Empathic Efficacy and Cyberbullying Defending: Exploring the Influence of Cyberbullying Victimisation and Moral Disengagement

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Summary

Empathy and moral disengagement have been researched as protective and enabling factors, respectively, for face-to-face bullying and cyberbullying. These factors have been mostly researched in isolation; however, there is a need to understand the interactions between these two variables across different contexts of bullying and participant roles and to fully understand how empathy and moral disengagement are implicated in bullying episodes. To investigate this issue, this thesis comprises two parts: a literature review and an empirical paper[1]. The literature review describes how empathy and moral disengagement are associated with different participant roles in face-to-face bullying and cyberbullying. The empirical paper presents a study in which 540 grade 7 and grade 9 students answered a questionnaire about their experiences in different cyberbullying roles (perpetrator, victim and defender), and their empathic efficacy and moral disengagement. The results showed that empathic efficacy and cyberbullying victimisation were positively associated with cyberbullying defending. Additionally, cyberbullying victimisation moderated the effects of empathic efficacy on cyberbullying defending; specifically, empathic efficacy was positively associated with cyber defending at all levels of cyberbullying victimisation, and this association was stronger at higher levels of cyberbullying victimisation. Together, the two components of this thesis suggest there needs to be more research on the interactions between factors associated with cyberbullying defending and that training to enhance empathic efficacy should be included in intervention programs to increase cyberbullying defending.

[1] This thesis is presented as a non-traditional research thesis by publication format as outlined by Macquarie University Higher Degree Research Unit. This format necessitates the preparation of papers which may be submitted for publication. This structure necessitates some repetition between papers.

Certification by Candidate

I certify that the work found within this thesis is all my own and has not been submitted for a higher degree to any other university or institution. All empirical research presented within this thesis was approved by the Human Research Ethics Committee of Macquarie University (reference number: 5201401142).

Yee Wah Li
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A Review of the Literature on Empathy and Moral Disengagement Among Participant Roles in Face-to-Face Bullying and Cyberbullying

Abstract

Face-to-face bullying and cyberbullying are group processes, and therefore research should examine the various participant roles in the different contexts of both modes of bullying. Specifically, empathy and moral disengagement have been researched as protective and enabling factors, respectively, for face-to-face bullying and cyberbullying, and therefore the association with various participant roles in different contexts needs to be examined. The characteristics of cyberspace particularly may influence how these factors are associated with different participant roles. This paper reviews the literature on empathy and moral disengagement and their association with the various participant roles (perpetrator, victim and defender) in face-to-face bullying and cyberbullying. It further describes how some features of online communication influence the process of empathy and moral disengagement. This review concludes by discussing the importance of considering the interaction between factors associated with face-to-face bullying and cyberbullying in further research.

A Review of the Literature on Empathy and Moral Disengagement Among Participant Roles in Face-to-Face Bullying and Cyberbullying

Face-to-face bullying and cyberbullying are unwanted aggressive behaviour; both are defined as a repetitive and intentional act with harm inflicted by a perpetrator towards a victim, and there some level of power imbalance between the perpetrator and victim, with victims usually unable to defend themselves (Olweus, 1993); and in the case of cyberbullying, it is done using various electronic devices, online platforms and applications (Keith & Martin, 2005; Kowalski & Limber, 2007; Patchin & Hinduja, 2006; Slonje & Smith, 2008). Meanwhile, Tokunaga (2010) defined cyberbullying as "any behaviour performed through electronic or media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others" (p.278).

There are opinions that cyberbullying and face-to-face bullying are the same phenomenon (e.g. Li, 2007). Hertz and David-Ferdon (2011) posit that face-to-face bullying is an age-old problem, and the internet has risen to make such bullying more convenient. Although there are some similarities between face-to-face bullying and cyberbullying, both conceptually and empirically, differences between these two types of bullying have also been identified (Smith et al., 2008). Other authors have suggested that factors associated with bullying may be influenced by the conditions in cyberspace, for example, the lack of socio-emotional cues in cyberspace could also contribute to the difference in how individuals communicate and process information online compared to the face-to-face context (Runions & Bak, 2015). In the study by Runions, Shapka, Dooley, and Modecki (2013), it was found that the functions of Information Processing Technology (ICT) may affect how information is processed online and subsequently affect cyberbullying behaviours differently than for face-face bullying.

There are potential differences in terms of how the core aspects of the definition (i.e. repetition, intentionality to harm and power imbalance) are expressed in cyberbullying. Repetition is a complex construct in cyberbullying due to the use of information and communications technology, for example, the repetition of bullying behaviour may not be carried out by the original perpetrator, as the single act of the perpetrator can be forwarded by others in the cyberspace (Slonje, Smith, & Frisén, 2013). Hutson (2016) found that adolescents tend to downplay the importance of repetition; instead the study highlighted that adolescents faced difficulty in determining the presence of the intent to harm in cyberbullying. According to Menesini and Nocentini (2009), intention refers to the extent of awareness of harming others. However, 18.2% cyberbullying perpetrators and 32.3% victims had experience of being the target of a joke in the cyberspace which may not have started off with the intent to hurt the target (Huang & Chou, 2010); this further indicates the possibility of adoption of a maladaptive sense of humour that explains such distorted perception and interpretation (Sari, 2016). Intent, therefore, should be measured along with the impact it has on the victims in cyberbullying. While a power imbalance in face-to-face bullying usually involves the perpetrator being physically stronger (Olweus, 1993), greater knowledge and skills in technology may contribute to power imbalance in cyberbullying (Vandebosch & Van Cleemput, 2008). Perpetrators in cyberbullying who have higher technology skills may utilize these skills to hide their identity and the anonymity of the perpetrator makes it harder for victims to respond (Slonje et al., 2013), although the counter-argument is that many victims have suspicions of the perpetrator's identity since they usually belong to the same social circle (Cuadrado-Gordillo & Fernández-Antelo, 2019). Taken together, these differences have implications of how models of face-to-face bullying may and may not apply to cyberbullying, and how other constructs may also be expressed differently in both bullying contexts.

Participant Roles: Definition of Perpetrator, Victim and Defender

Both face-to-face bullying and cyberbullying are group process (Salmivalli, Lagerspetz, Bjorkqvist, Österman, & Kaukiainen, 1996) in which each participant's role plays a crucial part in the dynamics. However, a considerable number of earlier studies have been published focusing primarily on the dyadic relationship between perpetrator and victim with little consideration acknowledging bullying as group and social phenomenon in which other roles are also involved (Salmivalli et al., 1996). For example, along with perpetrator and victim in the bullying process, there are observers who decide to be either a defender (those who intervene to support the victim), assistant (those who support the perpetrator's behaviour), reinforcer (those who encourage perpetrators by laughing or shouting) or outsiders who are passive and do nothing (Salmivalli et al., 1996). The current literature indicates that perpetrator, victim, defender, bully-victim, and outsiders have garnered most interest from researchers (Chen, Chang, & Cheng, 2016; Forsberg et al., 2018; Pöyhönen, Juvonen, & Salmivalli, 2012; Veenstra, Verlinden, Huitsing, Verhulst, & Tiemeier, 2013).

There are gender differences in face-to-face and cyberbullying roles. In face-to-face bullying, boys were more likely to be perpetrators (Erdur-Baker, 2010) and also victims (Silva, Pereira, Mendonça, Nunes, & de Oliveira, 2013) than were girls. Girls reported more defending in face-to-face bullying episodes than boys (Pöyhönen, Juvonen, & Salmivalli, 2010). However, in the context of cyberbullying, girls were more likely to be victims (Smith et al., 2008) and also defenders (Allison & Bussey, 2017); boys were more likely to be perpetrators in cyberbullying (Erdur-Baker, 2010).

Generally, a perpetrator or bully is defined as someone who engages in the bullying behaviour while the victim is someone who is targeted or exposed to the negative actions of the perpetrator (Keith & Martin, 2005; Olweus, 1993; Tokunaga, 2010). Meanwhile, a defender is someone who has witnessed the bullying and intervened. While defending may be

commonly perceived as a protection of the victim through direct confrontation with the perpetrators, there are other indirect ways to defend victims, such as providing emotional support, giving advice, allowing victims to join their group or accompanying the victims (Desmet et al., 2012; Pöyhönen et al., 2012). Apart from perpetrators and victims, the research is increasingly addressing the role of defenders as they can play a crucial role in escalating or attenuating the bullying episode (Allison & Bussey, 2017), however many outsiders/bystanders have remained passive, especially in cyberbullying (Van Cleemput, Vandebosch, & Pabian, 2014), therefore, equally important is the investigation on factors that influence defending behaviours. This present literature review will focus on the perpetrator, victim and defender role in bullying.

Cyberspace and its technological characteristics have further transformed behaviours associated with each participant role in the cyber context. Perpetration in cyberbullying can be performed in a more sophisticated and deftly manner compared to face-to-face bullying. In face-to-face bullying, for example, perpetrators engage in a variety of physical and verbal aggressive behaviours such as hitting, pushing, humiliating, threatening, verbal insults, manipulating relationships and isolating someone (Ma, 2001). Whereas, a cyberbullying perpetrator uses technology skills to cause harm to another person by posting or forwarding mean and humiliating messages, pictures or videos which can be done on text messages or social networking sites (Chapin & Coleman, 2017). Willard (2005) has outlined an extensive list of online behaviours that are considered as cyberbullying which includes exclusion, online cyberstalking, harassment, flaming, denigration, masquerade, and outing. Likewise, victimisation in cyberbullying happens more rapidly because victims are less able to escape from the situation, unlike in face-to-face bullying. Victimisation takes place and can be repeated whenever the victim goes online (Slonje et al., 2013) as these harmful contents remain in the cyberspace indefinitely and can be reposted and forwarded electronically

(Langos, 2012; Willard, 2005). Therefore, along with reporting cyberbullying to authorities, comforting the victim, and confronting the perpetrator like in face-to-face bullying (Desmet et al., 2012), defenders can also choose to delete and not forwarding the harmful content.

Individuals may participant in more than one role in bullying; in the context of cyberbullying, respondents have reported that they have been both cyberbullying perpetrator and cyberbullying victims in the past 6 months (Van Cleemput et al., 2014). In addition to that, other studies have shown an overlap of participant roles across the two contexts of bullying. A meta-analysis study conducted by Modecki, Minchin, Harbaugh, Guerra, and Runions (2014) has revealed a high correlation between the same participant roles within face-to-face bullying and cyberbullying. While it is possible to expect this overlap of participant roles, sometimes individuals may act differently across two contexts (Quirk & Campbell, 2015).Therefore, it is important to review these participant roles together with the factors affecting their behaviours across the two contexts of bullying.

Studies have identified empathy and moral disengagement as two of the strongest correlates of face-to-face bullying and cyberbullying (Allison & Bussey, 2017; Barchia & Bussey, 2011b; Gini, Pozzoli, & Bussey, 2015; Pöyhönen et al., 2010; Renati, Berrone, & Zanetti, 2012; Thornberg & Jungert, 2013; Zych, Baldry, Farrington, & Llorent, 2019). Empathy is the ability to comprehend and share another person's emotion and experience (Cohen & Strayer, 1996); while moral disengagement refers to a cognitive restructuring process through which individuals justify harmful actions that they commit, against their moral standards (Bandura, 2002). A number of studies have reported that perpetration of bullying was related to low empathy (Zych et al., 2019). Similarly, a meta-analysis conducted by Gini, Pozzoli, and Hymel, (2014) showed that moral disengagement correlates positively with aggressive behaviours. Meanwhile, emerging studies are revealing how moral disengagement could moderate the relationship between empathy and aggressive behaviours

(Wang, Lei, Yang, Gao, & Zhao, 2017). While empathy and moral disengagement have been shown to be independently associated with bullying perpetration, less is known about the interaction between these two variables and how it may affect various participant roles in both face-to-face bullying and cyberbullying contexts.

Before further examination to understand the interactions between empathy and moral disengagement across different contexts of bullying and participant roles, it is important to firstly, examine how empathy and moral disengagement are implicated depending on the context of bullying and participant roles.

This literature review aims to fill a gap in literature by reviewing how empathy and moral disengagement are associated with the various participant roles such as perpetrator, victim and defender in both face-to-face (traditional) bullying and cyberbullying. It is important to examine these roles because perpetrators play the key role in inflicting harm on victims while defenders can potentially stop bullying and decrease the negative impact on victims. Therefore, firstly, this paper will address the definition of face-to-face bullying and cyberbullying along with the key participant roles. Secondly, it will review how empathy is associated with each participant role in both face-to-face bullying and cyberbullying context. Next, it will review how moral disengagement is associated with each participant role in both face-to-face bullying and cyberbullying context. A critical review will also be presented on how the variables may be interacting with each other.

Prevalence of Bullying

Prevalence rates reported are affected by measures and methodology used (Chisholm & Day, 2013), therefore, prevalence reported for both face-to-face bullying and cyberbullying tend to vary greatly; for example face-to-face bullying perpetration rates have ranged from 9.68% to 89.6% (Perren, Dooley, Shaw, & Cross, 2010; Pornari & Wood, 2010). Whereas, Brochado, Soares, and Fraga (2017) in their scoping review have reported that

cyberbullying perpetration among adolescents has ranged from 3 to 39%. Prevalence in victimisation has also shown difference between the face-to-face and cyber context, where about 25% students reported being victimized in face-to-face context while 7% reported victimisation in cyberbullying context (Jadambaa et al., 2019). Only less than half of individuals (45%) who witnessed an episode of cyberbullying helped the victim (Van Cleemput et al., 2014) although it has been reported that bystanders defended victims more in the face-to-face bullying context than in the cyberbullying context (Quirk & Campbell, 2015). It has also been suggested that some the perpetrators and victims roles encompass other behaviours in both contexts of bullying, that is face-to-face perpetrators and victims are likely to be perpetrators and victims in cyberbullying (Vandebosch & van Cleemput, 2009). However, it is also possible that the unique characteristics of the cyber world would lead participants to behave differently online as they would in face-to-face context (Suler, 2004). For example, in a study conducted by Quirk and Campbell (2015), half of the 256 students who witnessed bullying in both face-to-face bullying and cyberbullying acted differently across the two contexts of bullying. Given the pervasive nature of bullying and overlap of participant roles in both contexts of bullying, it is important to examine how empathy and moral disengagement influence individuals' behaviours in both face-to-face bullying and cyberbullying depending on their participant role.

Empathy in Context: Face-to-Face Bullying and Cyberbullying

Empathy is usually defined with both cognitive and affective components; cognitive empathy refers to the ability to understand the emotions of others, while affective empathy refers to the ability to experience the emotions of others (van Noorden, Haselager, Cillessen, & Bukowski, 2015). One of the more comprehensive definitions was provided by Cohen and Strayer (1996, p. 988); they defined empathy as "the ability to understand and share in another's emotional state or context".

Generally, low empathy has been associated with perpetration of bullying (Barchia & Bussey, 2011b; Mitsopoulou & Giovazolias, 2015; Zych et al., 2019). A systematic review conducted by van Noorden and colleagues (2015) showed that empathy was associated differently with the various participant roles in both face-to-face bullying and cyberbullying: perpetration was found to be negatively associated with both types of empathy; however, victimisation was only negatively associated with cognitive empathy but not affective empathy, while defending behaviour was positively associated with both types of empathy. However, some studies have indicated that the relationship between empathy and bullying in cyberspace is different and more complex than in face-to-face bullying. In face-to-face bullying, a negative relationship between empathy and aggression is generally observed (Bussey, Quinn, & Dobson, 2015; Endresen & Olweus, 1998; Vachon, Lynam, & Johnson, 2014). Contrary to these findings, data from a study conducted by Pfetsch (2017) indicated that there was no difference in cognitive and affective empathy between perpetrators and non-involved students in cyberbullying. In addition to that, cognitive and affective empathy did not predict cyberbullying (Pfetsch, 2017). Based on these findings, empathy may be more strongly associated with aggressive behaviours in the face-to-face bullying. While such inconsistencies may be due to the different contexts of face-to-face bullying and cyberbullying, it is also possible it is caused by interaction with other variables. There are studies that suggested moderating variables such as moral disengagement may influence the relationship between empathy and bullying (Wang et al., 2017).

