Information Motivation Behavioural Skills Model and Cyberbullying Bystanders' Behaviour to Intervene or Not Intervene

Hezron Z. Onditi
Dar es Salaam University College of Education, Faculty of Education
Department of Educational Psychology and Curriculum Studies
Dar es Salaam, Tanzania
E-mail: hezndit@yahoo.com

Abstract

Using Information Motivation Behavioural Model (IMB), this study explored peers behaviour to intervene or not for victims in cyberbullying situations. The aim is to promote further research on bystanders' behaviour using IMB model that has been intensively used in preventive and intervention studies. The paper begins by explaining school bullying and cyberbullying as well as bystanders' role in bullying situations. Next, a general discussion of the IMB model and how it can be applied to assess online bystanders' motivation to intervene or not intervene in cyberbullying situations is provided. This paper concludes by illuminating the strengths and limitations of the IMB model and suggests how the framework may be applied in future studies and in developing a comprehensive theoretical model for understanding, explaining and predicting online bystanders' behaviour.

Keywords*: bullying, bystanders, cyberbullying, IMB model*

Introduction

Cyberbullying and its associated negative impact on children and youth has increasingly become a topic of critical concern for parents, educators, educational researchers and practitioners in many countries around the world. Researchers have generally defined cyberbullying as the use of electronic or digital devices to repeatedly communicate hostile or aggressive

messages with the intention to embarrass, humiliate, and inflict harm or discomfort on others (Kumar & Sachdeva, 2019). Studies have shown that cyber perpetration can occur through many venues including e-mail, text messages, web pages, chat rooms, social networking sites, digital images and online e games (Kowalski et al., 2014). Current studies show that by age 12, about 69% of adolescents in many countries own smartphones and by age 18, about 91% own smartphones (Rideout & Robb, 2019) a situation which increases exposure to online risks such as cyberbullying. Whereas some studies have indicated low prevalence rates of cyberbullying at or below 25% (Hinduja, 2012), others have reported higher prevalence rates of up to 58% (Onditi & Shapka, 2020).

Unlike face-to-face bullying where perpetrators can observe the impact of their behaviours on victims, perpetrators of cyberbullying can hide their true identity in the virtual world and inflict severe pain on victims (Kowalski et al., 2014). Although not all victims are being bullied by anonymous perpetrators by hiding behind the screen – cyberbullies do have the ability to access their target at any place and at any time by creating hostile websites, sending intimidating texts, or by posting pictures and harassing messages online through cell phones, computers and other devices that connect to the internet (Kowalski et al., 2014; Patchin & Hinduja, 2020). The extensive audience, the permanence of the digitally-posted data, as well as the inability of the victim to escape the harassment can contribute to significant long-term negative consequences compared to victims of traditional bullying (Tokunaga, 2010). In particular, cyberbullying has been linked with a host of negative outcomes including declines in academic performance, trouble at home, feelings of

anxiety, depression, frustration, anger and sadness and possible suicidal ideations which, in extreme cases, can lead to suicide (Bonanno & Hymel, 2013). Thus, comprehensive intervention programmes that include all stakeholders such as parents, teachers, school administration, IT service providers, bullies, victims and bystanders may help in buffering victims from cyberbullying and its associated negative consequences.

Bystanders' roles in the bullying episodes

Researchers identify bullies, victims, and bystanders (witnesses) having key roles in bullying events (Cortés-Pascual et al., 2020; Trach & Hymel, 2020). Among the players, bystanders can assume different roles in both offline and online bullying episodes including reinforcing bullying behaviours. For instance, bystanders can assist and/or defend the person engaging in bullying behaviours, or defend and/or support the victim. Bystanders, as outsiders, may also assume a passive role or do nothing (Bastiaensens et al., 2014; Thornberg & Jungert, 2013; Trach & Hymel, 2020).

Given that bystanders' role in bullying episodes has been extensively demonstrated in traditional school bullying literature (Cortés-Pascual et al., 2020; Thornberg & Jungert, 2013; Trach & Hymel, 2020) research on traditional school bullying can be used to shed light on the bystanders' role in cyberbullying, a relatively understudied social phenomenon in a rapidly growing digital world.

