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FUSE anti-bullying and online safety programme: measuring self-efficacy amongst post-primary students

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ABSTRACT

'FUSE' is an anti-bullying and online safety programme developed to support schools in complying with the Action Plan Procedures (2013). Between 2019 and 2022, 56% of all Post-Primary Schools in Ireland registered for the programme. FUSE is designed to address two key concerns, (a) students tend not to report bullying, and (b) students are increasingly facing online risks. FUSE aims to increase student's self-efficacy to recognise and report bullying behaviour and online harms safely. The programme is informed by Latané and Darley's bystander intervention model which outlines five sequential steps that an individual needs to follow in order to take action. This paper reports on the implementation of FUSE in Post Primary Schools in Ireland, justifying its theoretical base and model, and conveying the results of an empirical study conducted amongst a sample of 1254 Post Primary students (14–15 years of age) in 41 schools upon completion of the programme. Upon completion of the programme students reported high levels of self-efficacy in relation to noticing, responding and willingness to report. Future research will implement a pre- and post-study design to draw firmer conclusions regarding the effectiveness of the intervention.

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FUSE; self-efficacy; bullying; online safety; intervention programmes

Introduction and context

For almost 50 years, scholars, policy makers, and educators have continuously sought to define and address school bullying. Concerns about bullying in schools are justified when we consider that the number of children and young people who are targeted in Ireland has been found to be 17% of 9–17 year olds, rising to 22% of 13–14 year olds (National Advisory Council on Online Safety [NACOS] 2021). With a European mean of 25% of school children being targeted, data from the UK is even more concerning with 32% in England, 34% in Scotland, and 41% of 9–10-year olds reporting being bullied in Northern Ireland (UNESCO 2019). Furthermore, research shows that identity is a key factor to being targeted. Both at a global level and in Europe, physical appearance is the number

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one predictor of being targeted for bullying. In Europe, 25% of those who were bullied said they were targeted based on their physical appearance, 8.2% said they were bullied because of their race, nationality or colour of their skin, and 3.6% reported that they were bullied because of their religion (UNESCO 2019). The consequence of being targeted for bullying or being a perpetrator of bullying can have a significant negative impact on an individual's wellbeing (Foody, Samara, and O'Higgins Norman 2017; Kim et al. 2018; Przybylski and Bowes 2017). Being a target of peer bullying has been associated with anxiety, depression, psychosis, lower self-esteem, borderline personality disorder, and even suicide across all age groups (Fisher et al. 2013; Kelleher et al. 2013; Patchin and Hinduja 2010; Winsper et al. 2017; Wolke et al. 2013). In addition, lower academic achievement and early school leaving are recognised outcomes of bullying (Cornell et al. 2013; Hammig and Jozkowski 2013), and the impact has been shown to be long lasting (Takizawa, Maughan, and Arseneault 2014). On the other hand, engaging in bullying behaviour does not come without its cost, as it is associated with mental health problems, depression, attention-deficit disorder, and oppositional conduct disorder, as well as excessive alcohol consumption and higher levels of criminality as adults (Smokowski and Kopasz 2005).

Most school-based programmes have been designed on the understanding that bullying behaviour is characterised by *intentionality*, *negative acts*, *power imbalance* and some form of *repetition* (or threat of repetition) (Olweus 1978), and these programmes have primarily focused on trying to reduce the prevalence of this type of behaviour. A recent analysis into the effectiveness of many of these programmes found that some component elements within an overall anti-bullying initiative are significantly associated with reductions in the number of children engaged in bullying behaviour and/or being targeted. Specifically, the inclusion of curriculum materials and informal peer involvement were correlated with less bullying and targeting of children in schools. Furthermore, there was a more significant correlation between reduced bullying behaviour where punitive approaches were avoided and anti-bullying programmes included a whole-school approach, classroom rules, information for parents, formal peer involvement, and cooperative group work (Gaffney, Ttofi, and Farrington 2021).

However, despite a diverse range of initiatives to address bullying in schools, and more recently online, research on anti-bullying initiatives across several countries shows that the typical reduction in school-bullying perpetration that can be achieved is approximately 19–20% and school-bullying victimisation by approximately 15–16% (Gaffney et al. 2019). This leaves us wondering if there is a need to reconsider how we approach tackling bullying in schools and online. Most recently, it has been argued that one significant change that is needed in this space is a fundamental move from a whole-school to a whole-education approach to tackling school bullying, including cyberbullying (Cornu et al. 2022). While whole-school approaches have been relied upon in policy and procedures for several decades, it is now argued that this approach puts too much responsibility on individual schools to tackle bullying from within their own resources without support from wider education systems and stakeholders across society. O'Higgins Norman et al. (2022) argue that 'initiatives to tackle bullying need to recognise the interconnectedness of the school with the wider community including education, technological and societal systems. As such, a broader whole-education approach is needed to really tackle bullying in schools. Furthermore, given

the dynamic nature of school populations and the wider context in which they operate, it seems that regardless of which anti-bullying initiative that is employed there will continue to be an aptitude for bullying in most schools, and as such there is a case for an anti-bullying programme that focuses on self-efficacy among students in addition to reducing bullying behaviour.