Moral Disengagement as a Moderating Variable

Moral disengagement is known to be an enabling factor that facilitates both face-to-face bullying and cyberbullying, where positive association between moral disengagement and bullying has been reported (Pornari & Wood, 2010; Robson & Witenberg, 2013); additionally, in recent years it has been examined as a moderating variable on the relationship

between empathy and bullying behaviours (Robson & Witenberg, 2013; Wang et al., 2017). Moral disengagement is a cognitive restructuring process through which individuals justify harmful actions they commit which are against their moral standards, for example, that aggression and bullying are wrong. There are mechanisms that individuals use to justify their harmful conduct, such as: (a) moral justification, (b) attribution of blame, (c) euphemistic labelling, (d) advantageous comparison, (e) displacement of responsibility, (f) diffusion of responsibility, (g) disregard or distorted of consequences, and (h) dehumanization (Bandura, 2002). Robson and Witenberg (2013) had suggested that moral disengagement could deactivate empathy. This view is further supported by Wang and colleagues (2017) who argued that the association between empathy and aggression can be reduced by moral disengagement. It was further suggested that response towards moral emotions such as self-sanctions and empathy are quite unlikely among those who have high moral disengagement. For example, in the mechanism of dehumanization – it is easier to inflict harm on others when they are stripped of their human qualities; because to perceive someone as human requires empathy (Robson & Witenberg, 2013).

In addition, it is believed that the characteristics and conditions of the digital world could readily facilitate moral disengagement (Runions & Bak, 2015). As Bandura (1990) posited, self-regulatory process is activated by external cues such as social information in the environment where one finds themselves. The lack of socio-emotional cues in the digital world provides minimal emotional feedback to its users, and therefore the chances of self-regulatory and self-sanctioning behaviours are minimized. In the same vein, Runions and Bak (2015) argued that the lack of socio-emotional cues contributes largely to ambiguous communication among online users. More importantly, it is thought that such ambiguous cues are prone to be misinterpreted as threat. This further allows self-justification for bullying behaviours in the cyberspace and blaming the victims as the trigger for the justified

aggressive retaliation. This blaming attitude and mentality have been proven to reduce feelings of empathy towards others, as shown on fMRI scanning in a study conducted by Decety, Echols, and Correll (2009).

While there are a small number of studies that have investigated how moral disengagement moderates the association between empathy and aggression (Wang et al., 2017), and also the moderating roles of empathy on the relationship between moral disengagement and aggression (Bussey, Quinn, et al., 2015), few studies have examined other participant roles in both face-to-face bullying and cyberbullying, such as perpetrator, defender and victim. Therefore, to examine how moral disengagement could moderate the relationship between empathy and the key participant roles (i.e. perpetrator, victim and defender), it is crucial to firstly establish how these two variables are associated with these participant roles. Since the context of face-to-face bullying and cyberspace is distinguished by different characteristics, it is important to also consider how these variables behave in face-to-face bullying and cyberbullying among the different participant roles.

Empathy and Participant Roles

Both cognitive and affective empathy operate concurrently to give rise to an empathic response (Pozzoli, Gini, & Thornberg, 2017) which is dependent on various sources such as emotional cues for empathic arousal (Hoffman, 2000). In other words, while empathy could be a dispositional trait (De Wied, Goudena, & Matthys, 2005), contextual cues are required for empathic arousal. Hoffman (2000) suggested that prosocial behaviours are dependent on such empathic arousal, which may be influenced by contextual socio-emotional cues. The available socio-emotional cues in cyberspace may be severely lacking (Pornari & Wood, 2010; Runions & Bak, 2015), therefore, empathy could differ in cyberspace and face-to-face contexts across different participant roles. It is crucial to understand how each participant roles are influenced by empathy in these two contexts for effective prevention programs.

Empathy and Perpetrators in Face-to-Face Bullying

Although it has been demonstrated that low empathy is associated with aggression (Vachon et al., 2014), the relationship between empathy and bullying remains a complex one. A meta-analysis conducted by Vachon and colleagues (2014) concluded that empathy has only a weak negative relationship with aggression (r = -.11). Interestingly, it has been suggested that empathy could be positively related to aggressive behaviours (Caravita, Di Blasio, & Salmivalli, 2009) and that some morally transgressive acts (such as torturing someone) could also be partially motivated by the torturer's understanding of the suffering put onto the victims (Aaltola, 2014). This indicates that empathy can work both ways to increase the propensity for bullying behaviours; therefore, it is important to understand interacting factors that could influence these directions. This nature of how empathy can work both ways was specifically noted in studies on cognitive empathy and aggressive behaviours. For example, while Aaltola (2014) suggested that cognitive empathy could be positively associated with the role of perpetrator, however, a meta-analysis conducted by Jolliffe and Farrington (2004) revealed that those who scored low on cognitive empathy reported more aggressive behaviours.

Studies on the relationship between affective empathy and the role of perpetrator yielded more consistent findings. In a systematic review by van Noorden and colleagues (2015), it was found that generally low affective empathy was associated with face-to-face bullying perpetration. In the same vein, some authors such as Ang and Goh (2010) concluded that low affective empathy is more related to physical bullying. Taken together, it is possible that perpetrators in face-to-face bullying could understand others, but they could lack the ability to feel for others. Meanwhile the role that each type of empathy plays in bullying may vary according to the context and form of bullying behaviours.

Gender differences were also found in empathy and its relation to face-to-face bullying behaviours. Jolliffe and Farrington (2006), who conducted a study with 15-year-old students in United Kingdom, found that overall low empathy was associated with violent bullying in males and indirect bullying in females. In addition to that, face-to-face bullying was also found to be associated with low affective empathy for females but not for males. Jolliffe and Farrington's (2006) data also revealed that low affective empathy was associated with frequent bullying others for both genders. Such inconsistencies may be due to empathy being examined in isolation from other contextual factors. Bandura (1999) has stressed the importance of understanding behaviours as a reciprocal interaction between personal and contextual factors.

Empathy and Perpetrators in Cyberbullying

Cyberspace is an entirely different context to face-to-face in which bullying may take different forms. The online environment is characterised by anonymity and is lacking in many non-verbal qualities. Due to the lack of socio-emotional cues, it presents a challenging environment for online users to receive important non-verbal feedback, which is one of the crucial elements in empathy arousal (Hoffman, 2000). Therefore, it could be expected that the relationship between empathy and cyberbullying may be different from the face-to-face context.

Generally, however, low empathy is also related to cyberbullying others (Zych et al., 2019). More specifically, low affective empathy was associated with cyberbullying behaviours (Renati et al., 2012; Schultze-Krumbholz & Scheithauer, 2013). In an exploratory study by Renati and colleagues (2012), conducted with 819 Italian adolescents, it was found that cyberbullying perpetrators' scores on affective empathy were significantly lower than cyberbullying victims and those who were not involved in cyberbullying episodes. There was no difference between the groups in cognitive empathy scores. Cyberbullying can be also

targeted on those beyond the perpetrator's social circle of friends and acquaintances in real life. In a study among adolescents on cyberbullying towards celebrities, affective empathy was found to be negatively related to severe online bullying behaviour, but not to cognitive empathy (Ouvrein, De Backer, & Vandebosch, 2018).

There are a small number of studies, however, that have shown inconsistent findings on the role of cognitive empathy in cyberbullying. For example, among the studies included in the systematic review by van Noorden and colleagues (2015), a weak negative relationship was found (r = -.07; Topcu & Erdur-Baker, 2012) between cognitive empathy and cyberbullying, while another found no association (Ang & Goh, 2010).

Ang and Goh (2010) revealed an interesting finding on how cognitive empathy interacts with affective empathy in cyberbullying. Their study measured both cognitive and affective empathy with cyberbullying behaviours among Singaporean adolescents. The three-way interaction analysis revealed that at low affective empathy, both boys and girls who scored low on cognitive empathy reported higher cyberbullying behaviour than those who scored high on cognitive empathy. At high affective empathy, boys who scored low on cognitive empathy continued to report higher cyberbullying behaviours compared to those who scored high on cognitive empathy, but not girls. For girls, similar levels of cyberbullying were reported regardless of the level of cognitive empathy. These results suggest that cognitive processes, particularly cognitive empathy, have a larger role in moral decisions among boys than girls in cyberbullying.

It appears that cyberspace, due to the limited socio-emotional cues available, may facilitate both lower affective empathy and cognitive empathy (Ang & Goh, 2010). More importantly, it is thought that affective empathy can be low due to a lack of arousal cues available online. Without these cues, cyberbullying perpetrators are unable to feel the pain of their victims. While cognitive empathy may play a role as suggested by Ang and Goh (2010),

the authors did not provide a full explanation of how cognitive empathy could lead to cyberbullying perpetration. It is possible that online users utilize cognitive processes to guide their actions, since there are limited non-verbal and emotions feedback of others due the absence of socio-emotional cues. Therefore, the importance of examining the role of empathy in cyberbullying perpetration together with other cognitive factors should not be overlooked.

In the context of perpetration, empathy may be negatively associated with both face-to-face bullying and cyberbullying. Although total empathy and affective empathy are generally found to be negatively associated with face-to-face bullying, the findings for cognitive empathy remain inconsistent. In face-to-face bullying, cognitive empathy could vary according to the different types of aggression. However, the inconsistent findings on cognitive empathy in cyberbullying raise the question of how characteristics of cyberspace could have an impact on cognitive empathy and cognitive processes in cyberbullying.

Empathy and Defenders in Face-to-Face Bullying

There is a plethora of findings supporting the notion that empathy is a prerequisite to prosocial and defending behaviours (Caravita et al., 2009; Eisenberg, Eggum, & Di Giunta, 2010; Gini, Albiero, Benelli, & Altoe, 2007; Nickerson, Mele, & Princiotta, 2008; Pöyhönen et al., 2010; van Noorden et al., 2015). While most of these studies have established the positive relationship between empathy and defending in face-to-face bullying, it is it important to note that some of these studies have examined empathy as a single construct (for example Gini, Albiero, Benelli, & Altoè, 2008).

When empathy was investigated separately as an affective and cognitive component, affective empathy was found to be associated with defending behaviours (Barchia & Bussey, 2011b; Caravita et al., 2009; Nickerson et al., 2008; Pöyhönen et al., 2010). In addition to that, affective empathy was also found to be positively associated with defending behaviour over time. In another longitudinal study by Barchia and Bussey (2011b), which followed 613

students between ages 12 to 15, affective empathy was measured at Time 1, and was found to be associated with defending in Time 2 (β = .015, p< .01).

In addition, Caravita and colleagues (2009) found that affective empathy predicted defending and bystanding behaviours among boys in mid-childhood, but they found no association with cognitive empathy. The authors posited that it is affective empathy that plays a larger role in defending behaviours because the ability to understand how others feel (cognitive empathy) could be used two ways, that is to harm or to defend others. Similarly, Pöyhönen and colleagues (2010), in their study examining Grade 4 and Grade 8 (14-15 years old) Finnish students, reported that while there was an association between affective empathy and defending, there was no association with cognitive empathy. Furthermore, based on the idea that children are guided by their environment, the authors argued that even affective empathy alone may not suffice to explain defending behaviours, as behaviours are the product of the interactions between the individual's characteristics and the context. In their study, an association between defending and affective empathy was only significant at high levels of perceived popularity (β = .18, p < .05). This further supports the tenets of reciprocal determinism where Bandura (2002) emphasizes the importance of interactions between personal and environment factors.

Empathy and Defenders in Cyberbullying

Empathic response and prosocial behaviours are thought to be dependent on empathic arousal (Hoffman, 2000). However, the characteristics of cyberspace could pose challenges for empathic arousal due the lack of emotional cues in online communication (Lapidot-Lefler & Barak, 2012). Although children who are more willing to defend victims in cyberbullying scored higher on empathy concern, which comprises feelings of compassion, concern and sympathy (Van Cleemput et al., 2014), there are suggestions that online communications tend

to be cold and empathizing with others may be more difficult in cyberspace (Zych et al., 2019).

There are a limited number of studies that have examined defending and empathy in cyberbullying (Erreygers, Pabian, Vandebosch, & Baillien, 2016; Machackova & Pfetsch, 2016; Price et al., 2014). Among these, the findings of Erreygers and colleagues (2016) showed a positive relationship between affective empathy and defending, and Machackova and Pfetsch (2016) found both cognitive and affective empathy were weakly and positively correlated with defending behaviours. Similarly, a qualitative study has also indicated that empathy influenced the decision to defend (Price et al., 2014).

Importantly, for cyberbullying, research has also shown that empathic responses are influenced by contextual factors such as technological setting, ambiguity of the situations and perceived justification of the behaviours of the parties involved (DeSmet et al., 2014; Machackova & Pfetsch, 2016). In a mediated communication environment, the lack of eye contact and facial expression cues are well known for problematic interpersonal communication, as noted by Lapidot-Lefler and Barak (2012). Consequently, empathy, particularly affective empathy, may decrease in cyberspace. This could ultimately influence defending behaviours in cyberbullying as the findings of a path analysis conducted by Machackova and Pfetsch (2016), which found that only affective empathy predicted positive defending behaviours towards victims in cyberbullying. Even though it is also argued that affective empathy does not solely rely on emotional cues but can also be facilitated by cognitive empathy, online users could still make inaccurate judgements about the severity of an incident (due to invisibility and online perceived distance) which leads to a decrease of immediate affective empathy (Topcu & Erdur-Baker, 2012).

Similarly, the Reduced Social Cues Model suggests that the deficiency of nonverbal cues in online communication causes a challenge in reading emotional feedback among users

(Kiesler, Siegel, & McGuire, 1984). To fill this void of socio-emotional cues, online users or bystanders seek information about the victim from alternative sources, such as the victim's self-disclosed information. An experimental study has shown that empathy towards victims was influenced by the degree of victims' self-disclosure; bystander's empathy decreased with the increasing degree of victims' personal disclosure on social networking platforms (Schacter, Greenberg, & Juvonen, 2016).

It is plausible then, in the absence of important nonverbal information of the victims, other sources of information would be actively sought to understand the context, where inference and deductions may be based on. For example, highly personal postings by victims about their social relationship are perceived as violating netiquette (online disclosure norm; Vitak, 2012) and such victims are blamed for the cyberbullying. Similarly, information from victims' posts may be used to make a judgement about the victim's personality where high disclosure is perceived as a needy trait; therefore, observers may blame victims and have less empathy for them. Similarly, a bystander's interpretation of the situation may be based on their personal experience. For example, cyberbullying victims may be able to empathize with other victims even in the absence of emotional cues.

Taken together, empathy could be influenced by such diverse sources in cyberbullying episodes, and not merely by the bystander's dispositional affective nor cognitive empathy. While there are few studies examining defending in cyberbullying, other research has shown how the characteristics of cyberspace can alter online empathic experience and subsequently influence defending behaviours. It is reasonable to suggest that empathy may be influenced by factors in cyberspace such as the lack of socio-emotional cues (Barhight, Hubbard, & Hyde, 2013; Runions & Bak, 2015), perceived severity and distance (Machackova & Pfetsch, 2016), online personal information disclosure (Schacter et al.,

2016), and moral disengagement (Runions & Bak, 2015). All these factors may act to supress empathic arousal and consequently lower empathy towards others online.

Empathy and Victims in Face-to-Face Bullying

Research on empathy and victimisation is currently under-studied, so little is known of how empathy is related to victimisation in face-to-face bullying. Throughout the wealth of literature that has explored the empathy-aggression relationship, empathy appears to be a predictor for perpetration rather than victimisation, and findings for victimisation have been inconsistent. This may be due to how victimisation is defined and operationalized in most research (van Noorden, Bukowski, Haselager, Lansu, & Cillessen, 2016).

