05	.65	.75	26.38***	.25
	Development of holistic strategy and following the procedure and routines of OBPP	4.00	.60	3.57	.55	.58	59.56***	.42
Classroom level	Compliance of the rules of behaviour in the classroom	4.18	.39	3.86	.45	.67	40.55***	.33
	Classroom management	4.17	.36	3.90	.42	.71	32.49***	.29
	Olweus class meetings	3.66	.62	3.52	.64	.98	1.60*	.02
	Specific Olweus measures	3.93	.66	3.52	.62	.73	30.54***	.27
	Collaboration with parents	3.61	.72	3.31	.59	.81	19.60***	.20
Individual level	Suspicion of bullying	4.33	.48	4.03	.54	.72	30.84***	.28
	Intervention in bullying incidents	4.59	.45	4.18	.56	.60	54.92***	.40
	Organisation of confrontational conversations	4.26	.48	3.97	.50	.72	30.95***	.28
	Follow-up of the bullying cases	4.23	.45	3.87	.51	.60	54.81***	.40

*** $p < .001$, * $p < .05$, Λ – Willks' Lambda, η² – multivariate partial eta squared

As is shown in Table 1.1, teachers put the most effort into participation in adults' supervision, with adults intervening decisively when bullying was observed or suspected and reporting bullying incidents and regarded this component of the OBPP at the school level as the most effective. Teachers put the least effort into organisation and evaluation of Olweus survey at the school level of the OBPP; however, they perceived participation in the Study and Supervision Group as the least effective component of the OBPP.

Next, teachers put the most effort into the two components at the classroom level of the OBPP, namely 1) the compliance of the rules of behaviour in the classroom, where rules were justified, explained, discussed with pupils and constantly verified in class, and 2) the classroom management, where teachers exerted an authoritative leadership and worked systematically in order to create a positive group identity or sense of community in the class. These two components at the classroom level of the OBPP were also perceived as the most effective. Meanwhile, teachers put the least effort into collaboration with parents, where teachers invited parents to collaborate, discuss ongoing work against bullying in the parents' meetings, to increase parents' awareness, knowledge and competence related to school bullying issues, and to provide a report of the parents' meeting to all parents. This component was also perceived as the least effective component at the classroom level of the OBPP.

At the individual level of the OBPP, teachers put the most effort and perceived the teacher intervention in school bullying incidents component as the most effective, where teachers intervene in bullying incidents and stop bullying, notify the school administration about bullying and safeguard and help pupils who have been exposed to bullying. Meanwhile teachers put the least effort and perceived the follow-up to the bullying incidents component as the least effective component at the individual level of the OBPP.

In order to prove or reject the second and the third hypotheses, an independent-samples t-test has been applied between primary and lower secondary education teachers as well as between male and female teachers and teachers' practices within the OBPP at school, classroom, individual and all levels, and their perceptions of the effectiveness of the OBPP at those levels. Only the significant results are presented in Table 1.2.

Table 1.2   Results of teachers' practices within the OBPP and their perceptions of the effectiveness of the OBPP for primary and lower secondary education teachers, as well as for female and male teachers.

Variables	t*	p	Mean difference	95 % confidence interval of the difference		Groups	M	SD	Eta Squared
				LL	UL				
Teachers' practices within the OBPP in general	2.09	.04	.19	.01	.04	Primary	4.14	.32	.05
						Secondary	3.94	.32	
Teachers' practices within the OBPP at the classroom level	2.34	.02	.24	.04	.44	Primary	4.00	.36	.06
						Secondary	3.76	.31	
Organisation of the Olweus class meetings	3.30	.001	.57	.23	.91	Primary	3.76	.60	.12
						Secondary	3.19	.51	
Organisation of the Olweus class meetings	– 2.42	.018	– .38	– .70	– .07	Male	3.37	.60	.07
						Female	3.81	.36	
Follow-up of bullying cases	– 2.54	.013	– .29	– .51	– .06	Male	4.01	.47	.08
						Female	4.30	.43	
Teachers' perceived effectiveness of the OBPP in general	– 2.141	.035	– .20	– .38	– .01	Male	3.61	.32	.05
						Female	3.75	.61	