The initiative that is described in this paper was developed as a response to the stated needs of school principals in Ireland with just 42% of them reporting that they had managed to identify and implement a suitable anti-bullying programme and only 51% had fulfilled the obligation in the Government's Action Plan on Bullying (Department of Education and Skills [DES] 2013a) to appoint a specific 'relevant teacher' to take responsibility for investigating and managing cases of bullying in their school (Murphy, Downes, and O'Higgins Norman 2017). Furthermore, research continuously shows that of those who experienced bullying and cyberbullying, a relatively low number reported this to an adult (Foody et al. 2018; NACOS 2021; O'Moore 2010; O'Moore and Minton 2005). So clearly there was a need to develop an anti-bullying and online safety programme for schools that was easy to implement and to build capacity among school staff, parents, and students to notice, respond, and report their experiences. Furthermore, international research findings recommend that the most effective anti-bullying programmes are those that are designed for the country in which they are implemented (Gaffney et al. 2019), and that one of the most effective features of any intervention programme is the inclusion of the topics of bullying, cyberbullying, and online safety within the school's curriculum rather than outside of it (Gaffney et al. 2019). As such, the initiative described in this paper was designed to be delivered with ease by teachers within the wider school curriculum as part of a whole-education approach to bullying and online safety.

Fundamentally, this initiative reconsidered and re-orientated the established approach to tackling bullying in schools by shifting its emphasis from a concern with reducing prevalence to increasing the ability of students to recognise, respond to and report safely bullying and online safety issues.

FUSE, theoretical base

In considering that students tend not to report and coupled with the medium and long-term risks of bullying and online harm, the research team focused on developing a programme that aimed to mobilise students to be able to recognise, respond to, and safely report bullying and online safety issues. FUSE was informed by an Anti-Bullying Self-Efficacy Theory (Sargioti et al. 2022), a social-ecological framework designed to promote victims and bystanders' anti-bullying self-efficacy beliefs. The theory is a synthesis of the Participant Role Approach (Salmivalli et al. 1996) and Bystander Intervention Model (Latané & Darley 1970). Latané and Darley's original research sought to understand why bystanders may not intervene in emergency situations. The authors based their investigation on a case where a woman called Kitty Genovese was attacked in a public street in a residential section of New York City in March of 1964. The event was believed at the time to be witnessed by approximately thirty-eight neighbours who did not stop or report the attack as each of them presumed that someone else would do so. Latané and Darley (1970) posed the following question 'What determines in a

Table 1. Bystander Intervention Model by Latané and Darley (1970).

Step	Description
Noticing	Perception or awareness of an event
Emergency	Evaluation of the extent to which the event is serious and the type of help that is required
Responsibility	Acceptance of personal responsibility to do something
Knowing	Knowledge/skills to appropriately determine specific actions required
Intervening	Practical action when necessary

particular situation whether one person will help another? To answer this question, they designed a series of experiments and concluded that there is a series of five sequential steps (see Table 1) that, if not fulfilled or resolved in a sequential manner, block or distort the probability of a successful intervention by bystanders.

The model has been successfully adapted for use in different health and educational campaigns such as in relation to drink driving (Rabow et al. 1990), to help overcome the barriers to bystander intervention in at-risk situations for sexual assault (Burn 2009), in cases of sexual bullying and harassment (Knauf, Eschenbeck, and Hock 2018; Nickerson et al. 2014), and to assist refugees (Albayrak-Aydemir and Gleibs 2021). Consequently, the researchers on this project wanted to see if the synthesis of this 5-step model and the Participant Role Approach (Salmivalli et al. 1996; i.e. the Anti-Bullying Self-Efficacy Theory (Sargioti et al. 2022) could be used as a basis to improve students' self-reported levels of self-efficacy in relation to intervening in bullying and online harm. According to Latané and Darley, understanding an event as an emergency tends to provoke a quicker response from bystanders (Sargioti et al. 2022). In other words, if we were to perceive a negative action in the same way as we would perceive a burning house, we will be more likely to take a positive action to address the situation. However, Latané and Darley (1970) did not restrict events that require this type of immediate and decisive response to critical situations such as burning houses. Other situations can also be conceptualised as 'emergencies' such as bullying and online safety risks. To conceptualise bullying as an emergency situation it needs to be understood by the bystanders that the act of bullying is unacceptable and requests a timely and knowledgeable response. The word emergency, however, can give the impression that bullying is an aggressive single event, rather than a socio-relational problem and carries connotations of stress, risk, success, or failure. Therefore, due to the restrictive connotations that the word 'emergency' suggests, for the purposes of FUSE we replaced it with more meaningful alternative terms such as: 'the importance of the event' or 'an event that should not be ignored' (DCU Anti-Bullying Centre 2020).