Some studies have shown no association between both affective and cognitive empathy with victimisation (for e.g. Belacchi & Farina, 2012). In the small pool of studies on empathy and victimisation, Woods, Wolke, Nowicki, and Hall (2009) found that victims do not differ in empathy scores from other participant roles. Interestingly, it was observed that victims in their study reported poorer recognition of overall emotions in others. This is especially reflected in the emotions of anger and fear. Children who are commonly picked on in peer aggression are frequently lacking in social skills and assertiveness (Schwartz, Dodge, & Coie, 1993). This was further supported by the findings by Sutton, Smith, and Swettenham (1999) which found victims scored lower in social cognition. It is possible therefore, that such deficits in their ability to understand what others are thinking, together with their poor emotion recognition in others could lead them to have poorer interpersonal relationship with others, and consequently engage in problematic behaviours and have fewer friends (Guo, 2016; Yubero, Navarro, Elche, Larrañaga, & Ovejero, 2017). This places them at risk of being targeted by bullies.

Empathy and Victims in Cyberbullying

In the context of cyberbullying, Zych and colleagues (2019) have investigated the role of empathy in cyberbullying across different participant roles. Through their systematic review, they found that cyberbullying victims and non-victims do not differ in their total empathy scores (both cognitive and affective empathy combined). However, the relationship between cyberbullying victimisation and affective empathy was a positive one. Meanwhile, cyberbullying victims tended to score higher on cognitive empathy, however this relationship was not significant. It is important to note however, that these results are based on the small number of studies available.

In the present literature, there is no strong evidence that points to the fact that empathy is related to cyberbullying victimisation. Zych and colleagues (2019) concluded that empathy was also not related to cyberbullying victimisation although the authors suggested that it is possible that cyberbullying victims have high affective empathy. Yet the authors did not offer further explanation on how affective empathy could be associated with cyberbullying victimisation. Conversely, Kokkinos and Kipritsi (2012) found negative correlations between both types of empathy (cognitive and affective) and cyberbullying victimisation. Based on this, victims who have low affective and cognitive empathy can be expected to face greater challenges in reading feedback from other online users due the limited available socio-emotional cues in the cyberspace, thus putting them at greater risks of being targeted.

Together, the current literature is not able to fully explain how empathy is related to victimisation in both face-to-face bullying and cyberbullying. While affective empathy seems to have an association with both face-to-face bullying and cyberbullying victimisation, more studies are required to investigate and to understand this relationship. It is possible that empathy could be both a precursor; where their emotional sensitivity put them at greater risk

of being targeted by bullies, and it could be a consequence of victimisation; where victims could be more in-tune with the emotions of others (van Noorden et al., 2016). Both possibilities can lead to different intervention strategies. If victimisation is due to lack of friendships fostered due to low level of understanding of others friends (Guo, 2016; Yubero et al., 2017), it can be remedied through social skills and empathic training. However, if higher empathy is a consequence of cyberbullying victimisation experience (van Noorden et al., 2016), the question of how victims respond to other's victimisation is crucial because empathy could lead to over-identification with other victims (Bloom, 2016). Although victims who empathise with other victims may choose to defend them, over-identification could lead to inaction or aggressive defending. Therefore, it is crucial to explore this in future research.

Additionally, in line with Social Cognitive Theory's tenets of reciprocal determinism (Bandura, 1999), the current literature suggests that empathy should not be examined in isolation for both contexts of bullying since it has been found that empathy can be influenced by contextual factors. Therefore, interactive influence between empathy and personal factors (e.g., moral disengagement), should also be further examined as studies have suggested that moral disengagement may moderate the relationship between empathy and aggression (Wang et al., 2017). Before the interactive influence between empathy and moral disengagement can be addressed, it is important to review the associations between moral disengagement and the different participant roles in both types of bullying.

Moral Disengagement and Participant Roles

While most studies have established the association between empathy and the various participant roles, emerging findings are indicating that these relationships could be influenced by moral disengagement. In other words, moral disengagement could act to deactivate empathy, particularly in relation to aggression (Wang et al., 2017). At the same time,

empathy has been found to predict moral disengagement (Hyde, Shaw, & Moilanen, 2010). Therefore, it is important to consider the role of moral disengagement in studying different participant roles in both face-to-face bullying and cyberbullying.

According to Bandura's Social Cognitive Theory (2002), moral disengagement is a cognitive restructuring process through which individuals justify their harmful actions, which are against their moral standards (that is, “aggression/ bullying is wrong”) through mechanisms including: advantageous comparison, attribution of blame, moral justification, euphemistic labelling, diffusion of responsibility, displacement of responsibility, disregard or distortion of consequences, and dehumanization. Moral disengagement operates at both individual and collective levels. Through these cognitive restructuring mechanisms, individuals perform acts that could be deemed as inhuman and immoral with minimal or no sense of self-condemnation for breaking their moral code of ethics. It is possible that even in the most despicable of conducts, the gap of minimal or absence of self-condemnation could easily be replaced by a sense of pride and honour (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bandura, 2002) . For example, a perpetrator can justify their harmful acts towards victims by believing that the victims deserved it (victim blaming).

Bandura (2002) posited that moral agency has the dual power to both enable one to refrain one from behaving inhumanely and to enable one to behave humanely; it is a part of the self-regulatory systems which are linked to personal moral standards and self-sanctions. However, these self-regulatory processes and moral sanctions can be selectively disengaged through many psychosocial mechanisms, resulting in inhumane conducts. The disengagement of moral control can occur at two levels: individual and collective. In addition, moral actions are also seen as a product of interaction between personal and social influences. Therefore, it is crucial to examine how different participant roles may be a product of the interaction between moral disengagement and the context of both types of bullying.

It is important to consider the development trajectories in moral disengagement in relation to face-to-face bullying and cyberbullying behaviours. As Bandura (2002) described moral disengagement as a gradual process: “Disengagement practises will not instantly transform considerate people into cruel ones. Rather, the change is achieved by progressive disengagement of self-censure. Initially, individuals perform mildly harmful acts they can tolerate with some discomfort. After their self-reproof has been diminished through repeated enactments, the level of ruthlessness increases, until eventually acts originally regarded as abhorrent can be performed with little anguish or self-censure. Inhumane practices become thoughtlessly routinised. The continuing interplay between moral thought, affect, action and its social reception is personally transformative” (Bandura, 2002, p.110). In relation to development trajectories, Paciello and colleagues' (2008) longitudinal study found a stronger relationship between moral disengagement and aggression among adolescents compared to younger children. In addition, moral disengagement decreased strongly between age 14-16 years. According to the authors, this could reflect changes in cognitive and social development of individuals, as their ability to infer perspectives of others improved over the course of maturation. This is consistent with Caroli and Sagone's (2014) study among Italian participants aged 11-34 years which showed early and middle adolescents are more likely to adopt moral disengagement mechanisms than young adults.

Moral Disengagement and Perpetrators in Face-to-Face Bullying

Bullying perpetrators usually have high levels of moral disengagement. Moral disengagement was found to be positively associated with aggression (Bussey, Quinn, et al., 2015), face-to-face bullying, (Bandura et al., 1996; Barchia & Bussey, 2011a) and cyberbullying (for e.g. Bussey, Fitzpatrick, & Raman, 2015; Wang et al., 2016) . In a study on face-to-face bullying, Hymel, Rocke-Henderson, and Bonanno (2005) reported a substantial number of grade 8-10 students engaged in one or more moral disengagement

strategies to justify bullying and aggressive acts, and believed that bullying was common and beneficial. Cross -sectional and longitudinal studies have consistently shown that moral disengagement is associated with peer aggression behaviours (Barchia & Bussey, 2011a; Gini et al., 2015). Longitudinal studies have also revealed that moral disengagement is predictive of aggressive behaviours. Results from a study conducted by Barchia and Bussey (2011a) among school children over a 8-month period showed that both aggression efficacy and moral disengagement at Time 1 predicted peer aggression behaviours at Time 2.

The same trend of a positive association between collective moral disengagement and bullying has been observed in other studies (Kollerová, Soukup, & Gini, 2018). Collective moral disengagement refers to a group's shared beliefs, which justify morally wrong actions (Gini, Pozzoli, & Bussey, 2014) and occurs through interactions with other members of the group. In a study that measured peer ratings of bullying among Czech students aged 11-15 years, collective moral disengagement was found to be positively correlated with bullying (Kollerová et al., 2018).

In addition to those results, collective moral disengagement perceived by students may moderate the relationship between individual moral disengagement and aggressive behaviours. In a study by Gini and colleagues (2015) among 918 Italian students in Grade 6 to 10, higher aggressive behaviours was reported at high levels of both individual moral disengagement and collective moral disengagement. In other words, students are more likely to disengage and bully others if they perceive the class norm and culture share the same beliefs. In the context of aggression, moral disengagement is also suggested to be dependent on other psychological processes and personal traits, such as empathy (Hyde et al., 2010), where empathy may deactivate moral disengagement. However, only few studies have examined the interaction between empathy and moral disengagement in the context of

bullying. This is crucial, as both empathy and moral disengagement are two variables strongly associated with bullying.

Moral Disengagement and Perpetrators in Cyberbullying

In the context of cyberbullying, moral disengagement is also found to be positively associated with perpetration (Pornari & Wood, 2010; Renati et al., 2012; Wang et al., 2016). Perpetrators in cyberbullying were found to have higher moral disengagement scores compared with other participant roles such as victims and the non-involved (Renati et al., 2012). A meta-analysis by Guo (2016), studying predictors of cyberbullying, produced 15 key predictors; an average effect size for cyberbullying perpetration was found for most predictors (between r = .06 and .39). One of the key predictors found was the perception of aggression as a morally justified action, mirroring the construct of moral disengagement. Similarly, diffusion of responsibility and attribution of blame mechanisms have significantly predicted cyberbullying in a study conducted with 210 Australian students aged 12 to 15 (Robson & Witenberg, 2013). Some studies have suggested that cyberbullying perpetrators could conveniently morally disengage in the absence of non-verbal feedback from the victims, which restricts the feelings of shame and guilt associated with their bullying (Tanrikulu & Campbell, 2015).

In addition to these findings, studies continue to reveal how cyberspace influences moral disengagement and moral reasoning in relation to cyberbullying. Wang and colleagues (2016) conducted a survey of 417 Chinese students aged 12-14 years old, examining the relationship between cyberbullying with moral disengagement and moral reasoning. These researchers found that moral disengagement was positively associated with cyberbullying. Moral reasoning was also found to moderate the relationship between cyberbullying and moral disengagement. Specifically, the relationship between moral disengagement and cyberbullying was significant and positive at low levels of moral reasoning. However, at high

levels of moral reasoning the association between moral disengagement and cyberbullying was not significant. While it can be easy to morally disengage in cyberspace, this finding suggested that moral disengagement in cyberbullying may be reduced by moral reasoning. However, it is important to note that the study did not include the consideration of developmental trajectories of moral reasoning. Caravita, De Silva, Pagani, Colombo, and Antonietti (2017) noted that moral reasoning changes with age where the ability to consider more evaluation criteria in moral judgments increases with age; and that younger children could view moral rules less breakable than older children/ adolescents. More studies are required to affirm and explain this relationship and to identify specifically how the development of moral and other factors in the cyberspace influence the function of moral disengagement.

Although cyberbullying behaviours, along with other types of aggressive behaviours, can be predicted by a high level of moral disengagement, the process is a dynamic one. Moral disengagement is found to interact with other factors as well. Bussey, Fitzpatrick and colleague's (2015) study revealed a positive association between cyberbullying and moral disengagement, when students believed they had the capacity to perform the behaviours associated with cyberbullying perpetrator role.

Perren and Gutzwiller-Helfenfinger (2012) reported slightly different findings from most studies on moral disengagement. In their study, students between 12-19 years old were measured on their moral emotions, moral values, and moral disengagement based on self-report measures. Their findings did not establish moral disengagement as a predictor of cyberbullying. Instead, only moral emotions and moral values predicted cyberbullying. This raises the question that if moral disengagement is less relevant in cyberbullying as Perren and Gutzwiller-Helfenfinger (2012) questioned, is the deficit in socio-emotional cues and the distanced nature of online communication enough to reduce empathy towards victims, thus

increasing aggressive behaviours? It is important to note, however, that only items of moral justification were used to examine moral disengagement in their study and the measure was also lacking in specificity to cyberbullying. In Perren and Gutzwiller-Helfenfinger's (2012) study, to obtain moral disengagement scores, four questions were used to measure a student's moral rule understanding, moral evaluation of emotion to victimizer, and moral evaluation to self as perpetrator. This cannot be considered comprehensive to the moral disengagement mechanisms that Bandura (2002) had suggested. Meter and Bauman (2018) utilized a more cyberbullying-focused moral disengagement items (developed by Bussey, Fitzpatrick, et al., 2015) in the study, and confirmed the predictive role of moral disengagement on cyberbullying perpetration.

Moral Disengagement and Defenders in Face-to-Face Bullying

Moral disengagement is negatively related to defending (Killer, Bussey, Hawes, & Hunt, 2019) and similarly, Obermann (2011) found that unconcerned bystanders scored higher on moral disengagement than defenders. When moral disengagement in bullying was measured among 372 Swedish students aged between 10 to 14 years old, the two mechanisms that were found to be significantly and negatively related to defending in face-to-face bullying were diffusion of responsibility and victim attribution (Thornberg & Jungert, 2014). A morally disengaged person could go against their own moral standards and inflict harm on others while justifying their actions as acceptable, if not honourable. Conversely, bystanders may not intervene to stop the perpetrator nor support the victims if they deem the act of bullying as justifiable or the victims as responsible for the bullying incident. These findings were confirmed in a qualitative study, where students reported in the focus groups interview that they were unlikely to intervene if they thought the victims were deviant, annoying and provoking (Forsberg et al., 2018).

Although moral disengagement has a negative association with defending behaviours, (Thornberg & Jungert, 2014; Thornberg, Pozzoli, Gini, & Jungert, 2015), Thornberg and colleagues (2015) reported that the negative relationship between moral disengagement and defending was significant at low levels of moral emotions (which comprise sympathy, empathy, guilt for inaction and transgressive guilt). When moral emotions are high, defending behaviours were high, irrespective of the levels of moral disengagement. The authors conclude that moral emotions may act to overturn moral disengagement, or individuals do not selectively disengage their moral standards. Moral emotions such as empathy or moral guilt, could lead to individual's awareness of the negative consequences for the victims (Hoffman, 2000). This is also supported in a study by Kokkinos and Kipritsi (2018), which found that empathy mediated moral disengagement's link to bullying behaviours.

Moral Disengagement and Defenders in Cyberbullying

Generally, it is observed that defending in cyberbullying is lower than face-to-face bullying (Schacter et al., 2016). Although the likelihood to intervene among bystanders in cyberspace is also affected by the wider audience compared to face-to-face bullying (Fischer et al., 2011), studies have also shown that it is easier to morally disengage in cyberspace (Runions & Bak, 2015) resulting in passive bystanding behaviours. For example, an experimental study by Schacter and colleagues (2016) found that bystanders in cyberbullying were more likely to blame victims when victims disclosed more about themselves through their Facebook profile and updates. With personal information easily obtained across different social networking platforms, it is easier for bystanders to disengage from their moral standards through victim blaming. As indicated earlier, those who shared too much personal information on social networking sites are perceived as violating online norms and seen as deserving the cyberbullying (Park, Na, & Kim, 2014; Vitak, 2012). This is also consistent

with past studies that have identified various moral disengagement mechanisms used by passive cyber-bystanders, such as diffusion of responsibility and distorted consequences (Van Cleemput et al., 2014).

In other quantitative studies, findings showed that moral disengagement has no significant effect on defending behaviours in cyberbullying (Allison & Bussey, 2017; Perren & Gutzwiller-Helfenfinger, 2012). According to Allison and Bussey (2017), it is possible that socio-cognitive variables are less influential in the world of cyberspace. The authors suggested that the limited socio-emotional cues in the online environment could contribute to the ambiguous messages and obscure the harmful impact on the victims. In other words, the inability to read socio-emotional cues together with ambiguous messages are enough to decrease the motivation to defend victims. However, the activation of moral disengagement was also found to be influenced by the specific contextual factors in cyberbullying incidents; in a study conducted by Luo and Bussey (2019), the influence of contextual factors on moral disengagement in cyberbullying was examined. Moral disengagement mechanisms items in this study was worded to suit two cyberbullying contexts: Facebook and text messages. The results revealed that contextual moral disengagement was linked to both types of defending self- efficacy above general moral disengagement, indicating that contextual factors may play an important role in moral disengagement activation in cyberbullying (Luo & Bussey, 2019).