*df = 80

As shown in Table 1.2, significant differences in scores of the primary education and lower secondary education teachers were obtained for teachers' practices within the OBPP in general and, specifically, at the classroom level. Primary education teachers put more effort in comparison to lower secondary education teachers within the OBPP in general, specifically at the classroom level but especially in organisation of the Olweus class meetings. Female teachers put more effort into the OBPP in comparison to male teachers in one component at the classroom level – organisation of the Olweus class meetings – and in one component at the individual level – following up the bullying cases. Moreover, female teachers perceived the effectiveness of the OBPP better than male teachers.

In order to confirm or reject *Hypothesis* 4, one-way between-groups ANOVA were conducted to explore the impact of age on teachers' practices within the OBPP and their perceptions of the effectiveness of the OBPP. Participants were divided into four groups according to their age (Group 1: 34 years or under; Group 2: 35 to 44 years; Group 3: 45 to 54 years; and Group 4: 55 or over). The one-way between-groups ANOVA did not indicate any statistically significant difference at $p < .05$ level in teachers' practices within the OBPP in all components at the school, classroom and individual levels for the four age groups. However, there was a statistically significant difference in teachers' perception of the effectiveness in three components at the school level of the OBPP for the four groups of teachers' age:

(1) in participation in the staff meetings F (3, 78) = 4.475, p = .006. The effect size, calculated using eta squared, was .15, indicating large effect. Post-hoc comparisons using Tukey HSD test indicated that mean score for Group 4 (*M* = 3.97, *SD* = .66) was significantly different to Group 1 (*M* = 3.29, *SD* = .89) *I-J* = .68, *SD* = .23, p = .022. and Group 3 (*M* = 3.40, *SD* = .45) *I-J* = .57, *SD* = .19, p = .019. Group 2 (*M* = 3.75, *SD* = .68) did not differ significantly from either Group 1, Group 3 or Group 4, and Group 1 did not differ significantly from Group 3;

(2) in participation in adults' supervision F (3, 78) = 4.065, p = .01. The effect size, calculated using eta squared, was .14, indicating large effect. Post-hoc comparisons using Tukey HSD test indicated that mean score for Group 4 (*M* = 4.36, *SD* = .60) was significantly different to Group 3 (*M* = 3.73, *SD* = .50) *I-J* = .63, *SD* = .19, p = .007. Group 1 (*M* = 4.13, *SD* = .68) did not

differ significantly from either Group 2 (M = 4.12, SD = .70), Group 3 or Group 4, and Group 2 did not differ significantly from Group 3 or Group 4;

(3) in development of holistic strategy and following the procedures/routines F (3, 78) = 4.478, p = .006. The effect size, calculated using eta squared, was .15i, indicating large effect. Post-hoc comparisons using Tukey HSD test indicated that mean score for Group 4 (M = 3.87, SD = .45) was significantly different to Group 3 (M = 3.30, SD = .33) I-J = .57, SD = .16, p = .003. Group 1 (M = 3.65, SD = .53) did not differ significantly from either Group 2 (M = 3.61, SD = .68), Group 3 or Group 4, and Group 2 did not differ significantly from Group 3 or Group 4.

The same test was conducted to explore the impact of teachers' teaching experience on teachers' practices within the OBPP and their perceptions of the effectiveness of the OBPP. Participants were divided into three groups according to their experience as a teacher (Group 1: 10 years or less; Group 2: 11 to 25 years; Group 3: 26 years or more). There was a statistically significant difference at p < .05 level only in one component, namely in the teachers' practice to implement and follow class rules component for three groups of teacher's experience as a teacher: F (2, 79) = 4.056, p = .021. The effect size, calculated using eta squared, was .09, indicating medium effect. Post-hoc comparisons using Tukey HSD test indicated that mean score for Group 2 (M = 4.28, SD = .37) was significantly different from Group 1 (M = 4.02, SD = .41), I-J = .26, SD = .10, p = .023. Group 3 (M = 4.10, SD = .33) did not differ significantly from either Group 1 or Group 2.