At the centre of Latané and Darley's (1970) model and the Participant Role Approach (Salmivalli et al. 1996) is the figure of the bystander who may or may not take action when faced with bullying behaviour against someone else. More recent research indicates that when young people observe bullying, they are more likely to take action to help the target if they are older and previously informed about what supports are available to help. Findings show that if a young person has learned to recognise that they themselves have been previously bullied, then they are more likely to intervene with females more likely to take action than males (Chapin and Brayack 2016; Jenkins and Nickerson 2019). However, other research specifically on cyberbullying found that each step of the Bystander Intervention Model predicted the next step, but previously engaging in cyberbullying

behaviour or being a target is not strongly linked to any of those steps (Beavon et al. 2022).

Consequently, in designing our programme we understood that each step in Latané and Darley's model could be taught in an educational context to include bystanders, those who engage in bullying behaviour, and the bullying target. The key to this lies in including educational material that delves into topics such as empathy and self-reflection. As such, through this educational content, FUSE invites students to notice bullying behaviour not only in others, but in themselves (self-reflection) and it does this by primarily adopting a collaborative learning approach in which informal peer involvement is used and those who bully and those who are bullied are not directly targeted but instead are involved in discussions and other activities that promote engagement and self-reflection regardless of their actual or potential role in bullying behaviour (Gaffney, Ttofi, and Farrington 2021).

Anti-bullying self-efficacy in recognising, responding, and reporting

Traditionally, assessment of the effectiveness of school intervention programmes regarding bullying is usually focused on student self-reports with respect to the perpetration and victimisation of bullying incidents before and after a programme has been implemented (see Minton, O'Mahoney, and Conway-Walsh 2013; Gaffney et al. 2019; Gaffney, Ttofi, and Farrington 2021). It is important to highlight that FUSE does not focus on perpetration and victimisation, which are the traditional focus of anti-bullying initiatives. Instead, FUSE is designed to build a participant's confidence in their ability to tackle bullying behaviour and online harm in an efficient and knowledgeable manner. Self-efficacy is commonly defined as an individual's belief in their own ability to perform a specific behaviour in an effective way (Bandura 1977). This definition though understands self-efficacy as an individual's characteristic, and thus, disregards the social-ecological characteristics (Sargioti et al. 2022) and their potential interaction on an individual's ability or willingness to act (e.g. influences between students and their teachers, parents, peers, wider education system, technologies, and society) (Kuldas and Foody 2022; Sargioti et al. 2022). Therefore, FUSE approaches anti-bullying self-efficacy from a social-ecological approach (Kuldas and Foody 2022; Sargioti et al. 2022), according to which positive interactions between a student and their social environment can contribute to the acquisition of student self-efficacy.

Given the overarching aim of FUSE to increase self-efficacy among students, it was important that the workshops were designed to use resources and pedagogies that have been found to be effective in achieving self-efficacy among students rather than merely relying on teacher-led didactic approaches. Research shows that specific teaching strategies used in the classroom can and do make a difference to students' self-efficacy (Bandura 1977; Fencl and Scheel 2005; Margolis and McCabe 2006). Consequently, the workshops designed for this programme relied on an overall collaborative learning approach rooted in well-established sources of self-efficacy in students, i.e. mastery experiences, vicarious learning strategies, verbal persuasion, and promotion of a positive emotional and physical climate in the classroom (Bandura 1997; Usher and Pajares 2008; Gebauer et al. 2021).

Research aims

FUSE was developed as resource for Post-Primary Schools who wanted to tackle bullying and online safety among students. Although the initial research design involved a One-Group Pre-test – Post-test design, where students who had participated in the programme would complete a pre- and post-survey, issues related to GDPR and ethics as well as the shift to remote schooling during COVID-19 in 2020–2022, made it difficult in terms of resources and time to implement an experimental research design. To take account of these constraints with, the research followed a One-Group Post-test design, focusing on students' own perception of their self-efficacy upon completion of the programme. In other words, the research focused on students' perception of their belief in their capacity to recognise, respond to, and report bullying and online harms, after completing the programme.