All these findings indicate that the characteristics of the online environment may influence the process of empathy and moral disengagement compared to face-to-face bullying. At the same time, moral disengagement could also be reduced by empathic concern (Kokkinos & Kipritsi, 2018). Therefore, in the context of cyberbullying, the influence of cyberspace on moral disengagement is two-fold; firstly, by the nature of the online characteristic which enables moral disengagement to be activated easily, and secondly by the

lack of empathy in cyberspace, which can also leave moral disengagement unregulated. However, further research is required to investigate this process.

Moral Disengagement and Victims in Face-to-Face Bullying

Currently, there appears to be no published research that directly addresses moral disengagement as a predictor for victimisation in both face-to-face bullying and cyberbullying, although it was found that victims have lower levels of moral disengagement than perpetrators (Menesini et al., 2003). Yet, it is noteworthy that victimisation was commonly measured as 'pure' victims (those who did not have any other involvement in bullying such as perpetration, defending and bystanding) . Meanwhile, some other studies have since discovered dual and multiple role involvement in cyberbullying, such as the perpetrator-victim role, overlap of face-to-face bullying and cyberbullying and the changing nature of roles (Quirk & Campbell, 2015; Salmivalli & Nieminen, 2002). Additionally, Hymel and colleagues (2005) investigated if the experience as a victim has some impact on the tendencies to morally disengage. The study found that those who bullied occasionally and have been victimized showed a lower level of moral disengagement compared to students who bullied others repeatedly. This is consistent with earlier work undertaken by Menesini and colleagues (2003), who investigated emotions of responsibility (guilt, shame) and emotions of disengagement (pride, indifference) among perpetrator, victim and outsider. Upon viewing a scenario that depicted bullying, the participants were asked if they would feel guilt, shame, pride or indifference if they were the perpetrator in the scenario. The findings showed that peer-nominated perpetrators were more likely to describe the feelings of perpetrator's as pride, compared to victims and outsiders. This finding may suggest that the experience of victimisation could make victims less likely to morally disengage.

Moral Disengagement and Victims in Cyberbullying

Although currently there is no empirical evidence to conclude that moral disengagement predicts cyberbullying victimisation, there are suggestions that moral disengagement may be associated with victimisation (Killer et al., 2019). One of the possible explanations provided by Perren, Gutzwiller-Helfenfinger, Malti, and Hymel (2012) was that long-term victimisation experience could lead to the internalization of self-blame and therefore he/she adopts the belief that bullying is acceptable. This may further have an implication on how victims respond to cyberbullying incidents. Indeed, Kowalski, Giumetti, Schroeder, and Lattanner's (2014) study showed perpetration and victimisation were highly correlated in cyberbullying. The use of technology can easily enable participants to engage in more than one role simultaneously in cyberbullying. For example, victims can engage in a cyberbullying behaviour by creating or just forwarding a series of harmful message about the perpetrator. If so, it is reasonable to think that moral disengagement among the perpetrator-victim in cyberbullying is higher compared to those who are victims only.

In the same vein, literature on victims' responses to cyberbullying is slowly emerging. For example, the various types of aggressive victims in bullying were addressed in a study by Cuadrado-Gordillo and Fernández-Antelo (2014); among the types of victim responses are face-to-face aggressive-victims, aggressive-cyber victims, cyberaggressive-victims, and cyberaggressive-cyber victims. Victims who retaliate are thought to engage in aggressive behaviours as a mechanism to protect themselves from being target further (Frey, Pearson, & Cohen, 2015; König, Gollwitzer, & Steffgen, 2010), to resolve their negative feelings from the victimisation experience or for revenge, because they felt that those who wronged them deserved the retaliation (Varjas, Talley, Meyers, Parris, & Cutts, 2010). In the qualitative study by Varjas and colleagues (2010), there were some indications of moral disengagement mechanisms involved in the interview responses provided by the perpetrator-victim. For

example, one student who self-reported to have cyberbullied others stated, “I was really angry, and he was not nice to me and he deserved it.” (p. 271). Therefore, although victims showed lower levels of moral disengagement, a perpetrator-victim may engage moral disengagement mechanisms to act in the same way that they thought was morally wrong in the first place. However, there may be a divided opinion over whether retaliation is a bullying behaviour although Jara, Casas, and Ortega-Ruiz (2017) suggested that both proactive and reactive aggressive behaviours are present in bullying. There is evidence that showed that the perpetrator-victim role is the largest in cyberbullying (Brack & Caltabiano, 2014) indicating the ease of engaging in dual roles simultaneously in cyberspace as in face-to-face bullying. This therefore requires further exploration.

Limitation, Further Research and Conclusion

Empathy and moral disengagement are two variables that have been rigorously studied in face-to-face bullying and cyberbullying; while some studies indicate that moral disengagement may act as a moderator on the relationship between empathy and aggression. Before the interactions are examined further in bullying research, it is important to review how these two variables are implicated in different participant roles and types of bullying. The current literature pointed out that empathy and moral disengagement are associated with perpetration, defending and victimisation in different directions, with some variations in the context of face-to-face bullying and cyberbullying. Bandura’s Social Cognitive Theory addresses the importance of examining behaviours as a product of interactions between individual and environment factors. Therefore, while the associations between empathy, moral disengagement and participant roles share some similarity in face-to-face bullying and cyberbullying, there are notable differences that should not be ignored. One of the differences is how empathy and moral disengagement are affected differently in cyberspace compared to face-to-face contact. This is a critical issue because it has been suggested and shown that

empathy and moral disengagement may deactivate each other (Robson & Witenberg, 2013; Wang et al., 2017). The deficit in socio-emotional cues in cyberspace diminish empathic arousal, which may influence perpetration and defending behaviours. It is easier to activate moral disengagement mechanisms when empathy is low (Kokkinos & Kipritsi, 2018). In the same vein, the meta-analysis study conducted by Kowalski and colleagues (2014) provided further evidence that perpetration in cyberbullying is associated strongest with moral disengagement. At the same time, the same deficit in socio-emotional cues, along with other cyberspace characteristics such as anonymity and ambiguity, conveniently activate moral disengagement mechanisms (Runions & Bak, 2015) and further fuel perpetration and dampen defending. Anti-cyberbullying efforts that rely heavily on empathic skills training may lose their effectiveness if this prospect is left unexplored. While Wang and colleagues (2017) have examined this connection, it is unknown when and how empathy deactivates moral disengagement or vice versa, and if there are specific moral disengagement mechanism that are responsible for this deactivation. Further research is required for an in-depth understanding of this.

The pioneering research by Salmivalli and colleagues (1996) identified more roles involved in bullying than the perpetrator and victim. Indeed, the participant roles examined in most current literature have since gone beyond the perpetrator-victim dyad. Although this review has initially aimed to review individual participant roles, the existing literature suggested the existence of multiple and dual roles which should not be ignored. For example, while some studies showed that the experience of victimisation has some influence on moral disengagement and empathy, it was also noted that victims were prone to help other victims (Allison & Bussey, 2017). The dual role of victim-defender and their responses as bystanders should also be investigated further. While it is possible while empathy could lead to some

prosocial behaviours, the outcomes may not always be constructive, as some victims were found retaliate aggressively (Cuadrado-Gordillo & Fernández-Antelo, 2014).

Social Cognitive Theory (Bandura, 2002) has been instrumental in mapping out how empathy and moral disengagement interact at the individual and environment level in producing behaviours across various participant roles in both face-to-face bullying and cyberbullying. The differences in empathy and moral disengagement between face-to-face bullying and cyberbullying are largely due the number of socio-emotional cues available, with a notable deficit in the latter. The inability to understand how others feel and think may enable moral disengagement mechanisms (Wang et al., 2017), particularly victim blaming. On the other hand, it is also possible that a morally disengaged person might find it hard to understand the perspective and feelings of others (Robson & Witenberg, 2013). This needs to be disentangled for effective anti-bullying intervention strategies, particularly in cyberbullying.

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Empathic Efficacy and Cyberbullying Defending: Exploring the Influence of Cyberbullying Victimisation and Moral Disengagement

(may be submitted to Journal of Adolescent Research)

Keywords : Empathy, Empathic Efficacy, Moral Disengagement, Cyberbullying Defending, Cyberbullying Victimisation.

Abstract

Cyberbullying defenders are individuals who help those who they have seen cyberbullied, and they play an important role in stopping cyberbullying incidents and decreasing the negative mental health outcomes in victims. However, rates of cyberbullying defending are relatively low. Researchers have found that individuals with higher empathy, and those who have lower moral disengagement are more likely to defend. Yet, these factors have been studied independently from one another and findings on empathy, moral disengagement and their associations with cyberbullying defending remain inconsistent. In addition, cyberbullying victims have also been found to have a higher tendency to defend. Social Cognitive Theory suggests the importance of interactive influence between personal, behaviour and environmental factors cannot be overlooked. In this study, 540 grade 7 and 9 students completed a questionnaire that examined the link between cyberbullying defending with cyberbullying victimisation, empathic efficacy and moral disengagement. Results showed gender was significantly associated with cyberbullying perpetration, empathic efficacy and moral disengagement. Boys reported higher scores in cyberbullying perpetration and moral disengagement than girls. Girl reported higher scores in empathic efficacy than boys. In addition, cyberbullying victimisation and empathic efficacy were both predictors of cyberbullying defending. Cyberbullying victimisation moderated the effects of empathic efficacy on cyberbullying defending; the association between empathic efficacy and cyberbullying defending was significant at all levels (low, average and high) of cyberbullying victimisation; the association was stronger at higher levels of cyberbullying victimisation. These results suggest the experience of victimisation moderate the influence of empathic efficacy on cyberbullying defending.

Empathic Efficacy and Cyberbullying Defending: Exploring the Influence of Cyberbullying Victimisation and Moral Disengagement

Bullying is a repetitive and intentional act with harm inflicted by a perpetrator towards a victim, and there some level of power imbalance between the perpetrator and victim, with victims usually unable to defend themselves (Olweus, 1993) and in the context of cyberbullying, it is committed electronically (Tokunaga, 2010). Ybarra and Mitchell (2004) reported an overlap between an individual's involvement in face-to-face bullying and cyberbullying as those who are involved as a perpetrator in cyberbullying are usually also involved in face-to-face bullying. However, Quirk and Campbell's (2015) study showed that among those students who defended in face-to-face bullying, only 45% retained the same role in cyberbullying**.** Therefore, it is important to examine how correlates of bullying may be influenced by the special factors that operate in cyberspace.

A study conducted among 1602 American students aged 13 – 18 years found that 23% reported that they have been cyberbullied (Chapin & Coleman, 2017). The mental health outcomes of cyberbullying victimisation are often detrimental, as victims have reported anxiety (Coelho & Romão, 2018), depression (Gámez-Guadix, Orue, Smith, & Calvete, 2013; Kowalski & Limber, 2013; Trompeter, Bussey, & Fitzpatrick, 2018) lower self-esteem and other problematic behaviours (Kowalski & Limber, 2013; Ybarra & Mitchell, 2004). Among the few longitudinal studies, Hemphill, Kotevski,and colleagues' (2015) study examined involvement in cyberbullying and mental health and behavioural problems over a 24-month period. Their findings revealed that cyberbullying victimisation in Grade 10 students was linked to depressive symptoms in Grade 11 indicating the long-term impact of cyberbullying victimisation. However, these negative effects on victims can be alleviated when bystanders step in to defend the victims, as victims who were defended reported better adjustment (Sainio, Veenstra, Huitsing, & Salmivalli, 2011). Defending others who have

been cyberbullied can be in the form of direct defending (perpetrator-oriented); that is by confronting the perpetrator, or indirect defending (victim-oriented) which can be conducted by providing emotional support, giving advice, informing authorities or allowing victims to join their group. Yet, the number of bystanders who are willing to defend victims is relatively low (Hawkins, Pepler, & Craig, 2001) especially in cyberbullying incidents (Schacter et al., 2016).

Studies that have examined factors associated with defending behaviour in cyberbullying have found that it is more likely if the student is empathic (Zych et al., 2019), while some other studies have suggested that victimisation experiences may increase the tendency of a student to defend (Allison & Bussey, 2017). In addition, other studies have found that students who are morally disengaged tend not to defend those who are cyberbullied (Van Cleemput et al., 2014).

Empathy, Empathic Efficacy and Cyberbullying Defending

Empathy is the ability to identify with another person's emotional states (Singer & Klimecki, 2014) which includes a cognitive and affective component (Davis, 1994). Cognitive empathy, also known as perspective taking, refers to an individual's ability to understand what others are thinking, while affective empathy refers to the ability feel the emotions of others (Smith, 2006). Empathy includes a prosocial motive (Hoffman, 2000) and may directly motivate others to help in distress due to their ability to relate to others at both cognitive and emotional levels. In addition, Hoffman (2000) has proposed five empathy-arousing modes: role taking, direct association, mimicry, classical conditioning, and mediated association. These are essential for the activation of empathic behaviours. Within these modes, nonverbal cues that reflect the affective state of others play a crucial role for empathic arousal. For example, mimicry relies heavily on an involuntary imitation of other's expression (facial, vocal and musculature) and consequently produces an emotion in the

observer that matches the feelings of the victims. In the context of cyberbullying, empathic arousal may be challenged, due to the lack of socio-emotional cues in the online environment. Bystanders may miss out important details about the affective state of victims and such ambiguity could further dampen their motivation to intervene. Students have reported their reluctance to intervene when they are unsure of what has transpired between the perpetrator and victim (Forsberg et al., 2018).

Defending has typically been conceptualized as a prosocial behaviour, which has been shown to be associated with empathy (Hoffman, 2000), however, it is possible that it is also associated with empathic anger (Pozzoli et al., 2017). Empathizing with others could also be accompanied by other emotions such as empathic anger, guilt, and feelings of injustice, which are all important motivation forces that drive helping behaviours (Hoffman, 2000). As Hoffman (2000) suggested, the proneness to feel anger at a perpetrator comes from taking the victim's perspective and experiencing the emotional state of the victim. Similarly, empathic anger has been described as an important component to affective empathy and has been shown to be a significant mediator of the relations between empathy and bystander's behaviour in bullying (Pozzoli et al., 2017). However, more research is required to understand how empathic anger is associated with certain behavioural outcomes such as defending victims of cyberbullying, or if it may be associated with aggressive behaviours in defending.

Despite empathy being positively and significantly associated with prosocial behaviours, a weak association with the behaviour of defending those who have been cyberbullied has been observed. Among the studies that have investigated this relationship, the association found was weak although positive (Van Cleemput et al., 2014). Despite findings showing that empathy predicted defending behaviour in face-to-face bullying among 6^{th} – 8^{th} graders in United States (Nickerson et al., 2008), one study found that perpetrators,

and uninvolved students among university students did not differ in their empathy scores (Pfetsch, 2017). In other words, high empathy may not necessarily lead to defending behaviours; such discrepancy may be moderated by other variables. Two possible moderators could be moral disengagement (Wang et al., 2017) and victimisation experience (Allison & Bussey, 2017) as these two have been found to be independently correlated with cyberbullying defending. It is also noteworthy that empathy in these studies have been examined as an emotional construct that excluded the important element of self-efficacy belief in empathy.

Self-efficacy beliefs are the perception of the ability to achieve a desired goal using one's knowledge and skills and it is best understood as a domain specific (Bandura, 1986). In understanding cyberbullying defending behaviours, therefore, empathic self-efficacy which is described as the perceived ability to sense another person's emotional experience and to respond empathetically to other's distress (Eklund, Loeb, Hansen, & Andersson-Wallin, 2012), may play a crucial role in cyberbullying defending behaviours.