Traditional school bullying bystanders

Observational data on bystanders' roles in traditional bullying episodes have shown that peers are present in about 88% of bullying episodes and would passively watch the bullying 54% of the time while intervening in bullying incidents about 19% to 25% of the time (Hawkins et al., 2001). Findings from observational data are similar to findings from student self-report data, which also demonstrate that 87% of students witness bullying, but only 17% report that they intervene or defend the victim (Salmivalli et al., 1996). This suggests that a significant number of bystanders intentionally or unintentionally choose to remain outsiders during traditional bullying episodes. Being an outsider in the midst of ongoing bullying incidents may escalate the bullying behaviour, making it difficult to stop (Gourneau, 2012).

For example, the motivation to bully others may be an attempt, on the part of the bully, to gain power, attention, status, prestige, and dominance in the social group all of which are likely to depend on bystanders' feedback to achieve their objectives (Gourneau, 2012; Salmivalli, Voeten, & Poskiparta, 2011). Bystanders can support bullying behaviours by giving positive feedback or rewarding bullies' actions through their implicit and explicit behaviours (Gourneau, 2012). In particular, while other bystanders tend to join bullies in bullying the victim, others may watch passively without taking any action to defend the victim (Thornberg & Jungert, 2013; Trach & Shelley, 2020). This kind of bystanders' response does not only reward bullies and glorify their inappropriate behaviours, but could also enhance the frequency and intensity of bullying behaviours and its negative consequences for the victim (Salmivalli et al., 2011). In other words, bullies could feel implicitly or

explicitly supported by bystanders, creating more opportunities to exercise their power and therefore making it even harder to break the bullying cycle and its associated malady on victims (Gourneau, 2012).

Apart from reinforcing and rewarding bullying behaviours by remaining passive, bystanders can also change and become *upstanders* or *defenders* (Hawkins et al., 2001). These upstanders and defenders tend to take the victim's side, support or console the victim, and/or intervene in bullying on behalf of the victim by confronting the bullies status, as a result stopping the bullying (Hawkins et al., 2001). For instance, Hawkins and colleagues (2001) found that peers intervened in 58% of the bullying episodes while 57% of those interventions resulted in the bullying incidents ending within 10 seconds. By intervening in bullying situations and disapproving such negative behaviours, bystanders have the ability to deflate a bully's power and control (Gourneau, 2012; Hawkins et al., 2001). As a result, victims tend to get relief, hope, comfort, strength and confidence to reach out for help and to stand up for themselves due to the perceived support from bystanders (Gourneau, 2012). With this in mind, shifting from being a passive bystander to an active bystander and defender for victims cannot only help to stop bullying but may also help in buffering victims from the severe negative consequences associated with bullying (Forsberg et al., 2014).

The traditional bullying literature has offered strategies to be employed by bystanders when intervening for the victim in bullying episodes (Forsberg et al., 2014; Trach & Hymel, 2020). Although the defending roles and strategies used will differ by age, grade level and gender (Trach et al., 2010), generally

studies have found that offline bystanders tried to intervene by seeking support from peers or friends, talking to an adult, confronting the bully by telling them to stop, distracting the bully, and befriending and helping the victim (Forsberg et al., 2014; Trach et al., 2010).

Although research has shown that a large majority of children oppose bullying and indicate readiness to intervene for the victims, they are less likely to side with the real victims of bullying (Salmivalli, 2014). Recognizing that bystanders have power to help in stopping bullying by assuming roles as upstanders and defenders (Salmivalli et al., 2011; Trach & Hymel, 2020), one critical question in the minds of scholars such as Forceberg et al. (2014), Salmivalli (2014)) and others is *why* the majority of children and youth are hesitant or abstain from assuming defending roles.

Generally, being a defender is not an easy task (DeSmet et al., 2014) even among adults who advocate for children to be upstanders. From the traditional bullying literature, several factors have been identified to explain a swing in the bystanders' pendulum to help or not help. Studies have shown that children are scared of becoming the next target, intimidated by the existing power dynamics in the bullying process (Gourneau, 2012), considering bullying to be fun, blaming the victims, fearing to be called a snitch or that others do not care (Forsberg et al., 2014; Gourneau, 2012). Other factors include lack of competencies and effective intervention skills, age, grade and gender differences, and peer group processes (Salmivalli, 2014; Thornberg & Jungert, 2013). With regard to peer group processes, youth are more likely to intervene on behalf of their same-sex peers (Hawkins

et al., 2001; Trach et al., 2010) as well as their friends but rarely for a victim who is considered an outsider (Forsberg et al., 2014). It is also possible that children who have friends who are bullies are less likely to intervene on behalf of the victim since the behaviour is perceived as normal in their social network (Forsberg et al., 2014; Trach & Hymel, 2020). The defender role becomes even more complex in scenarios where the bully-victim dyad is attached somewhat to the potential defender. This may leave the potential defender at a crossroad and left not knowing what to do.