Methods

Recruitment of schools

To recruit schools for participation in the FUSE programme, each post-primary school in Ireland listed on the official Department of Education website was invited to register for the FUSE Anti-Bullying and Online Safety Programme via post. Upon registration, each school received a 'Welcome to FUSE' letter and accompanying FUSE teacher handbook by post, providing an overview of the programme and key contact points.

Implementation of the programme

FUSE was delivered by at least one teacher in each participating school to students within second year of Junior Cycle. Over the school academic year, students participated in six workshops of 40 - 60 min in duration. The FUSE Programme was mapped to the Junior Cycle of the Social, Personal and Health Education (SPHE) Framework and was recommended for second-year students, however the curriculum mapping was not restrictive, and schools could decide at their own discretion how to use FUSE to best suit student and individual school needs.

The workshops were designed in a sequential order to follow the Anti-Bullying Self-Efficacy Theory (Sargioti et al. 2022, see [Table 2](#)).

To ensure fidelity in the delivery of the programme, an Education Coordinator provided training and guidance to participating teachers via scheduled online zoom sessions. Similarly, an Education Coordinator was available to respond to questions (if any) raised by teachers throughout delivery of the programme. In accordance with the ethical approval obtained from the research teams university, information and support were on hand for any student who may have expressed concerns or become upset as a result of participating in workshops that were focused on bullying and online harms. Informed parental consent and student assent was obtained prior to the implementation of the data collection stage of the programme. We were not advised of students (if any) withdrawing from the programme nor were we made aware of any student becoming upset as a result of participation in the programme. Post-programme completion,

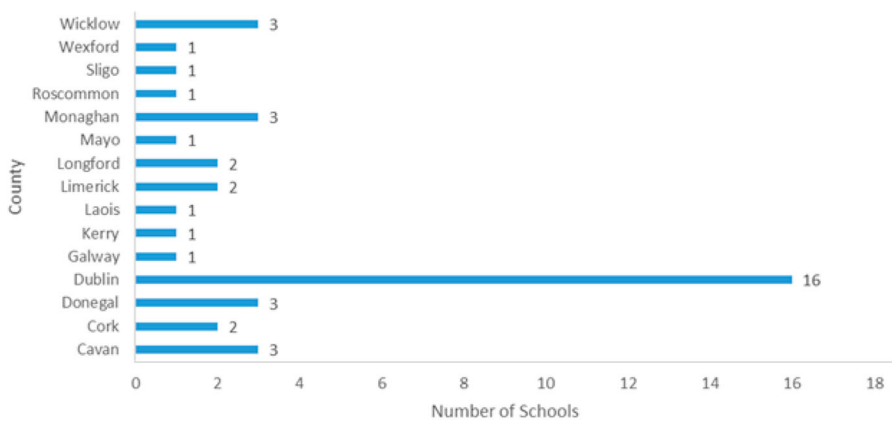
Table 2. Anti-Bullying Self-Efficacy Theory used to design FUSE.

Steps	Description	Steps Used in FUSE	Specific Workshop
Recognition	Victim/ bystander's self-efficacy in being aware of a bullying behaviour	Noticing Bullying/ Online Harm	Bullying: What it is and Who is involved
Emergency Comprehension	Victim/ bystander's self-efficacy in realising the extent to which the event is serious and help is required	Understanding Bullying/Online Harm	Preventing & Intervening in Bullying
Responsibility	Victim/ bystander's self-efficacy in accepting personal responsibility to do something	Not ignoring Bullying/ Online Harm	Empathy and Relationships
Knowledge	Victim/ bystander's self-efficacy in knowing what to do to appropriately determine specific actions	Knowing what to do about Bullying/ Online Harm	Online Safety. Social Media & Intimacy Online; Privacy and Sharing
Intervention	Victim/ bystander's self-efficacy in taking practical action when necessary	Intervening Safely on Bullying/Online Harm	Action Plan: Design Your Own Intervention

students who participated in the workshops were asked to complete an anonymous online survey (i.e. Dublin Anti-Bullying Self-Efficacy Scale, DABSE, Sargioti et al. 2022) which was designed to evaluate their perceived self-efficacy in recognising, responding to, and reporting bullying and online harms.

Participants

This research was conducted between 2020 and 2021 in 41 Post-Primary Schools (see Figure 1). The participating schools were drawn from both the public and voluntary sectors as well including schools that have been designated for the purpose of receiving additional supports related to their student's socio-economic status, in urban and rural areas. The student population in each participating school was between 25–1,000 students from single-sex and co-educational schools. However, the demographic characteristics of the participating students are not within the main objectives of the present survey, and therefore, they are excluded from the following analysis.