In line with this reasoning, a study conducted among Swedish students aged 15-16 years showed that empathic self-efficacy had a positive association with prosocial behaviours (Eklund et al., 2012). In addition, among behavioural self-efficacy beliefs, empathic self-efficacy has shown the highest correlations with prosociality (Alessandri, Caprara, Eisenberg, & Steca, 2009; Caprara, Alessandri, & Eisenberg, 2012). As noted by Caprara, Alessandri, di Giunta, Panerai, and Eisenberg (2010), it is less likely for people to help others, unless they believe that they are able to manage the emotions associated with the awareness of others' needs and take actions to meet those needs.

While Zych and colleagues (2019) reported there are currently very few studies that have examined empathy and cyberbullying defending; the association between empathic efficacy and cyberbullying defending behaviour is even more understudied. This necessitates

a further examination on the relationship between empathic efficacy and cyberbullying defending, specifically the inclusion of possible moderating variables such as moral disengagement as noted in (Wang et al., 2017).

Moral Disengagement and Cyberbullying Defending

Moral disengagement is a cognitive restructuring process through which individuals justify a harmful action which are against their moral standards. They use specific psychological processes to achieve this restructuring. Through the use of moral disengagement, individuals reassure themselves that their moral standards are not applicable to them in a specific context or situation. Bandura (1990) described eight mechanisms used for the justification of harmful conduct which are: moral justification (reframing their actions as serving a moral purpose), attribution of blame (claiming the victims as deserving of the harsh treatment), euphemistic labelling (sanitizing the conduct by using 'positive' words to detract from emotional intensity), advantageous comparison (downplaying the severity of the conduct compared to other harmful behaviours), displacement of responsibility (putting the responsibility on others), diffusion of responsibility (emphasizing that there are others with them in the group), disregard or distortion of consequences (downplaying the severity of the impact of their conducts on victims), and dehumanization (ignoring the victims' rights and humanity).

In the context of defending in cyberbullying, moral disengagement mechanisms have been shown to be often employed by bystanders in cyberbullying. Schacter and colleagues (2016) found that passive bystanders were more likely to blame victims particularly when victims over disclosed their personal information on their Facebook profiles and updates. Additionally, other studies have identified that cyberbullying bystanders engaged various other moral disengagement strategies such as diffusion of responsibility and distorting the consequences (DeSmet et al., 2014; Huang & Chou, 2010). For example, the passive

bystanders in a study among 7th – 9th grader in Taiwan conducted by Huang and Chou (2010) reasoned that they did not intervene because it was not their business and it was really 'no big deal'. Additionally, the available cues in the cyberspace were shown often ambiguous; which may be processed as threats or hostile (de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002; Pornari & Wood, 2010) and subsequently activated self-justification (Salmivalli & Nieminen, 2002) resulting in moral disengagement.

These findings cited above point to the possibility that characteristics of cyberspace may facilitate moral disengagement where the lack of online socio-emotional cues creates an emotional gap and limits the activation of self-regulatory behaviours (Runions & Bak, 2015). Studies have shown that moral disengagement is negatively associated with defending behaviours in face-to-face bullying (Caravita, Gini, & Pozzoli, 2012; Gini et al., 2015; Thornberg, Wänström, Hong, & Espelage, 2017) unconcerned bystanders scored higher in moral disengagement compared to defenders and guilty bystanders who did not do anything to help those who were bullied but felt guilty about it (Obermann, 2011). However, other quantitative studies have shown that moral disengagement has no significant association with defending behaviour in cyberbullying (Allison & Bussey, 2017; Perren & Gutzwiller-Helfenfinger, 2012). This discrepancy has not yet been fully explored, although there are suggestions that moral disengagement plays a lesser role in cyberbullying because of the lack of socio-emotional cues in cyberspace (Perren & Gutzwiller-Helfenfinger, 2012) or it could be due to the unexplored interactive influence with other correlates such as empathy.

It has also been argued that moral disengagement reduces empathy (Robson & Witenberg, 2013) because those with high moral disengagement may be more likely to justify their aggressive or morally inconsistent behaviours; and therefore, not be able to empathize with another's emotional state (Wang et al., 2017). This is supported by the negative

correlations found between empathy and moral disengagement (Barchia & Bussey, 2011; Haddock & Jimerson, 2017). According to Bandura and colleagues (1996), individuals construct moral standards which are used to guide their behaviours. Most people regulate their behaviours to be consistent with these standards to enhance their sense of self-worth and avoid self-censure. This can be achieved by using affective self-regulatory processes such as empathy. However, these self-regulatory processes can be activated and deactivated. There are various mechanisms, (for example, moral disengagement mechanisms) that allow individuals to selectively activate and deactivate internal controls that consequently enable them to act in ways that are against their moral conduct without guilt and self-censure. Taken together, these moral disengagement mechanisms may act to deactivate empathy. Additionally, the nature of cyberspace such as the lack of socio-emotional cues is thought to facilitate moral disengagement and decrease empathy.

In the context of cyberbullying, the consequences of lack of socio-emotional cues in cyberspace on defending are twofold. First, it may facilitate moral disengagement and consequently deactivate empathic responses through the use of moral disengagement mechanisms (Decety et al., 2009). This is supported by functional magnetic resonance imaging (fMRI) findings in a neuroscience study that showed attitudes of blaming decreases feelings of empathy for AIDS drug use targets in the study (Decety et al., 2009). In addition, a study conducted by Wang and colleagues (2017) showed that moral disengagement moderated the relationship between empathy and aggression. However, the negative association between empathy and aggression was found at low levels of moral disengagement, but not at high levels of moral disengagement.

Second, empathic arousal, which is dependent on socio-emotional cues, may be restrained to a minimal level in cyberspace, which can directly influence defending behaviours. This is crucial because previous research has found that empathy reduced the

activation of moral disengagement (Hyde et al., 2010). A study conducted by Bussey, Quinn, and colleagues (2015) showed that empathic concern weakened the activation of moral disengagement mechanisms in face-to-face overt aggression; conversely moral disengagement may also weaken the activation of empathic concern. Similarly, Thornberg and colleagues (2015) reported that the negative relationship between moral disengagement and defending those who have been bullied was only significant at low levels of moral emotions (which comprise sympathy, empathy, guilt for inaction and transgressive guilt) and it was suggested that strong moral emotions tend to override moral disengagement with behaviours in bullying.

Most of these findings are restricted to the study of aggression and defending in face-to-face bullying; it is unclear how this may be associated with cyberbullying defending. While Bandura and colleagues (1996) have explained how moral disengagement may reduce empathy, so far, there has been less discussion about how this tendency to morally disengage in cyberspace affects the relationship between empathy and defending in cyberbullying. Therefore, the interactive influences need to be accounted for to fully understand defending in cyberbullying.

Cyberbullying Victimisation and Cyberbullying Defending

Allison and Bussey (2017) found that cyberbullying victims were more likely to defend other victims in cyberbullying incidents. This is also supported by Van Cleemput and colleagues' (2014) study which found that individuals who had been victimized (face-to-face bullying or cyberbullying) reported a higher frequency of cyberbullying defending. According to Allison and Bussey (2017), this could be due to victim’s tendency to perceive witnessed cyberbullying incidents as more severe which then motivates them to defend the victim. Indeed, ambiguity in the online communication may lead to attribution error as noted by Runions and colleagues (2013) and therefore may increase cyberbullying defending.

Empathy and Cyberbullying Victimisation

Bullying is a group phenomenon (Salmivalli et al., 1996) that is highly dependent on person, social, and contextual factors and involves multiple roles. Salmivalli and colleagues (1996) showed that participant roles in bullying are not mutually exclusive; dual roles can exist. For example, a victim may also be a perpetrator, bystander or defender. In a study conducted by Rivers, Poteat, Noret, and Ashurst (2009), 1.3% participants self-reported as perpetrator-victim, 6.7% as perpetrator-bystander, 15.2% as both victim-bystander while 10.7% as perpetrator -victim- witness. In the same vein, a meta-analysis study conducted by Kowalski and colleagues (2014) observed a moderate correlation between perpetration and victimisation in cyberbullying (*r=.51)*. The nature of the cyberspace may facilitate the overlap of roles in cyberbullying easily especially when online messages posted on online public domains can be exposed to an indefinite number of viewers for an indefinite period. Frequency of exposure to online environments and the ease of forwarding and spreading any messages posted online in return creates a vast opportunity for online users to be exposed to and involved in cyberbullying. For example, unlike overt aggression in face-to-face bullying where individuals are required to be present physically to be a witness; cyber users (who could have been involved as a perpetrator or victim previously) could witness a cyberbullying incident when the original material is being reposted. This may further allow them to respond to the cyberbullying incident in a different role (such as defender).

Emerging studies are showing that victims were found to be more likely to defend others (Allison & Bussey, 2017), therefore the victim-defender role requires further exploration. Victims may be able to empathize more with what other victims based their personal experience. Indeed, defending has been shown to be positively associated with victimisation (Barchia & Bussey, 2011; Batanova, Espelage, & Rao, 2014; Pozzoli, Gini, & Vieno, 2012). As stated earlier, mimicry is one of the five modes for empathic arousing

which allows bystander to produce the matching feelings with victims. This mode could be weakened due to the lack of socio-emotional cues in cyberspace. Therefore, the other empathic-arousing mode proposed by Hoffman (2000) such as direct association, may play an important role for empathic arousal where the explicit signs of cyberbullying observed by individuals may serve as a reminder of their own victimisation experience and trigger feelings that are similar to the victims of cyberbullying. It is possible that past victimisation may provide conditions that easily facilitate empathic arousal towards other victims Hoffman (2000). Therefore, the experience of cyberbullying victimisation may moderate the relationship between empathy and cyberbullying defending.

Moral Disengagement and Cyberbullying Victimisation

Due to their personal victimisation experience, victims are thought to be more aware and sensitive towards moral violations (Perren & Gutzwiller-Helfenfinger, 2012; Pornari & Wood, 2010). Consistent with this view, Perren and colleagues (2012) study found that victims reported lower moral disengagement. However, there are other studies that have a found positive relationship between cyberbullying victimisation and moral disengagement (Allison & Bussey, 2017), and others found no significant relationship in the context of face-to-face bullying (Gini, 2006). In a recent meta-analysis study conducted by Killer and colleagues (2019) that examined the relationship between moral disengagement and various participant roles in bullying, the results showed a positive relationship between moral disengagement and victimisation. Although the relationship was an extremely weak one (*r=0.08),* the authors noted that the relationship was stronger for cyberbullying victimisation (*r=0.17*) compared to face-to-face victimisation (*r=.06*). While it is possible that victims who showed higher levels of moral disengagement may also be perpetrators, the interactive effects of moral disengagement and cyberbullying victimisation on cyberbullying defending is currently unknown and requires further examination.

The Present Study: Aims and Hypotheses

Although previous studies have examined empathy in relation to cyberbullying defending, the present study will measure empathic efficacy. According to Bandura (1997), behaviours are determined by the belief in one's capability to perform the given behaviour towards an expected outcome. Efficacy beliefs are important because individuals will not be motivated to act if they do not believe in their capability to do so; additionally, self -efficacy is should be examined as domain specific (Bandura, 1997). Similarly, it is the individual's belief in their capability to understand others that will motivate them to act as defenders; for these reasons, empathic efficacy belief is measured in this study.

This study aims to fill the gap in the literature by examining the influence of empathic efficacy, moral disengagement and cyberbullying victimisation on cyberbullying defending. By adopting a social cognitive approach, it also aimed to explore the interactive influences of these variables to understand how the association between empathic efficacy and cyberbullying defending could be moderated by moral disengagement and cyberbullying victimisation experience.

Previous studies have shown that defending is positively associated with empathy (Gini et al., 2007) and victimisation (Barchia & Bussey, 2011; Batanova et al., 2014; Pozzoli et al., 2012); and negatively associated with moral disengagement (Barchia & Bussey, 2011). Therefore, it was hypothesized that cyberbullying defending will be positively associated with empathic efficacy (H1) and cyberbullying defending will be also be positively associated with cyberbullying victimisation (H2). Cyberbullying defending was expected to be negatively associated with moral disengagement (H3). It was also hypothesized that cyberbullying victimisation will moderate the association between empathic efficacy and cyberbullying defending, that is a positive association between empathic efficacy and cyberbullying defending was expected to be stronger at higher levels

of cyberbullying victimisation (H4). Moral disengagement was expected to moderate the association between empathic efficacy and cyberbullying defending; that is, the positive association between empathic efficacy and cyberbullying defending would be strongest at lower levels of moral disengagement (H5). Based on the view that victims may be more aware of moral violation (Perren et al., 2012), the positive association between cyberbullying victimisation and cyber defending is expected to be stronger at lower levels of moral disengagement (H6). In addition, a three-way interaction was expected where cyberbullying defending is highest when empathic efficacy and cyberbullying victimisation are high, and moral disengagement is low (H7). As previous studies have reported gender and grade differences in cyberbullying (Van Cleemput et al., 2014), grade and gender differences in participant roles: cyberbullying perpetration, victimisation and defending; as well as in empathic efficacy and moral disengagement were also examined although they were not the primary foci of this study. If differences are found, gender and grade will be controlled in further data analysis.

Method

Participants

Participants were 540 students, including 344 students from Grade 7 (194 female; M_{age} = 12.65, SD = .42), and 196 students from Grade 9 (110 female; M_{age} = 14.63, SD = .45). Students were recruited from 14 independent, co-educational schools in New South Wales. The sample identified as Anglo/Celtic (67.2%), European (15.9%), and East/South East Asian (6.7%) and were mostly from an upper middle-class socioeconomic status (Australian Curriculum Assessment and Reporting Authority, 2016).

Measures

Cyberbullying participant roles. A modified version of the Cyberbullying Questionnaire (CBQ) by Allison and Bussey (2017), which was based on a revision of the

CBQ by Gámez-Guadix, Villa-George and Calvete (2014), was used to assess the frequency with which participants were involved in cyberbullying as perpetrators, victims, bystanders and defenders.

Cyberbullying perpetration and victimisation. The revised CBQ by Gámez-Guadix and colleagues (2014) was used to measure the frequency of perpetration and victimisation in cyberbullying. Prior to completing the questions, the definition of bullying adapted from Olweus (1993) was stated. To measure perpetration, participants were asked to rate "How often in the last school term have you performed the following behaviours", followed by a list of 14 cyberbullying behaviours (e.g. "I have sent threatening or insulting messages"). Participants rated each cyberbullying behaviour on a six-point Likert scale from 1 (it hasn't happened at all) to 6 (many times a week). The victimisation scale consists of 9 items which are similar to the perpetration scale, except that participants answered from the perspective of being the victim. Participants rated "How often in the last school term have the following behaviours happened to you". The reported Cronbach's alpha for the perpetration scale was .79 (Gámez-Guadix et al., 2014) and in this study Cronbach's alpha = .79. The reported Cronbach's alpha for the cyberbullying victimisation scale was .74, in this study Cronbach's alpha = .87.

Cyberbullying defending. Defending behaviours were measured using a scale created by Allison and Bussey (2017) , which was based on the perpetration subscale of the revised CBQ (Gámez-Guadix et al., 2014). The defending scale includes the same items as the perpetration scale but altered so that it was asked from the perspective of the defenders. Participants were asked, "How often in the last school term did you try to help other kids after the following things had happened to them", followed by 14 items and a response scale which were similar to that used by Gámez-Guadix and colleagues (2014). The reported

Cronbach's alpha for the scale was = .95 (Allison & Bussey, 2017), and in this study Cronbach's alpha = .92.

Empathic Efficacy. Empathic efficacy was measured using the Empathic Self-Efficacy scale adapted from Barchia & Bussey (2011), which was based Bryant's (1982) affective empathy scale. Affective empathy is defined as "vicarious emotional response to the perceived emotional experiences of others" (Bryant, 1982, p. 414). Participants were asked "How well can you" followed by 9 items. An example of the items asked is "Feel the same as the person in trouble feels when they are experiencing it". Participants rated each item on a 4-point Likert scale from 1 (not well at all) to 4 (very well). Clark (2017) reported Cronbach's alpha = .82. In this study Cronbach's alpha =.82.