Other factors that decrease the likelihood of bystander intervention include moral disengagement, lack of empathy, negative attitudes towards the victim, and school climate (Hinduja, 2012; Obernmann, 2011, Salmivalli, 2014). Further, qualitative research conducted by Thornberg and colleagues (2012) revealed five factors associated with bystanders' decision to intervene or abstain from helping victims, including appraisal of the level of the harm, emotional reactions, social appraisal, moral appraisal, and self-efficacy.

Cyberbullying bystanders

Given the paucity of research on bystanders' role in cyberbullying incidents, and given that offline and online bullying have been conceptually and empirically found to overlap amidst differences (Waasdorp & Bradshaw, 2015), the reviewed literature on bystanders role on traditional bullying may shed light on the understanding of the role of online adolescent bystanders in the cyberbullying episodes witnessed in the cyber space. Similar to traditional bullying, scarce research on cyberbullying have shown that about 88% of U.S. teens using social network sites (SNS) such as Facebook and Google+

reported to have witnessed cyberbullying behaviours (Lenhart et al., 2011). Consistent with bystander patterns in their response to offline bullying, 91% of the online bystanders refrained from intervening in bullying episodes whereas 21% joined in the bullying behaviours (Lenhart et al., 2011). A recent experimental study of Polish adolescents (ages 11 to 18) demonstrated that online bystanders are more likely to support bullies than offline bystanders (Barlińska et al., 2013). Similarly, a study with Canadian adolescents (ages 11 to 18) revealed that students with negative beliefs towards cyberspace are more likely to condone cyberbullying behaviours by cheering on the bullies such as liking, commenting, reposting the posted intimidating information, while their counterparts with positive beliefs about cyberspace were more likely to leave the online space after witnessing bullying incidents (Li & Fung, 2012). Could it be that the act of leaving cyberspace or glorifying the behaviour both directly and indirectly may have similar consequences of intensifying cyberbullying and thus leading to potential harm on the victim?

Similar to traditional bully's motives, research on cyberbullying has also shown that cyber perpetrators tend to harass and intimidate others online either for proactive or reactive reasons (Shapka & Law, 2013). As suggested earlier, online bystanders' actions such as deciding to do nothing or supporting bullying behaviours may not only serve to reinforce cyber bullying, but they could also make it difficult to break the vicious cycle of online bullying. Also, online bystanders have the opportunities to tackle the bullying problem by meeting the dyad on the cyberspace and sometimes in the physical world (DeSmet et al., 2014). When in the virtual world, bystanders can reinforce bully behaviours or defend victims through various inbuilt SNS

communication applications such as liking buttons (Barlińska et al., 2013; Bastiaensens et al., 2014; DeSmet et al., 2014). Apart from using the identified SNS applications with the public audience, online bystanders can also communicate with the bully or victim using private application settings or technologies that allow one-to-one communication such as mobile phones, e-mail and instant messenger (Bastiaensens et al., 2014; Tokunaga, 2010).

While anonymity can enhance cyberbullying behaviours (Tokunaga, 2010), anonymity can also be used as an opportunity for intervening on behalf of cybervictims. For example, an anonymous bystander may choose to delete, unlike or comment on a derogatory photo of someone familiar or unfamiliar to them that has been posted online. Through anonymity, a bystander can have some level of confidence to intervene by writing texts that disapprove the intimidating information posted by both proactive and reactive online bullies.