**Figure 1.** Distribution of schools per county.

The sample of the present study consisted of 1254 Post-Primary students aged 14–15 years, and was collected using a convenience sampling technique (Bryman 2016; Creswell 2012).

Measures

Dublin anti-Bullying self-Efficacy (DABSE) scales

Four different scales were developed (Sargioti et al. 2022) to measure students' (targets and bystanders) perception of their own self-efficacy in tackling bullying (offline and online).

Specifically, the four scales were:

- (a) Victims' self-efficacy in tackling offline bullying
- (b) Victims' self-efficacy in tackling online bullying
- (c) Bystanders' self-efficacy in tackling offline bullying
- (d) Bystanders' self-efficacy in tackling online bullying

All four scales consisted of 20 items each, each measuring students' self-efficacy in dealing with bullying incidents both offline and online as either a victim or bystander of bullying. In each case (i.e. victim offline, victim online, bystander offline, bystander online), students' self-efficacy was measured in four dimensions/steps: (a) recognising bullying behaviours (4 items; e.g. 'The FUSE programme has increased my confidence in my ability to notice if I am bullied in person'), (b) understanding an emergency (4 items; e.g. 'The FUSE programme has increased my confidence in my ability to see the need for urgent help if I am bullied online'), (c) taking personal responsibility to take action (4 items; e.g. 'The FUSE programme has increased my confidence in my ability to take responsibility for asking for help if someone else is bullied in person'), (d) knowing how to take action (4 items; e.g. 'The FUSE programme has increased my confidence in my ability to know where to report if someone else is bullied online'), and (e) intervening (4 items; e.g. 'The FUSE programme has increased my confidence in my ability to report if I am bullied online') in a bullying incident. Students were asked to rate how confident they felt in dealing with bullying offline and online using a six-point scale (from 0 = not confident at all to 5 = very confident). A six-point scale was used for the following reasons: (a) larger number of points and an even-numbered response format are more likely to improve the psychometric characteristics of the scale and increase internal consistency which results in higher reliability (Kuldas 2018; Oaster 1989); (b) an odd-numbered response, including a middle (neutral) point is likely to mislead students' response behaviour (Kuldas 2018); (c) research has shown that a scale of six options displays a more ideal model fit of the data than smaller-point scales (Kuldas 2018). At the same time, the presentation of the scale was done following the recommendation by Kuldas (2018), providing a graphical representation of the six points in a row of six batteries, progressively changing their charge level (from 5 = fully charged to 0 = no charge). Graphical representations of the scales have been shown to be simpler and more comprehensible by children and adolescents (Kuldas 2018). The development and test of the four measurement scales are a separate part of this wider study and focuses on ensuring their content, face and construct validity. The four scales indicated originally sufficient psychometric evidence (Sargioti et al.

2022; readers who are interested in the scale items and their psychometric properties are recommended to read the relevant paper). In the present study, reliability of each dimension for all four scales was calculated with Cronbach's alpha coefficient, which indicated high reliability ($\alpha > .90$) for all the subscales.

Online safety self-efficacy

Another 23-item scale developed by the authors was used to measure students' self-efficacy in their knowledge on how to deal with specific online issues about privacy and security on a six-point scale (from 0 = not confident at all to 5 = very confident). An Exploratory Factor Analysis (EFA – Principal Axis Factoring with Promax Oblique rotation method) indicated a unidimensional scale of 23 items with adequate KMO measure = .98 ($p < .000$), explaining 70.23% of the total variance. The reliability of the scale was also calculated using Cronbach's alpha coefficient, indicating high reliability ($\alpha = .98$).

Data analyses

The present study does not aim to test the difference before and after the implementation of the programme, rather we were interested in students' perceived self-efficacy in dealing with offline/online bullying incidents either as victims or bystanders. Therefore, the survey questions asked students to rate their beliefs in their ability to tackle bullying after participating in the programme. For this objective, the analysis used for the interpretation of the results aimed at distinguishing students' perceived self-efficacy either as low or as high. In this regard, the Item Response Theory (IRT) and the Test Characteristic Curves (TCCs) of each factor of the scales were the most appropriate for the analysis (Baker 2001).

All the analyses were conducted using R programming language and the IBM SPSS v.27 statistical software. The Two-Parameter-Logistic (2PL) Model of Item Response Theory (IRT) was applied, using the ltm package in R (Rizopoulos 2006). The Test Characteristic Curves (TCCs) were used to allow for the estimation whether each subscale of the four scales has the discriminating ability (cut-off points) for determining students' self-efficacy (Baker 2001).