Hypothesis 5 predicted that higher levels of the teachers' perceived effectiveness of anti-bullying programmes are positively associated with more anti-bullying efforts within the programme. In order to confirm or reject this hypothesis, a simple regression analysis has been conducted in which teachers' practices to prevent school bullying were specified as the outcome variable; teachers' perceptions of the effectiveness of the OBPP was the predictor variable. The correlation between the outcome and the predictor variable indicated that those two variables were positively correlated (r = .55. p < .001). The teachers' perceptions of the effectiveness of the OBPP variable explained 29.8 % of the variance and indicated modest fit. The F-ration was 35.449, p < .001. Moreover, the current model indicated that the predictor variable was a significant predictor of their efforts to prevent school bullying (t = 5.95, p < .001); the unstandardised

coefficient b of the predictor variable was .496, while *beta* was .554, *p* < .001, and made a significant contribution to the model.

DISCUSSION

The current study revealed that teachers' perceptions of the effectiveness of the OBPP at the school, classroom and individual levels were different and that their practices within the programmes were also different. Thus, *Hypothesis* 1 that there are significant differences between teachers' perceptions of the effectiveness of an anti-bullying programme and their practices within the programme has been confirmed. Teachers perceived the components of the individual level of the OBPP as the most effective and put in the most effort at this level as well. Consequently, it could be stated that teachers regarded their responsibility in dealing with individual bullying incidents as the most important, where they needed to uncover, intervene, stop, and follow up on bullying cases in school. Consistent with previous studies (Bauman et al., 2008), the results of the current study show that the majority of teachers were willing to immediately intervene and stop a bullying incident.

Teachers perceived the components at the school level of the OBPP as the least effective. Thus, on the basis of the study results, it may be assumed that the OBPP components, where teachers needed to collaborate and share their responsibility, have been perceived as the least effective. The current teachers' perception contradicted the findings of the meta-analysis, done by Gaffney et al. (2021), that an anti-bullying policy was significantly correlated with larger mean effect sizes for bullying perpetration outcomes in schools.

Several studies (Gaffney et al., 2021, 2019a, b; Olweus & Limber, 2010; Ttofi & Farrington, 2011) confirmed the importance of classroom-level components for reducing bullying rates at school. However, the current study revealed that teachers put the least effort in at the classroom level of the OBPP. This result might be explained by the assumption that being an authoritative teacher requires a high level of professional skills in classroom management, in establishment and coherent adherence to the classroom rules, in holding class meetings, where bullying issues are discussed with pupils, and the social emotional skills of pupils are fostered. Moreover, in the class meetings, teachers should also actively apply Olweus rules against bullying, and the Olweus bullying circle.

The results of the current study indicated higher means of teachers' practices within the OBPP than their perceptions of the effectiveness of the OBPP.

Nevertheless, the results of the current study allow the drawing of a parallel between teacher practices and their perception of the effectiveness of the OBPP. Teachers put the most effort into the components of the OBPP which they regarded as the most effective.

Further, the results of the current study partly supported *Hypothesis* 2. Generally, the primary education teachers were more active in school bullying prevention within the OBPP than the lower secondary education teachers. Specifically, the primary education teachers put more effort in compared to the lower secondary education teachers at the classroom level. Moreover, the primary education teachers put more effort into organising Olweus class meetings than the lower secondary education teachers. No studies were found to support or reject those findings; however, it could be assumed that primary education teachers spend much more time together with pupils and are more focused on social emotional learning, while lower secondary education teachers are more focused on subject teaching and share responsibility with other teachers to secure the development of a positive learning environment in the classroom. Yet, the primary education and the lower secondary education teachers perceived the effectiveness of the OBPP similarly and there was no indication of any significant difference in score.