Moral disengagement. Moral disengagement was measured using the Cyber Bullying Moral Disengagement Scale developed by Bussey and Fitzpatrick (2014), which was adapted from the Mechanisms of Moral Disengagement scale developed by Bandura and colleagues (1996) to reflect the cyber context. This scale consisted of 16 items, with each of the eight moral disengagement mechanisms represented by two items. Students were asked to show how much they agreed with each statement by rating their response on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). A sample item from this scale includes "Posting a mean message about a cyberbully is just to teach them a lesson". Total scores were obtained by summating individual items, with higher scores indicating greater individual moral disengagement. Allison and Bussey (2017) reported Cronbach's alpha as .91. In this study, Cronbach's alpha = .90.

Procedure

Ethics approval was granted by the Macquarie University Human Research Ethics Committee (see Appendix A). Consent to conduct the study was obtained from school principals and parents at the participating schools (see Appendix B for consent forms).

Students completed the survey supervised by a teacher or researcher. Among the participants, 83% completed the survey online (*n*= 446), while the remaining participants completed the paper version (*n*= 94) at the participating school's request. Participants were seated apart to ensure confidentiality and reminded to remain silent throughout the session. Participants whose parents had returned the completed consent form were provided with an identification number and login code to access the survey. Once they logged in to the survey, an online consent form was provided, and participants were required to agree to participate. A paper consent form was given to those students completing the paper survey.

Participants firstly answered questions pertaining to demographics. After completing the survey, participants were given a debrief statement, which advised that they could contact the researcher to indicate if they were distressed while completing the survey and if they wished to speak to the school counsellor.

Data Management

Missing data. All items used in this study had a small proportion of missing data, ranging between 0.06% to 7.59%. Missing data were imputed using the expectation-maximization (EM) procedure in SPSS as it is deemed as an effective method when imputing data that are not completely missing at random within a linear model (Schafer & Graham, 2002).

Results

Data Analytic Strategy

First, multivariate analysis of variance (MANOVAs) was used to examine grade and gender effects on the dependent variables. Second, correlations between all variables were conducted. Lastly, a hierarchical regression analysis was conducted to examine the associations between empathic efficacy, cyberbullying victimisation, moral disengagement and cyberbullying defending. An alpha of .05 was used for all analyses.

Gender and Grade Effects

Multivariate analyses of variance (MANOVA) were run to explore potential gender and grade differences on all variables. Results are presented in Table 1. The dependent variables were cyberbullying defending, victimisation, perpetration, empathic efficacy and moral disengagement. The MANOVA design was 2 (Grade) x 2 (Gender). When significant multivariate effects were obtained, the univariate analyses were subsequently examined to isolate the effects for each variable separately.

There was a significant multivariate effect for gender ($F_{5,532} = 9.49$, $p < .001$, partial $\eta^2 = .082$). Univariate analyses revealed significant gender differences for cyberbullying perpetration, empathic efficacy and moral disengagement. As shown in Table 1, boys reported higher scores for cyberbullying perpetration than did girls, ($F_{1,536} = 14.89$, $p < .001$, partial $\eta^2 = .027$). Meanwhile, girls reported higher scores on empathic efficacy than did boys, ($F_{1,536} = 10.78$, $p = .001$, partial $\eta^2 = .020$). For moral disengagement, boys reported higher levels than did girls, ($F_{1,536} = 33.77$, $p < .001$, partial $\eta^2 = .059$). There was no multivariate effect for grade, ($F_{5,532} = 1.66$, $p = .144$, partial $\eta^2 = .015$).

Table 1

Estimated Marginal Means and Standard Errors for all Variables

	Boys EM (SD)	Girls EM (SD)	*F*
CB defending	20.034 (.548)	19.518(.484)	.497
CB victimisation	11.838 (.316)	11.543(.278)	.492
CB perpetration	17.456(.476)	15.006(.420)	14.893*
Empathic Efficacy	26.373(.299)	27.681(.264)	10.777*
Moral Disengagement	27.012(.645)	22.011(.569)	33.756*

Note: CB = cyberbullying
* $p \leq .001$

Correlations between Measures.

Partial Pearson Correlations among all variables are presented in Table 2. As MANOVA results have shown gender effects on some of the variables, partial Pearson Correlations

controlling for gender were used to examine the relationship between the variables, cyberbullying victimisation was positively correlated with cyberbullying defending, cyberbullying perpetration and moral disengagement. Cyberbullying defending was positively correlated with empathic efficacy, moral disengagement and cyberbullying perpetration. Additionally, cyberbullying perpetration was positively correlated with empathic efficacy and moral disengagement. Correlation between moral disengagement and empathic efficacy, and cyberbullying victimisation and empathic efficacy were not significant.

Table 2

Partial Pearson Correlations for all Independent and Dependent Variables Controlling Gender

Variables	1.	2.	3.	4.	5.
1. CB victimisation	–				
2. CB defending	.54*	–			
3. CB perpetration	.50*	.32*	–		
4. Empathic efficacy	-.05	.15*	-.15*	–	
5. Moral Disengagement	.35*	.27*	.47*	-.05	–

Note: CB = cyberbullying
*$p \leq .001$

Associations between Empathic Efficacy, Cyberbullying Victimisation, Moral Disengagement and Cyber Defending.

Hierarchical regression analysis was used to investigate the effects of empathic efficacy, cyberbullying victimisation and moral disengagement on cyberbullying defending. To examine the moderating role of moral disengagement and cyberbullying victimisation, bootstrapped bias-corrected 95% confidence intervals with 5000 bootstrapped samples was used as continuous measures were positively skewed, following the recommendation by

Russell and Dean (2000) and Preacher and Hayes (2004). Gender was entered as a control variable since the MANOVA results indicated gender differences on some of these variables. Cyberbullying perpetration was also included as previous studies have reported that it was correlated with defending in cyberbullying (Van Cleemput et al., 2014). This is consistent with correlation analyses in the present study, which showed a positive correlation between cyberbullying defending and cyberbullying perpetration ($r = .32$, $p < .001$). Before this analysis was run, all continuous variables were transformed to mean-centred variables. The interaction terms were then computed by multiplying these mean centred variables.

A seven-step model was created where gender was entered as step one and cyberbullying perpetration was entered as step two. Empathic efficacy, victimisation and moral disengagement were entered as step three, four and five, respectively. The three two-way interaction terms were added together at step six. Lastly, the three-way interaction between empathic efficacy, cyberbullying victimisation and moral disengagement was entered at step seven.

Table 3 displays the results of the regression analysis. The analysis was run as a three-way interaction, but it did not add to the overall variance of the model. As the three-way interaction in Step 7 did not significantly increase the predictive value of the model ($\Delta R^2 = .003$, $F_{1,529} = 2.86$, $p = .092$), the analysis for the sixth step is reported here. This model accounted for 40.9% of the variance in cyberbullying defending scores. The overall model was significant ($F_{3,530} = 22.64$, $p < .001$). Cyberbullying perpetration (B= .196, $p = .017$), empathic efficacy (B = .309, p = .001), and cyberbullying victimisation (B= .939, $p = .001$) emerged as significant individual predictors of cyberbullying defending. Specifically, those with higher empathic efficacy reported more frequent cyberbullying defending. Similarly, those who had more frequent experience as cyberbullying victims reported more frequent cyberbullying defending. Also, those who had more experience as cyberbullying perpetrators

reported more frequent cyberbullying defending. However, moral disengagement was not a significant predictor of cyberbullying defending.

Furthermore, the interaction between empathic efficacy and cyberbullying victimisation (B = .051, p = .002) was also significantly associated with cyberbullying defending. As the three-way interaction did not significantly increase the predictive value of the model; this interaction between empathic efficacy and cyberbullying victimisation was further examined using PROCESS. The overall model was significant ($F_{8,531}$= 45.16, p <.001). Simple slopes were calculated at one standard deviation above and below the mean for cyberbullying victimisation. This analysis revealed that empathic efficacy was positively associated with cyberbullying defending at all levels of cyberbullying victimisation that was at low (B =.173, t =2.46, p =.014), average (B = .309, t = 4.94, p <.001) and high (B =.546, t = 7.14, p <.001) levels, but it was stronger at higher levels of cyberbullying victimisation; that is, the more frequent the cyberbullying victimisation, the more that empathic efficacy was related to cyberbullying defending. Figure 1 shows the results of the simple slopes analysis of the interaction between empathic efficacy and cyberbullying victimisation.

Table 3

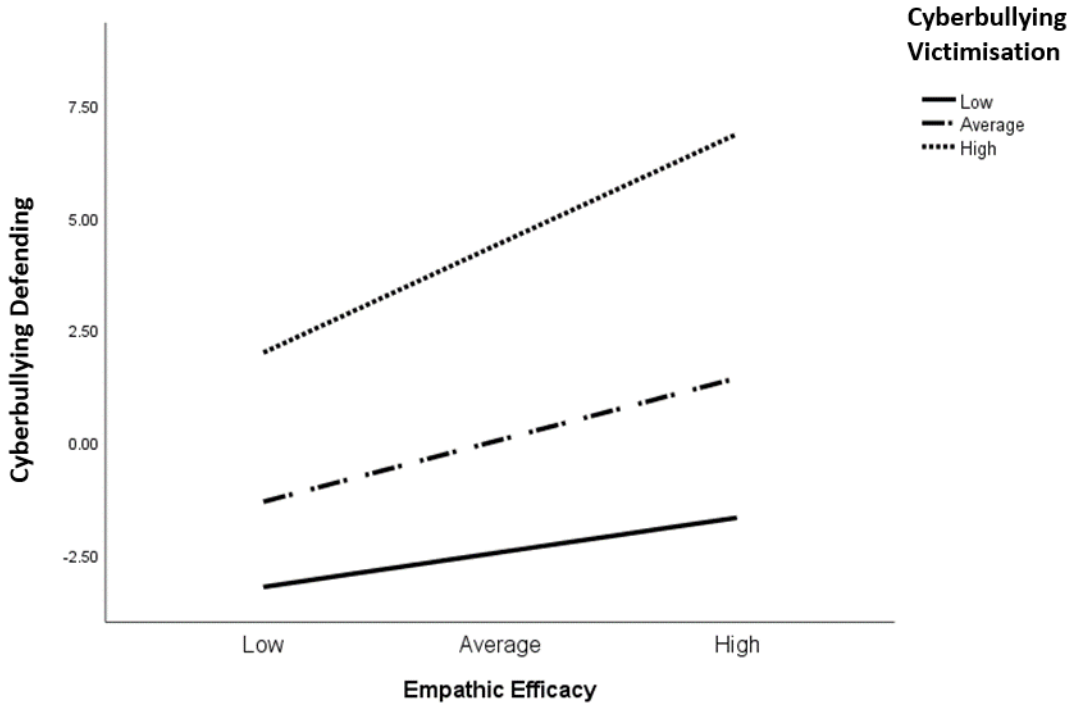
Hierarchical Regressions Examining Associations between Empathic Efficacy, Cyberbullying Victimisation, Moral Disengagement and Cyberbullying Defending

	Cyber Defending							
Variable	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	95% CI
Gender	-.333	.588	.206	-.279	-.026	.032	.044	[-1.84,1.088]
Cyberbullying perpetration	-	.365*	.399**	.110	.073	.196*	.182**	[.135,.734]
Empathic Efficacy (EE)	-	-	.365***	.341***	.338***	.309***	.284***	[.186, .540]
Cyberbullying victimisation (CV)	-	-	-	.871***	.850***	.939***	.931***	[.653,1.120]
Moral disengagement (MD)	-	-	-	-	.069*	.065	.063	[.007,.130]
EE x CV	-	-	-	-	-	.051**	.030	[.011,0.81]
EE x MD	-	-	-	-	-	.012	.009	[-.004,.021]
CV x MD	-	-	-	-	-	-.007	-.005	[-.024,.006]
EE x CV x MD	-	-	-	-	-	-	.001	[-.001,.003]
Total R^2	.000	.100***	.139***	.328***	.333*	.409***	.412	
ΔR^2	.000	.100	.039	.189	.005	.076	.003	

Note. Variables were bootstrapped. Gender was coded 0=Male, 1=Female.
*$p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Figure 1

Cyberbullying Defending as a Function of Empathic Efficacy and Cyberbullying Victimisation



Discussion

This present study builds on previous research by investigating cyberbullying defending from a social cognitive perspective. It explored the interactive influence of empathic efficacy, cyberbullying victimisation and moral disengagement on cyberbullying defending. Cyberbullying victimisation and empathic efficacy were independently associated with cyberbullying defending; that is, those with more experience as a cyberbullying victim as well as those who scored higher on empathic efficacy reported more frequent defending in cyberbullying incidents. In addition, cyberbullying victimisation was shown to be associated with empathic efficacy, which affects cyberbullying defending. Specifically, empathic efficacy was positively associated with cyberbullying defending at all levels of cyberbullying victimisation, and this association was stronger at higher levels of cyberbullying

victimisation. This effect was significant even in the presence of other variables (gender, grade, cyberbullying perpetration and moral disengagement).

Empathic Efficacy, Cyberbullying Victimisation and Moral Disengagement Influence

Consistent with hypothesis 1, empathic efficacy was positively associated with cyberbullying defending. This is consistent with previous studies that have found empathy was positively associated with defending in cyberbullying (Erreygers et al., 2016; Machackova, Dedkova, Sevcikova, & Cerna, 2018). This is in line with empathy theories such as one proposed by Hoffman (2000) which suggested that empathy is associated with prosocial behaviours. It is thought that such ability to 'feel as' and 'feel for' the victims is what motivates defenders to intervene in situations that are perceived as disadvantageous and harmful to the victims.

Consistent with hypothesis 2, cyberbullying victimisation was positively associated with cyberbullying defending. Specifically, those who had more experience as cyberbullying victims reported more frequent cyberbullying defending This aligns with previous studies that have found that victims are more willing to defend others in cyberbullying episodes (Allison & Bussey, 2017; Van Cleemput et al., 2014). Online communication is often characterised as ambiguous due to the deficit in socio-emotional cues, which is thought to be responsible for the lack of empathy displayed online (Runions & Bak, 2015). Individuals who had been previously victimized are shown to have the tendency to process ambiguous information as threatening and more severe; consequently, they may be more driven to defend (de Castro et al., 2002; Runions & Bak, 2015).

Interestingly, this study showed that cyberbullying perpetration was positively associated with cyberbullying defending. This is consistent with Huitsing, Snijders, Van Duijn, and Veenstra (2014) who showed that perpetrators could also be defended by their in-group members against victim's reaction or even retaliation. Students could behave

differently in different situations and toward different group of friends, as Huitsing and Veenstra (2012) pointed out, some students could be defenders for their own in-group but they may also bully other classmates who were not part of their in-group. However, this positive association between cyberbullying perpetration and defending may also possibly be a form of defending that involves punishing the perpetrator by cyberbullying them. More research is required to examine this possibility.

Contrary to hypothesis 3, moral disengagement did not have a significant main effect on cyberbullying defending despite suggestion that moral disengagement predict defending in face-to-face bullying (Barchia & Bussey, 2011), Killer and colleagues (2019) reported a positive association between moral disengagement and cyberbullying defending in their meta-analytic study. However, it is consistent with results of previous studies that have found no effect of moral disengagement on cyberbullying defending (Allison & Bussey, 2017; Perren & Gutzwiller-Helfenfinger, 2012). Runions and Bak (2015) proposed that the online communication features may facilitate moral disengagement, however, Allison and Bussey (2017) suggested that perhaps moral disengagement is less important in mediated communication as the lack of socio emotional cues may impair users' empathy (Runions & Bak, 2015), and thereafter their decision to defend. In addition to that, Runions, Shapka, Dooley, and Modecki (2013) have highlighted some important functions of the Information Communication Technology (ICT) that may influence how online information are processed. Among other functions discussed, the authors suggested that features of online communication contribute to the paucity of social cues which influences both social information encoding and interpretation process. In addition, the use of emoticons (which are pictorial representations for emotion/facial expression cue in online communication) increases ambiguity (Runions et al., 2013). For example, when a negative message is accompanied by a positive emoticon (e.g., '😊' smiley face emoticon), observers can

perceive that as a joke (Runions et al., 2013). Such ambiguity may affect decisions to defend, regardless of levels of moral disengagement.