After that, for each dimension in the Dublin Anti-Bullying Self-Efficacy Scales, the mean of its items was calculated and based on the cut-off points indicated by the 2PL model of IRT, students' low or high self-efficacy was estimated. The online safety items were loaded in one factor (based on an Exploratory Factor Analysis, see above), and therefore, they were analysed separately.

Results

The TCCs indicated a cut-off point of almost 4 out of 4 as a true score, which means that students reporting being self-efficacious in at least four items results in high self-efficacy. Values below this cut-off point indicate low self-efficacy. Since the items of each subscale were dichotomised (taking values of 0 and 1), a true sum score of 4 or a mean of 1 indicates high self-efficacy. Mean scores less than 1 indicate low self-efficacy.

Table 3 displays the levels of students' self-efficacy in bullying offline and online as both victims and bystanders across the five steps of the Bystander Intervention Model.

Table 3. Percentages of Victims and Bystanders' Self-Efficacy in Bullying Offline and Online ($N = 1254$).

	Victims				Bystanders			
	Offline		Online		Offline		Online	
	Low self-efficacy (%)	High self-efficacy (%)	Low self-efficacy (%)	High self-efficacy (%)	Low self-efficacy (%)	High self-efficacy (%)	Low self-efficacy (%)	High self-efficacy (%)
Recognition	26.6	73.4	29.5	70.5	25.9	74.1	35.4	64.6
Emergency Comprehension	28.7	71.3	31.1	68.9	43.2	56.8	50.0	50.0
Responsibility	28.5	71.5	30.5	69.5	28.1	71.9	31.0	69.0
Knowledge	25.2	74.8	26.8	73.2	26.1	73.9	29.9	70.1
Intervention	27.4	72.6	29.7	70.3	27.0	73.0	46.1	53.9

The results indicated that students who participated in FUSE presented mainly high self-efficacy to tackle bullying offline and online either in cases of victimisation or when witnessing an incident.

In the first step (*recognition*), 73.4% of students reported that after having completed the programme they were more confident in noticing and recognising if they were bullied offline, 70.5% of students were more confident in noticing and recognising if they were bullying victims online, 74.1% of students were more confident in noticing and recognising if someone else was bullied offline, and 64.6% of students were more confident in noticing and recognising if they witnessed someone being bullied online.

In the second step (*emergency comprehension*), 71.3% of student responses indicated a high level of confidence in their ability to recognise that it was an urgent situation requiring action if they were victims of bullying offline, 68.9% if they were targeted online, and 56.8% if having witnessed bullying offline. However, only the 50% of students had the self-efficacy to consider it important to intervene when someone else was bullied online.

In the third step (*responsibility*), 71.5% of students presented high self-efficacy to accept personal responsibility when they were victimised offline, 69.5% when they were victimised online, 71.9% when someone else was bullied offline, and 69% when someone else was bullied online.

In the fourth step (*knowledge*), 74.8% of students were more confident that they knew what to do if they were victims of offline bullying, while 73.2% of students were more confident that they knew what to do if they were victims of online bullying. When witnessing a bullying incident, 73.9% of students were more confident that they knew what to do if they witnessed bullying offline and 70.1% of students were more confident that they knew what to do if they witnessed bullying online.

In the fifth step (*intervention*), 72.6% of students who participated in FUSE were confident in their ability to report if they were the victims of offline bullying, 70.3% if they were the victims of online bullying, 73% of students were confident in their ability to report if they witnessed someone else being bullied offline, and 53.9% were confident in their ability to report online bullying as bystanders.

Regarding the online safety items, the 2PL model of IRT indicated a cut-off score of 2, which means students who rated their self-efficacy between 0 and 2 indicated low self-efficacy and those rating between 3 and 5 indicated high self-efficacy.

Table 4 demonstrates students' self-efficacy rates in their knowledge on the specific issues of online safety issues, which is evidenced to be high.

Table 4. Percentages of students' self-efficacy in their knowledge of online safety issues ($N = 1254$).