Similar to literature on offline bystanders reviewed earlier, a few existing studies on online bystanders have also identified empathy, moral disengagement, friendship pattern and social influence, appraisal of threat, help-seeking competencies and support from the environment as having an influence on bystander behavior. In particular, a recent experimental study on cyberbullying among adolescent bystanders (Barlińska et al., 2013) demonstrated that cyber perpetration experiences increased the likelihood of not defending victims online. Even further, both affective and cognitive empathy were associated with the likelihood of becoming an upstander in cyberspace. Severity of cyberbullying episodes has also been linked with the likelihood to play defending role. For example, in a study with early

adolescents aged 13 to 14, Bastiaensens et al. (2014) found that bystanders are more likely to help the victim under severe cyberbullying episodes. Nonetheless, making a clear distinction between what constitutes a severe and less severe bullying situation still remains a challenge for young people. Developmentally, the severity of cyberbullying may fluctuate with age and the individual's child's repertoire of social competencies and how to navigate in various social settings (Trach, 2010). For instance, even among children of the same age, what may be considered severe by one child may be considered normal by another child. Bastiaensens et al.(2014) concluded that online bystanders are more likely to reinforce bullying when other familiar friends in the SNS condone the behaviour rather than when the act is supported by unfamiliar friends.

Recent studies on online bystanders have identified different approaches used by online adolescent bystanders in the performance of online defender roles (Bastiaensens et al., 2014; DeSmet et al., 2014). Among others, such approaches include (1.) telling the bully and victim they think bullying is not okay. (2.) frightening the bully or retaliating, (3.) providing comfort, advice and protection for the victim (4.) telling friends, (5.) allowing the victim to join their group, (6.) and defending the victim in both private and public forums. Additionally, some online bystander studies reported opportunities to meet cyber bullies and victims in the real world and talk about the incident such as asking for motives and providing advice (DeSmet et al., 2014). In particular, DeSmet et al. (2014) revealed that online adolescent bystanders would like to take online bullying problems and address them in the real world setting by comforting the victim rather than confronting the bully, which may in turn

escalate the problem of bullying. However, talking to adults was less preferred by online defenders. Online adolescent bystanders' reluctance to involve adults may be explained by various factors including shame, the fear of being denied access to the online world which is an integral part of their life, lack of effective help seeking skills and adults' low level of technological savvy (Hinduja, 2012; Tokunaga, 2010).

Finally, *why* adolescents do not intervene in cyber space and which among the identified online intervention approaches is considered to be more effective are still open for further empirical explanations. Perhaps, depending on the context, a combination of several approaches could help in performing online defending roles. Theoretically, little is still known about adolescents' behaviour to intervene or not intervene for victims of cyberbullying. A meta-analysis study by Tokunaga (2010) illuminated on a need to advance cyberbullying studies using behavioural change theories.

IMB Model and bystanders' behaviour in cyberspace

Apart from the identified research on online bystanders' behaviours, theoretical explanations for understanding why online adolescent bystanders decide to take passive roles despite a plethora of helping opportunities such as anonymity, using both online and offline contexts, public and private settings and inbuilt SNS applications to intervene in cyberbullying incidents are yet to be explored. Thus, the IMB model is one lens through which we can understand a swing in the online adolescent bystanders' pendulum to intervene or not intervene in cyberbullying episodes. Figure 1 shows how the

IMB model can be applied in studying online adolescent bystanders' behaviour to help or not help in cyberbullying episodes.

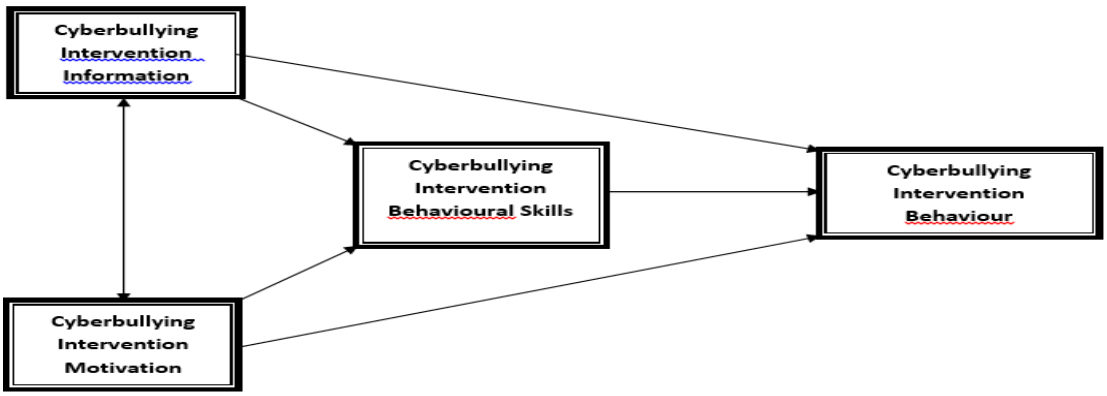

Figure 1. IMB model for assessing bystanders intervention behaviour (Adapted from Fisher & Fisher, 1992)