Consistent with hypothesis 4, the interaction between empathic efficacy and cyberbullying victimisation was significantly associated with cyberbullying defending; a stronger positive association between empathic efficacy and cyberbullying defending was observed at higher level of cyberbullying victimisation. This result is consistent with studies that have linked empathy (Erreygers et al., 2016; Machackova et al., 2018), victimisation (Barchia & Bussey, 2011; Batanova et al., 2014; Pozzoli et al., 2012; Van Cleemput et al., 2014) and defending behaviour in the past. Observers of cyberbullying are constantly involved in making moral judgements and decisions in response to the perceived perpetrators' violation of moral standards. Although there are many factors that could lead to the action and inaction of observers, emotions play an important role in judgment and decision making; such emotions usually stem from personal experience (Turiel & Killen, 2010). Individuals who have been victimized may be able to relate to other victims based on shared experience. The empathic experience of victimized individuals towards other victims may be additionally fuelled by empathic anger and feelings of injustice, which leads them to make a moral decision to intervene. This is supported by the notion proposed by Hoffman (2000), that empathy is driven by sympathetic distress, empathic anger, empathic feelings of injustice or even guilt, all of which are components of a motivational force for prosocial behaviour. Similarly, research has shown that cyberbullying victimisation is associated with anger, fear, frustration and sadness (Beran & Li, 2007; Dehue, Bolman, & Völlink, 2008; Patchin & Hinduja, 2006). Indeed, empathic anger was also found to be positively related to defending behaviour and negatively related to bystanding behaviour (Pozzoli et al., 2017). Specifically, Pozzoli and colleagues' (2017) findings support Hoffman's (2000) idea that the propensity to empathize with victims is linked to empathic anger. Additionally, although

online messages could be ambiguous in nature, studies have found that individuals who have been victimized may process vague information as purposefully hostile (Ziv, Leibovich, & Shechtman, 2013) and may respond by defending others. These findings point to the possibility that personal experience together with the various modes of empathic arousal (Hoffman, 2000) available in the online environment may increase the tendency for cyberbullying victims to defend other victims. Although consistent with previous findings, cyberbullying victim's empathy and identification with other victims should be further examined. Empathy can lead to over-identification with victims. When combined with a sense of moral anger and injustice, defending behaviours can turn destructive, as defenders may set to punish the perpetrators (Bloom, 2016). Furthermore, as suggested by Pozzoli and colleagues (2017), it is crucial to investigate if empathic anger is associated with punishing the perpetrator. In the same vein, emerging studies also reveal that victims can act aggressively towards perpetrators (König et al., 2010). This raises concern regarding whether defending can be manifested in aggressive behaviours. In this context, empathy may not always lead to constructive defending; therefore, the antisocial side of empathy in cyberbullying defending requires examination (Bloom, 2017; Zaki & Cikara, 2015). It is noteworthy that although the deficit in socio-emotional cues in the online environment is thought to dampen empathic arousal which is responsible for prosocial behaviours (Hoffman, 2000), it is important to note that nonverbal cues are not the only mode for empathic arousal to activate prosocial behaviours. Hoffman, (2000) stressed the importance of the combination of many modes for empathic arousal in prosocial behaviours. These modes include classical conditioning, mediated association (communicated through language), role taking (putting oneself in other's position) and direct association (cues in the victims' situation which remind observers of their own similar experience). It is possible that these modes, which are

available in online communication, can collectively contribute to empathic arousal in cyberbullying defending.

Again, contrary to hypotheses 5 and 6, there was no significant interaction between moral disengagement and empathic efficacy or between moral disengagement and cyberbullying victimisation. Additionally, no significant three-way interaction between empathic efficacy, cyberbullying victimisation and moral disengagement was observed in this study, counter hypothesis 7. This finding, however, is contrary to other research. For example, Robson and Witenberg (2013) suggested, that moral disengagement may deactivate empathy; as individuals who score highly on moral disengagement may be more likely to justify their aggressive or morally inconsistent behaviours and not be able to empathize with another's emotional state (Wang et al., 2017). It is also counter to findings from the study conducted by Wang and colleagues (2017) that showed moral disengagement moderated the relationship between empathy and face-to-face aggressive behaviour among Chinese juvenile delinquents. Further, empathy was also found to moderate the relationship between moral disengagement and aggression in face-to-face bullying (Bussey, Quinn, et al., 2015). The authors found that at high levels of empathy, the association between moral disengagement with aggression was weaker. This showed that as individuals are more able to empathize with victims it is harder to activate moral disengagement mechanisms (Bussey, Quinn, et al., 2015). Although, there are no previous studies that have examined nor concluded findings on the interactive influence between empathic efficacy and moral disengagement on cyberbullying defending, nonetheless, it is consistent with some studies that have found that moral disengagement was not associated with defending behaviours (Allison & Bussey, 2017; Perren & Gutzwiller-Helfenfinger, 2012).

Group Differences in Cyberbullying Defending

No grade and gender difference in cyberbullying defending emerged in this study. This is consistent with some studies that found no age (Macháčková, Dedkova, Sevcikova, & Cerna, 2013) and gender (Macháčková et al., 2013; Van Cleemput et al., 2014) differences in cyberbullying defending behaviours. This result indicates the possibility that gender and age may play a lesser role in predicting defending behaviours in cyberbullying. However, it is contrary to some findings (Allison & Bussey, 2017) which have found both gender and grade difference in defending. The reasons behind these inconsistencies remain unclear. However, the present study results also showed that girls demonstrated higher scores in empathic efficacy than boys. This supports previous studies that have found that girls reported higher scores in empathy (Cohen & Strayer, 1996; van Noorden, Cillessen, Haselager, Lansu, & Bukowski, 2017). Baron-Cohen (2005) suggested that the development of empathy is dependent on culture and socialization, which may explain the inconsistent findings on gender differences in empathy. In the present study, while girls also reported lower moral disengagement than boys, and may be more willing to report empathy, adhering to stereotypical gender roles (Eisenberg & Lennon, 1983), it was not reflected in their defending tendencies compared to boys in the present study.

Strengths and Limitations

Using a social cognitive framework that emphasizes reciprocal determinism, this study was the first to explore interactive influences of empathic efficacy, moral disengagement and cyberbullying victimisation on defending in cyberbullying. This was done by controlling gender and other cyberbullying involvement. In addition, cyberbullying involvement roles were determined using a validated measure, which enabled participants to report different types of involvement in cyberbullying simultaneously. This enabled multiple participant roles to be measured and controlled in this study, which was important due to the

high correlations among participant roles in the cyberbullying world. Moral disengagement was assessed in reference to cyberbullying, increasing its relevance to the context of the behaviour being studied.

The interaction between empathic efficacy and cyberbullying victimisation was found to be associated with cyberbullying defending in this study, supporting the hypothesis that past experiences as victims and the ability to identify with others' emotional state and perspective may promote defending in cyberbullying. Victims may be able to understand situations faced by other victims in cyberbullying incidents, based on their personal experiences. This study also observed a possible dual role: victims -defenders in cyberbullying, indicated by the positive association between victimisation and defending scores. It is possible that the frequency of cyberbullying victimisation enables them to recall the cyberbullying incidents more vividly, and therefore they are more able to understand and have a higher tendency to help. The findings of this study on empathic efficacy's effect on cyberbullying defending further show the importance of interventions that focus on boosting empathic efficacy. One of the key benefits of measuring empathic efficacy is that there are prescribed ways to boost self-efficacy based on Social Cognitive Theory. Findings by Singh and Bussey (2011) highlighted the importance of increasing self-efficacy among children for proactive behaviours and emphasized the four processes proposed by Bandura (1997) to increase various types of self-efficacy (e.g., empathic efficacy) which includes verbal persuasion, mastery experience, vicarious experience, and physiological states. It is believed that with increased self-efficacy, individuals will be able to respond more confidently (Singh & Bussey, 2011); likewise, boosted empathic efficacy may enable individuals to understand the emotional state and the distress of others and therefore act as defenders.

However, this study is not without its limitations. First, although different roles in cyberbullying were measured, it was measured in the unit of frequency. A qualitative study to

indicate the type of defending behaviours (constructive or destructive defending) would have been more helpful for a deeper understanding of cyberbullying defending behaviours. As previous studies have found, victims could also retaliate aggressively; it is thus important to determine the nature of these defending behaviours. This was beyond the scope of the measurement used in this study, therefore further research should investigate the different types of defending behaviours in cyberbullying. It would also be ideal to include factors such as intentions for defending as Bloom (2017) suggested that empathy could lead to biased decisions that can harm others instead. Therefore, it would also be useful to examine and categorize empathy as prosocial empathy and antisocial empathy in the context of cyberbullying.

Additionally, because of the cross-sectional nature of the data, it was not possible to examine the directions of the observed association between the variables measured in this study. For example, while cyberbullying defending was found to be positively associated with cyberbullying victimisation, it may be that defending has caused individuals to be victimized. Future research is needed to establish the causal direction linking these two variables. A longitudinal study design would be able to clarify this relationship. Since the definition of bullying and cyberbullying was provided and student's involvement was also explicitly asked in the survey, there is a potential response bias among participant as answers could be affected by social desirability bias. Also, it should be noted that there could be a potential limitation to the generalisability of the findings due to the nature of the sample recruited among upper middle-class population.

Conclusion

Despite the above limitations, this study has contributed significantly to the current body of literature in the area of defending in cyberbullying. This study was the first to examine interactive effects of empathic efficacy and cyberbullying victimisation on defending behaviours in cyberbullying, with the results suggesting that cyberbullying victimisation may moderate the effects of empathic efficacy and cyberbullying defending. Moreover, it has preliminarily examined the association between cyberbullying victimisation and cyberbullying defending. Future studies could aim to further clarify the types of defending behaviours that cyberbullying victims engage in, as studies have indicated that victims could also retaliate aggressively. This will provide a foundation for researchers to understand and break the vicious cycle of perpetration-victimisation in cyberbullying and integrate the results of such research into anti-bullying programs.

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Appendices

Appendix A: Ethics Approval

Appendix A – Ethic Approval

an amendment

APPROVED
By Fran Thorp at 3:20 pm, Jan 17, 2017

Fran Thorp

Kay Bussey

Wed 21/12/2016 5:24 PM

To:Ethics Secretariat <ethics.secretariat@mq.edu.au>;

Cc:Sally Fitzpatrick <sally.fitzpatrick@mq.edu.au>;

2 attachments (335 KB)

Amendment 2017 - updated.docx; Information Sheets and Consent Forms 2017.docx;

Dear Ethics Secretariat,
Please find attached an amendment form and consent letters for project Ref. 5201401142.
Thank you for your consideration of this amendment.
Merry Christmas and all the best to you all for the New Year.
Regards, Kay.

Appendix B: Consent Forms

Consent Forms

Principal Consent

MACQUARIE University
SYDNEY·AUSTRALIA

Department of Psychology
Faculty of Human Sciences
MACQUARIE UNIVERSITY
NSW 2109 **Phone: +61 (02) 9850 8085** Fax: +61 (02) 9850 8062 Email: kay.bussey@mq.edu.au

"Factors Associated with Cyberbullying"

Dear Principal,

We are seeking permission for children in Grades 7 and 9 to participate in a longitudinal research project entitled "Factors Associated with Cyberbullying". The aim of this research is to investigate factors that are associated with children being mean to each other in their cyber interactions. We anticipate the results of this study will be of benefit to your school in planning strategies to reduce bullying and victimisation.

Approval to conduct the study has been granted by the Macquarie University Human Research Ethics Committee. This research is being conducted by the following students: Aileen Luo and Madeleine Clarke as part of their Bachelors of Psychology (Honours), and Veronica Sheanoda. as part of her Masters of Research degree at Macquarie University. Aileen, Veronica, and Madeleine are supervised by Dr Sally Fitzpatrick (phone: 02 9850 8097, email: sally.fitzpatrick@mq.edu.au) and Associate Professor Kay Bussey (phone: 02 9850 8085, email: kay.bussey@mq.edu.au), from the Faculty of Human Sciences, Department of Psychology, at Macquarie University.

Children will complete a 40 minute questionnaire at school in Term 2 of 2017 and 2018. The questionnaire will be completed in a group setting, ensuring minimal disruption to the school day. Each child who participates will be asked to answer questions about their experiences of cyber bullying, their self-efficacy to respond to cyber- bullying, and the psychological effects that cyber-bullying has on them. Children will not be asked to submit their names but provide a code to link their surveys responses across time. The study will be conducted on school premises in a location determined by you. If you consent to this study being conducted at your school we will provide information and consent forms outlining the aims and the procedures of the research to be sent home to parents. Researchers from Macquarie University will administer the questionnaire; the questionnaire will either be administered online (if the resources are available) or in a pen and paper format.

Consent will be obtained from parents by sending a letter home detailing the nature of the study and asking approval for student participation. Parents will provide their consent via a returned form or email. It is requested that **ALL** students return this consent form, regardless of whether their parents consent to them participating. Consent will also be obtained from students before they begin the questionnaire. Furthermore it may be necessary for students to speak to a school counsellor if they are distressed. Although this is unlikely, I would appreciate you informing the counsellor of this possibility.

All data gathered is strictly confidential and students' responses are identified only by an individual code. The data is held in a secure area and accessible only to the project's researchers. No participant will be identified in any publication or presentation of results. Approval to conduct the study has been granted by the Macquarie University Human Research Ethics Committee.

At the completion of this study a summary of the research results will be forwarded to you. We would greatly appreciate your involvement in this important project.

Thank you,
Dr Kay Bussey

APPROVAL OF PRINCIPAL'S CONSENT - please detach copy below and return to researcher.

I ***(block letters)*** _____ , have read the above information and any questions I have asked have been answered to my satisfaction. I have kept a copy of this form. I give consent for this research to be conducted in my school. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Principal's Name ***(block letters)*****:** _____

Principal's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

……..……..……..……

CONSENT FORM – RESEARCHERS' COPY

I ***(block letters)*** _____ , have read the above information and any questions I have asked have been answered to my satisfaction. I have kept a copy of this form. I give consent for this research to be conducted in my school. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Principal's Name ***(block letters)*****:** _____

Principal's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Parent Consent

Dear Student,

Please give this letter to your parent/guardian when you get home and return the signed consent form by _____.

MACQUAR University
SYDNEY·AUSTRALIA

Department of Psychology
IE

Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109

Phone: +61 (02) 9850 8085

Fax: +61 (02) 9850 8062
Email: kay.bussey@mq.edu.au

"Factors Associated with Cyberbullying"

Dear Parent/Guardian,

We are seeking permission for your child to participate in a longitudinal research project titled "Factors Associated with Cyberbullying". **The study has been approved by the school principal and will be conducted at your child's school.** Please sign the attached form and return it to the school, regardless of whether you would like your child to participate. The aim of this research is to investigate factors that are associated with children being mean to each other in their cyber interactions.

Approval to conduct the study has been granted by the Macquarie University Human Research Ethics Committee. This research is being conducted by the following students: Aileen Luo and Madeleine Clarke as part of their Bachelors of Psychology (Honours), and Veronica Sheanoda. as part of her Masters of Research degree at Macquarie University. Aileen, Veronica, and Madeleine are supervised by Dr Sally Fitzpatrick (phone: 02 9850 8097, email: sally.fitzpatrick@mq.edu.au) and Associate Professor Kay Bussey (phone: 02 9850 8085, email: kay.bussey@mq.edu.au), from the Faculty of Human Sciences, Department of Psychology, at Macquarie University.

If you agree, your child will complete a 40 minute questionnaire at school in Term 2, 2017 and 2018. The questionnaire will be completed in a group setting in a location directed by the school principal, ensuring minimal disruption to the school day. Children will not be asked to provide their names on the questionnaire but provide a code to link their surveys responses across time.

Children who participate will be asked to answer questions about their experiences of cyberbullying, their self-efficacy to respond to cyberbullying, and the psychological effects that cyberbullying has on them. Cyberbullying is bullying through e-mail, instant messaging, in a chat room, on a website, or through a text message sent to a mobile phone. The effects of cyberbullying are varied, although they may include children experiencing low mood or increased

anxiety. The principal of your school has been given a copy of the questionnaire for his/her approval prior to the commencement of the research.