	Low self-efficacy (%)	High self-efficacy (%)
I feel confident in my ability to know ...		
... what videos I should not post online	10.0	90.0
... when an online profile is fake	18.3	81.7
... what pictures I should not post online	11.9	88.1
... how to respect others online	10.3	89.7
... how to keep my password safe	14.3	85.7
... what sexting is	15.1	84.9
... who not to share my password with	11.2	88.8
... when someone is sexting me	16.1	83.9
... who not to trust online	12.2	87.8
... who to tell when something bothers me online	13.7	86.3
... what information (e.g. my password, picture, video, or location) about me I should not share online	11.5	88.5
... how to use my social media safely	10.7	89.3
... when sexting happens	17.9	82.1
... who I have to talk when I feel uncomfortable online	14.1	85.9
... it is dangerous to meet in person someone I met online	11.0	89.0
... when someone pretends to be someone else online	12.7	87.3
... when sharing an online post can negatively affect others	11.4	88.6
... when I try to convince someone into sexting	21.4	78.6
... what upsets me online	13.1	86.9
... who I am following online	12.5	87.5
... I should not harm others online	10.2	89.8
... who to ask for help to use my social media profile	14.0	86.0
... when someone does not want his/her picture to be posted online	11.0	89.8

Discussion

FUSE is an initiative that is delivered within the school community and adopts a whole-education approach to bullying and online safety. It aims at empowering students' confidence in their ability to tackle bullying behaviour and online harm embracing the steps that can efficiently lead to intervention. Therefore, the main purpose of the present study was to investigate students' perceived self-efficacy in dealing with offline and online bullying incidents and online harms either as a victim or bystander across the five sequential steps of the Anti-Bullying Self-Efficacy Theory (Sargioti et al. 2022) after the implementation of the FUSE programme.

According to Sargioti and colleagues (2022), a person only pays selective attention to their environment and lacks the ability to recognise events if they are not specifically pointed out to them. This aligns with Ging and O'Higgins Norman (2016) and O'Moore (2010) observation that one of the reasons 'to not report' lies in the inability of students to recognise what bullying is or how it is manifested. It has been evidenced that anti-bullying programmes have a positive impact on students' awareness of bullying incidents (Amse 2014), allowing them to report. To this end, FUSE includes two workshops to educate students on the different expressions of bullying and cyberbullying and the varying forms in which bullying incidents are manifested. The results of the present study show that both victims and bystanders who have attended FUSE present high levels of self-efficacy to notice and recognise different bullying indications in both the offline and online environment.

Once the bullying event is noticed, the individual should decide, without ambiguity, whether the event is an emergency or not (Sargioti et al. 2022; Nickerson et al. 2014).

One of the workshops emphasises the idea of bullying as unwanted behaviour and highlights the importance of not ignoring the event. Students that have engaged with FUSE, generally present high self-efficacy in understanding the severity of an unwanted behaviour when they are victimised either offline or online. Overall, these results illustrate that FUSE contributes to educating students in understanding that bullying is unwanted behaviour and this is a significant improvement when compared with decades ago when bullying was seen as normal behaviour (O'Moore 2010). However, the rates of perceived self-efficacy in understanding an emergent situation drop when an individual witnesses a bullying incident both offline and online. This tendency of not realising the inconvenience caused to a victim during offline/online bullying incidents may increase bystanders' decision not to intervene (Wachs et al. 2018).

Contrary to egalitarian ideas, the majority of people do consider whether a person 'deserves help', or if the person's safety and integrity is our responsibility (Latané and Darley 1970, 33; Sargioti et al. 2022). The lack of feeling of personal responsibility to intervene in a bullying situation (offline and online) and help the victim explains in many cases the passive behaviour of a person, especially a bystander (Wachs et al. 2018). To cope with this absence, FUSE introduces another workshop which focuses on empathy and relationships, therefore educating students on empathy and solidarity with other individuals, highlighting the importance of someone's personal responsibility to put an end to bullying. The results of the present study highlighted that after participating in the programme, students perceive themselves as more confident to take personal responsibility to intervene and stop an unwanted behaviour.

Identifying the proper ways to deal with bullying incidents is as important a component as noticing that they exist. The individual though might demonstrate a lack of skills that are crucial in allowing them to intervene in a bullying situation (Wachs et al. 2018), resulting in their decision not to take action (Sargioti et al. 2022). However, anti-bullying programmes that are focused on enhancing students' knowledge and skills in dealing with (cyber)bullying incidents may positively impact their actual behaviour (Salimi et al. 2021). For this purpose, FUSE incorporates a workshop (in the form of Action Plan) that is dedicated to encouraging students to think in terms of reporting and therefore to create their own reporting mechanisms as a way to inform their knowledge on what to do when bullying occurs. Being consistent with previous research on anti-bullying programmes (Amse 2014; Slee and Mohyla 2007), the present study revealed a positive impact on students' beliefs in their knowledge regarding necessary ways to stop oneself or others being bullied offline and/or online. As cyberbullying is only one of the online risks (categorised as content risks) that adolescents may face when using social media and the Internet (Livingstone 2019), the FUSE programme attempts to raise awareness and enhance students' knowledge of online safety issues. Therefore, two further workshops on the topics of social media and intimacy online as well as privacy and sharing content and images online are offered. These workshops mostly focus on noticing and knowing what to do, covering a range of topics such as screen time, sexting, phishing, hacking, ransomware, and impersonation. The results of the present research indicated that students' confidence in their ability to understand and know what to do when experiencing online risks was at a high level after the implementation of the programme.