Several studies (cf., Bauman et al., 2008; Boulton, 1997; Burger et al., 2015; Yoon et al., 2011) reported that female teachers were more likely than male teachers to prevent and intervene in bullying incidents. However, the current study revealed a significant difference in bullying prevention and the teachers' gender only in the two components of the OBPP: female teachers were more active in organising Olweus class meetings at the classroom level and following up bullying cases at the individual level in comparison to the male teachers. No difference in bullying prevention in general and the teachers' gender was revealed, but the female teachers perceived the effectiveness of the OBPP more positively than the male teachers. Thus, it could be stated that the results of the current study only partially supported *Hypothesis* 3.

Next, the findings of the previous studies about the teachers' efforts to prevent bullying and their age or duration of teaching experience are rather controversial. Borg and Falzon (1990) revealed that teachers with longer teaching experience tended to be more tolerant of misbehaviour, whereas Burger et al. (2015) reported that teachers aged approximately 45 to 50 (with more than 25 years of teaching experience) were more likely to work with pupils involved in bullying. The results of current study did not indicate any differences in

teachers' practices within the OBPP at the school, classroom and individual levels for the four age groups. Yet, significant differences in teachers' perceptions of the effectiveness in participation in the staff meetings, in participation in adults' supervision, and in the development of holistic strategy and following the procedures/routines components of the school level of the OBPP for the four groups of teachers' age have been obtained. Specifically, teachers from 55 to 64 years of age had a higher level of the perception of the effectiveness of those three components of the OBPP at the school level than teachers aged 45 to 54. In addition, teachers from 55 to 64 years of age perceived the participation in the staff meetings component as more effective than teachers younger than 34 years. The current study indicated only one significant difference in the teachers' practice to implement and follow class rules component for three groups of teachers' teaching experience. Teachers with teaching experience between 11 and 25 years put more effort into implementing and following class rules than teachers with 10 years of the teaching experience or less. Thus, *Hypothesis* 4, that teachers with longer teaching experience put more effort into school bullying prevention and have a more positive perception of the effectiveness of an anti-bullying programme compared to teachers with shorter teaching experience, was also only partly supported.

Finally, *Hypothesis* 5 assumed that higher levels of the teachers' perceived effectiveness of an anti-bullying programme were positively associated with more anti-bullying efforts within the programme. The current study confirmed that the more effective the teachers perceived the OBPP, the higher were the standards of the practices of the teachers within the OBPP. Thus, *Hypothesis* 5 has been supported. However, the results did not make it possible to draw causal inferences. Nevertheless, the current study supported results from the previous studies (cf., Biggs et al., 2008; Kallestad & Olweus, 2003) that teachers' perceptions of an anti-bullying programme shape their adherence to the programme and contributed to the research in bullying issues, by taking a step further in the process of understanding the relationship between teachers' perceptions of the effectiveness of an anti-bullying programme and their practices to prevent and intervene against bullying.

IMPLICATIONS

The results of the current study reveal only general trends in teachers' perceptions of the effectiveness of the OBPP and their practices within the OBPP at the

school, classroom and individual levels. However, the current study has some limitations. Firstly, only the teacher self-reports were used as the data source in the current cross-sectional study. Secondly, since the response rate of the current study was only 29.5 %, the representativeness of the population (i.e., teachers in Olweus schools) is questionable. Thirdly, the effect size was small or modest in the current study. Therefore, extended research into other potentially significant individual as well as contextual factors obtained through both quantitative and qualitative research methods would possibly provide a deeper understanding of teachers' perceptions of the effectiveness of an anti-bullying programme and their efforts to prevent bullying.

Despite these methodological limitations, this study contributes to the literature to address issues related to bullying prevention in schools and confirms a crucial role of the teacher in preventing and reducing bullying in schools as well as securing pupils' safety in schools. This study takes a step further in the process of understanding the relationship between teachers' perceptions of the effectiveness of an anti-bullying programme and their efforts to prevent bullying. Finally, the current study promotes the need for teachers' collaborative efforts to prevent bullying in order to ensure pupils' psychological and physical well-being at school.

Declaration of interest statement

The author reports no conflicts of interest and has no relevant financial or non-financial interests to disclose.

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