Most students who have participated in similar research have enjoyed the experience. However, if your child shows any signs of not wishing to participate, s/he can stop at any time. Also, you can withdraw your consent for your child's participation at any time without giving a reason. It is possible that some students may experience distress as a result of recalling bullying experiences. If your child does experience distress as a result of completing this questionnaire, they will be able to privately request a meeting with the school counsellor by speaking with the research assistant or checking a box on a form provided to them when they stop filling in the questionnaire (which can be at any time). Organisations such as the Kids Helpline also provide telephone and online support to students who are distressed. They can be contacted on 1800 55 1800 or at http://www.kidshelp.com.au/. If you would like more information on Cyberbullying or Cyber safety, please visit the Cybersmart (http://www.cybersmart.gov.au/) or ThinkuKnow (http://www.thinkuknow.org.au/) websites.

A copy of the research results will be made available to your child's school once they are available. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

Please discuss this project with your child before giving approval. During discussions, it is important to make your child aware that s/he can withdraw from participation at any time, even if s/he has not completed the questionnaires. Please assure your child that s/he will not be asked any questions if s/he decides not to participate or withdraws his/her participation.

Please indicate if you do, or do not, wish, for your child to participate by completing the form below and returning the form to your child's school, or respond via email, by (insert date). You can indicate your consent in the following ways:

Sign the enclosed forms. Detach and return the 'researcher's copy' to your child's school,

OR

& **Email _____, stating whether you do or do not consent to your child's participation**

We would be very grateful for your child's participation. If you have questions please do not hesitate to contact Dr Kay Bussey or Dr Sally Fitzpatrick.

Thank you,

Dr. Kay Bussey

PARENTS' COPY FOR CHILD PARTICIPATION

I ***(block letters)*** **_____, WANT / DO NOT WANT (please circle) MY CHILD *(block letters)* _____ TO PARTICIPATE IN THIS STUDY.**

CHILD'S GRADE_____ CHILD'S HOMEROOM CLASS_____

Parent or Guardian's Name ***(block letters)*****: _____**

Parent or Guardian's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

……

"Factors Associated with Cyberbullying"

RESEARCHERS' COPY FOR CHILD PARTICIPATION

I ***(block letters)*** **_____, WANT / DO NOT WANT (please circle) MY CHILD *(block letters)* _____ TO PARTICIPATE IN THIS STUDY.**

CHILD'S GRADE_____ CHILD'S HOMEROOM CLASS_____

Parent or Guardian's Name ***(block letters)*****: _____**

Parent or Guardian's Signature: _____Date: _____

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Student Consent Form – Paper Version

Department of Psychology

Faculty of Human Sciences

MACQUARIE UNIVERSITY
NSW 2109 **Phone: +61 (02)9850 8085** Fax: +61 (02)9850 8062
Email: kay.bussey@ mq.edu.au

Dear Student,

This questionnaire is designed to find out how you feel about your interactions with peers at school. This is not a test. There are no right or wrong answers.

All responses will be confidential and identified only through a unique code. Your name will not be recorded and your teachers, parents and other students will not see what you have written. The only people who will see your answers are the researchers at Macquarie University. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects.

The questionnaire will take about 40 minutes to fill out. Your participation in this study is completely voluntary and you can choose to stop at any time without giving a reason.

If you experience distress as a result of completing this questionnaire, you will be able to privately request a meeting with the school counsellor by speaking with the research assistant or checking a box on a form provided to you when you stop filling in the questionnaire (which can be at any time).

Alternatively, you may wish to seek support from the Kids Helpline by calling 1800 55 1800 or by visiting http://www.kidshelp.com.au/. If you would like to fill out this questionnaire, please sign the consent form below. If you have any questions, please do not hesitate to put up your hand and one of the researchers will answer your questions.

……..……..……..……

STUDENT'S COPY:

I ***(block letters)*** **_____,** have read the above information and **I DO / DO NOT WANT TO PARTICIPATE IN THIS STUDY.** Any questions I have asked have been answered to my satisfaction. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Student's Name ***(Block letters)*****:_____**

Student's Signature ***(Block letters):_____*** Date***:_____***

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

……..……..……..……

RESEARHER'S COPY:

I ***(block letters)*** **_____,** have read the above information and **I DO / DO NOT WANT TO PARTICIPATE IN THIS STUDY.** Any questions I have asked have been answered to my satisfaction. I understand that participation is voluntary and that I can withdraw consent at any time without penalty.

Student's Name ***(Block letters)*****:_____**

Student's Signature ***(Block letters):_____*** Date***:_____***

Investigator's Name: Dr Kay Bussey

Investigator's Signature/s: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Student Consent Form – Online Version

Please note that the text below will appear on Qualtrics and thus, has not been presented on a Macquarie University letterhead.

Dear Student,

This questionnaire is designed to find out how you feel about your interactions with peers at school. This is not a test. There are no right or wrong answers. All responses will be confidential and identified only through a unique code. Your name will not be recorded and your teachers, parents and other students will not see what you have written. The only people who will see your answers are the researchers at Macquarie University. Data may be made available to other researchers for future Human Research Ethics Committee-approved research projects. The questionnaire will take about 40 minutes to fill out. Your participation in this study is completely voluntary and you can choose to stop at any time without giving a reason.

If you experience distress as a result of completing this questionnaire, you will be able to privately request a meeting with the school counsellor by speaking with the research assistant or checking a box on a form provided to you when you stop filling in the questionnaire (which can be at any time). Alternatively, you may wish to seek support from the Kids Helpline by calling 1800 55 1800 or by visiting http://www.kidshelp.com.au/. If you have any questions, please do not hesitate to put up your hand and one of the researchers will answer your questions.

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics and Integrity (telephone (02) 9850 7854; email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

☐ If you would like to participate in this study, please check the box to continue to the questionnaire.

Appendix C: Participant Questionnaire

The aim of this questionnaire is to find out how you feel about your interactions with other kids at your school. This is not a test, and there are no right or wrong answers. Try to answer honestly what you think. Your answers will not be seen by anyone except the researchers from Macquarie University.

Your teachers, parents, or other students WILL NOT SEE what you have written.

To answer each question please completely colour one of the circles to indicate your answer using only BLUE OR BLACK PEN. Please only fill in ONE circle for each question. If you make a mistake, place a cross through the incorrect answer. DO NOT USE LIQUID PAPER.

If you do not understand a question ask a researcher or your teacher to explain it to you.

What school do you go to? _____

What grade are you in?
- ❍ Year 7
- ❍ Year 8
- ❍ Year 9
- ❍ Year 10

What is your gender?
- ❍ Male
- ❍ Female

What is your date of birth? (dd/mm/yyyy) _____/_____/_____

What is your ethnicity? (Select all that apply)
- ❑ Anglo/Celtic (e.g. English, Irish, Scottish)
- ❑ East/South East Asian (e.g. Chinese, Japanese, Vietnamese)
- ❑ European (e.g. French, Greek, Italian)
- ❑ South Asian (e.g. Bangladeshi, Indian, Pakistani)
- ❑ Middle Eastern (e.g. Egyptian, Lebanese, Turkish)
- ❑ Aboriginal/Torres Strait Islander
- ❑ Pacific Islander (e.g. Fijian, Samoan, Tongan)
- ❑ Other

Do you ever use Facebook?
- ❍ Yes
- ❍ No

Do you ever text your friends?
- ❍ Yes
- ❍ No

This section asks you about your interactions with your peers. Please read the definition below before answering any of the questions

We say that a person is being bullied when another person, or several other people do any of the following:

- *Say mean and hurtful things*
- *Make fun of him or her*
- *Call him or her mean and hurtful names*
- *Completely ignore or exclude him or her from their group of friends*
- *Leave him or her out of things on purpose*
- *Hit, kick, push, shove around, or lock him or her inside a room*
- *Tell lies or spread false rumours about him or her*
- *Send mean notes and try to make other students dislike him or her*
- *And other hurtful things like that.*

When we talk about bullying, these things happen repeatedly, and it is difficult for the person being bullied to defend himself or herself. We also call it bullying when a student is teased repeatedly in a mean and hurtful way.

Cyberbullying is bullying through electronic means. As such, cyberbullying can be received and carried out from a range of devices (smartphone, tablet, computer), and through a range of communication tools (social networking sites, email, instant messenger, chat, forum, phone calls, text messages).

The following questions are about times when you have seen other students be mean to each other online.

How OFTEN in the last school term did you **try to help** other kids after the following things happened to them while on the Internet, or on a smartphone, tablet, or computer?

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
1. I tried to help after someone had sent them threatening or insulting messages	❍	❍	❍	❍	❍	❍
2. I tried to help after someone had posted or sent humiliating images of them	❍	❍	❍	❍	❍	❍
3. I tried to help after someone had posted links of humiliating images of them for other people to see	❍	❍	❍	❍	❍	❍
4. I tried to help after someone had written embarrassing jokes, rumours, gossip, or comments about them on the Internet	❍	❍	❍	❍	❍	❍
5. I tried to help after someone had posted or sent links with rumours, gossip, etc. about them so that other kids could read them	❍	❍	❍	❍	❍	❍
6. I tried to help after someone had hacked their account to send messages by email or social networks that could make trouble for them	❍	❍	❍	❍	❍	❍
7. I tried to help after someone had recorded a video or taken pictures while a group laughed and forced them to do something humiliating or ridiculous	❍	❍	❍	❍	❍	❍
8. I tried to help after someone had posted or sent the images described in Item 7 to be seen by other kids	❍	❍	❍	❍	❍	❍
9. I tried to help after someone had recorded a video or taken a picture while another person hits or hurts them	❍	❍	❍	❍	❍	❍
10. I tried to help after someone had posted or sent the images described in Item 9 to be seen by other kids	❍	❍	❍	❍	❍	❍
11. I tried to help after someone had broadcast their secrets, compromising information or images online	❍	❍	❍	❍	❍	❍

How OFTEN in the last school term did you **try to help** other kids after the following things happened to them while on the Internet, or on a smartphone, tablet, or computer?	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
12. I tried to help after they had been deliberately excluded from an online group	❍	❍	❍	❍	❍	❍
13. I tried to help after someone had recorded a video or taken pictures of them performing some type of sexual behavior	❍	❍	❍	❍	❍	❍
14. I tried to help after someone had posted or sent the images described in Item 13 to be seen by other kids	❍	❍	❍	❍	❍	❍

The following questions are about things you might have **experienced while you were online**.

How often **in the last school term** have the following behaviours HAPPENED TO YOU via the Internet, or a smartphone, or tablet, or computer?

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
1. I have received threatening or insulting messages	❍	❍	❍	❍	❍	❍
2. Other people have posted humiliating images of me on the Internet	❍	❍	❍	❍	❍	❍
3. Other people have written embarrassing jokes, rumours, gossip, or comments about me on the Internet	❍	❍	❍	❍	❍	❍
4. Other people have hacked my email or social networks to send messages that could be troublesome for me	❍	❍	❍	❍	❍	❍
5. Other people have used a mobile phone to record a video or take pictures of me while a group laughs and forces me to do something humiliating or ridiculous	❍	❍	❍	❍	❍	❍
6. Other people have used a mobile phone to record a video or take pictures of me while someone hits or hurts me	❍	❍	❍	❍	❍	❍
7. Other people have broadcast secrets about me online that involve compromising information or images of me	❍	❍	❍	❍	❍	❍
8. Other people have deliberately excluded me from an online group	❍	❍	❍	❍	❍	❍
9. Other people have used a mobile phone to record a video or take pictures of me involved in a sexual behaviour	❍	❍	❍	❍	❍	❍

This section is about what YOU think of the following behaviours.

Please read each statement and select the response to show **how much you agree**.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. It's alright to send mean messages to a kid using a mobile phone or the Internet if they have poked fun at your friends	❍	❍	❍	❍	❍
2. Posting a mean message about a cyber bully is just teaching them "a lesson"	❍	❍	❍	❍	❍
3. It is unfair to blame a kid who only had a small part in the harm caused by a whole group of kids sending mean messages about someone	❍	❍	❍	❍	❍
4. It's okay to email a mean message to another kid because posting it on Facebook for everyone to see is worse	❍	❍	❍	❍	❍
5. Kids can't be blamed for texting mean comments when all their friends do it	❍	❍	❍	❍	❍
6. It is okay to cyberbully because it doesn't really do any harm	❍	❍	❍	❍	❍
7. If kids are annoying, it is their own fault if they get sent a mean message on their mobile phone or through the Internet	❍	❍	❍	❍	❍
8. Some kids who are cyberbullied deserved to be treated like animals	❍	❍	❍	❍	❍
9. If kids have mean comments texted to them on their mobile phone, then it's okay for them to send mean comments about other kids	❍	❍	❍	❍	❍
10. Sending a mean message about someone on Facebook is just a way of joking around	❍	❍	❍	❍	❍
11. A kid who only suggests sending a mean message to another kid on the Internet should not be blamed if other kids go ahead and do it	❍	❍	❍	❍	❍
12. Compared to the illegal things that people do, sending a mean text about a kid is not very serious	❍	❍	❍	❍	❍

Select the response to show **how much you agree**	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
13. Kids can't be blamed for sending mean comments on a mobile phone if their friends pressured them to do it	❍	❍	❍	❍	❍
14. Posting mean comments about other kids on Facebook doesn't really hurt them	❍	❍	❍	❍	❍
15. Kids who get cyberbullied usually do things to deserve it	❍	❍	❍	❍	❍
16. It's okay to cyberbully a kid who behaved like a jerk	❍	❍	❍	❍	❍

This section is about how you **deal with emotions**. Some people think they are good at some things and not at others. Please indicate **how well** you can do the things listed below by selecting the circle in the appropriate column.

How well can you...

	Not well at all	Not too well	Pretty well	Very well
Know what your friends would like when they are upset	❍	❍	❍	❍
Feel the same way that a person in trouble feels when they are experiencing it	❍	❍	❍	❍
Understand the effect your actions have on others' feelings	❍	❍	❍	❍
Quickly find out things that new people you meet like and dislike	❍	❍	❍	❍
Recognise when someone wants comfort and emotional support	❍	❍	❍	❍
Recognise when a person likes you	❍	❍	❍	❍
Recognise whether a person is annoyed with you	❍	❍	❍	❍
Recognise when a person is scared	❍	❍	❍	❍
Recognise when a friend needs your help	❍	❍	❍	❍

The following questions are about things YOU might have done while you were ONLINE.

How often in the **last school term** have **you performed** the following behaviours while on the Internet, or on a smartphone, or tablet, or computer?

	It hasn't happened at all	About once a term	Two or three times a term	Many times a term	Every week of a term	Many times a week
1. I sent threatening or insulting messages	❍	❍	❍	❍	❍	❍
2. I posted or sent humiliating images of another kid	❍	❍	❍	❍	❍	❍
3. I posted links of humiliating images for other people to see	❍	❍	❍	❍	❍	❍
4. I wrote embarrassing jokes, rumours, gossip or comments about another kid on the Internet	❍	❍	❍	❍	❍	❍
5. I posted or sent links with rumours, gossip, etc. about another kid so that other kids can read them	❍	❍	❍	❍	❍	❍
6. I hacked to send messages by email or social networks that could make trouble for another kid	❍	❍	❍	❍	❍	❍
7. I recorded a video or took pictures while a group laughs and forces	❍	❍	❍	❍	❍	❍
8. I posted or sent the images described in Item 7 to be seen by other kids	❍	❍	❍	❍	❍	❍
9. I recorded a video or took pictures while someone hits or hurts another kid	❍	❍	❍	❍	❍	❍
10. I posted or sent the images described in Item 9 to be seen by other kids	❍	❍	❍	❍	❍	❍
11. I broadcasted another kid's secrets, compromising information, or images online	❍	❍	❍	❍	❍	❍
12. I deliberately excluded someone from an online group	❍	❍	❍	❍	❍	❍
13. I recorded a video or took pictures of other kids performing some type of sexual behaviour	❍	❍	❍	❍	❍	❍
14. I posted or sent the images described in Item 13 to be seen by other kids	❍	❍	❍	❍	❍	❍