The final step of the Bystander Intervention Model is intervention (Sargioti et al. 2022). When participants go through each one of the preceding steps, they are more

likely to intervene (Sargioti et al. 2022), resulting in higher rates of reporting (cyber)bullying incidents to a teacher or a trusted adult. As a key aim of FUSE is to empower and enhance students' confidence in their ability to report, findings of the current research are in line with previous research on anti-bullying programmes, revealing a high level of students' self-efficacy in intervening (Amse 2014; Andreou, Didaskalou, and Vlachou 2007), which can impact their willingness to intervene (Wachs et al. 2018). The only area that students had lower levels of self-efficacy was in relation to online bullying, especially as a bystander. This might be the case when individuals need to complete time-consuming and complicated forms on each specific social media platform, inhibiting their free will and autonomy in reporting.

Limitations and further research

The present study is not free of limitations. First, as the study aimed at implementing the workshops and giving some primary results on the rationale of testing students' self-efficacy as an indicator of the effectiveness of the programme following a model of five steps, the study sample was selected using the convenience sampling technique, and therefore, the findings cannot be generalised to the overall population. A probabilistic sampling technique is designed for the continuation of this research in order to reach generalisable results.

Second, this study was limited in that it was not able to use an experimental research design, measuring students' self-efficacy before and after participating in the programme. This initiative would have allowed us to compare the impact of the programme on their self-efficacy for tackling bullying and online harms. However, we were able to measure the students' own perception of the impact of the programme. Following the appropriate analysis techniques, levels of their self-efficacy (low and high) were easily distinguishable and overall, the findings were very positive. In light of these findings, future research will need to involve the creation of pre and post surveys to evidence whether implementing FUSE contributes to increasing student's self-efficacy in tackling bullying behaviour and online harms.

Finally, the present research focused on measuring students' self-efficacy as their perceived capability to deal with bullying incidents (as a sequence of the five steps) rather than their intention to intervene or their actual ability and tendency to intervene. In line with this, future research is recommended to measure students' intention to intervene and their actual ability to do so as well as rates of bullying and cyberbullying as an outcome of their self-efficacy and/or intention/ability to act.

Conclusion

Previous research highlighted that schools need to be supported in developing adequate responses to tackle bullying and promote online safety among children and young people (Foody et al. 2018). Therefore, FUSE was established to support schools to comply with the goals of the Government Anti-Bullying Procedures for Primary and Post-Primary Schools (DES 2013b), and to create educational curricula to increase students' confidence in their ability to recognise, respond to, and report bullying and online harms safely. FUSE's rationale has been designed as a response to address two key concerns, the persistent tendency among students not to report bullying incidents (Foody et al. 2018; Ging

and O'Higgins Norman 2016; O'Moore 2010; O'Moore and Minton 2005) and the concern that exists among parents and school staff in relation to online risks and the relationship between cyberbullying and risky online behaviour (O'Higgins Norman 2020). In order to address these concerns, FUSE is informed by Sargioti and colleagues' (2022) Anti-Bullying Self-Efficacy Theory. For FUSE, the novelty lies in the fact that the model has been modified and adapted to inform a prevention and intervention programme to increase the self-efficacy of students in their own perception of their ability to tackle bullying and online safety. The results of the Dublin Anti-Bullying Self-Efficacy Scale (DABSE) evidenced, that overall, students who participated and engaged in the FUSE programme both recognised and demonstrated adequate levels of confidence in their ability to recognise all forms of bullying, to know never to ignore bullying when it occurs, to self-reflect, assess and take responsibility when bullying behaviours occur. Similarly, students recognised and demonstrated their self-efficacy in knowing what to do in cases of bullying and online harm, and how to safely intervene in bullying and cyberbullying situations, both as victims and bystanders. However, despite the high levels of students perceived self-efficacy in recognising, responding to, and reporting offline and online bullying and online harms, they presented low self-efficacy in recognising the emergency of an unwanted online behaviour as bystanders. Although the main objective of FUSE is to empower students to report bullying, there are weaknesses among students self-efficacy in reporting especially when facing or witnessing an online unwanted behaviour. To address this issue, future iterations of the FUSE programme will need to put an emphasis on educating students in all aspects of witnessing bullying online and the importance of taking action.

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