In their IMB model, Fisher and Fisher (1992) illustrate how preventive/intervention behaviour is a function of individual's knowledge about the behaviour, their motivation for prevention or intervention and their behavioural skills and competencies for enacting specific acts of prevention. The model further holds that information and motivation for performing a behaviour generally works through a behavioural skills path to influence individuals in performing a particular preventive or intervention behaviour.

Information about cyberbullying

Generally, information or knowledge about a particular behaviour is not only essential but important for the performance of specific preventive behaviours. According to the IMB model, "the more information a person has, the greater the likelihood of his or her indulging in preventive behaviour" (Sharma, 2012,

p, 6). In other words, knowledge is power because it can increase one's confidence in making appropriate decisions. In the case of cyberbullying, having adequate and relevant information or knowledge about cyberbullying in terms of (1.) what it stands for and what it is not, (2.) mechanisms involved in cyberbullying, (3.) key players and their roles, (4) and its associated negative impacts on children and youth, can increase the likelihood of adolescents to intervene on behalf of the victims. For instance, DeSmet et al. (2014) realised that adolescents had knowledge of behaviours that constitute cyberbullying but were limited regarding its consequences on victims. To increase the prevalence of defenders in cyberspace, adolescents need to have comprehensive and relevant information about cyberbullying and its associated negative consequences for the victims, bullies and bystanders themselves.

Another piece of information to have which is important for those who wish to intervene is the knowledge of what to do during cyberbullying episodes. As pointed out earlier, online adolescent bystanders have a plethora of strategies that can be employed in defending victims. Such strategies include deleting intimidating information, not forwarding the information to strangers or those in their social network, not liking or providing comments on the posted intimidating information or photos, and talking to the bullies and the victims privately (Barlińska et al., 2013; Bastiaensens et al., 2014; DeSmet et al., 2014). Although talking to adults is not usually preferred by many adolescents in cyberspace (DeSmet et al., 2014), seeking support from trusted adults such as parents, teachers, counselors and school administrators is also important. Although little is known on the effective online defending strategy,

based on the IMB model, adolescents who lack a repertoire of defending strategies are less likely to be effective defenders compared to their counterparts who have relevant knowledge and information on various online defending strategies.

Although information and knowledge about cyberbullying is necessary and important for online adolescent bystanders to assume the defender role, studies from health-related disciplines that have utilized the IMB model have shown mixed findings regarding information and performance of preventive behaviours. On one hand, some studies have indicated some positive relationships between information about a particular behaviour such as acquired immunodeficiency syndrome (AIDS) knowledge with the performance of a preventive behaviour among adolescents such as abstinence or using condoms (Ybarra et al., 2013), and with medication adherence (Rongkavilit et al., 2010). On the other hand, studies predicting intention to smoke among adolescents has found a partial or lack of direct relationships between knowledge and preventive behaviour (Zhu et al., 2013). Altogether, the variation in findings may be attributed to many factors including complexities of the situation, research methods, nature of the study and the sample, and the context of the studies.

Although the reviewed studies from health discipline have reported mixed findings, one question is still lingering regarding intervening for cyberbullying, that is "*Does available knowledge make a difference or not? Or is knowledge necessary but not sufficient to change bystanders' behavior?* Perhaps having a clear and specific information or knowledge about cyberbullying may be

important for online adolescent bystanders to perform defending roles in cyberbullying situations where less complicated intervention strategies such as disliking, deleting, not commenting or forwarding the posted intimidating information or photo are required. However, information alone may not work when the online bullying incident witnessed involves more risk or sophisticated intervention strategies such as challenging or confronting the bully. This suggests that information is a necessary and important, but not always a sufficient condition for individuals to initiate and maintain the performance of a particular preventive behaviour (Fisher & Fisher, 1992; Sharma, 2012; Zhu et al., 2013). Although the model is yet to be empirically applied towards cyberbullying research, intervention programmes focusing on enhancing adolescent bystanders' behaviour to intervene for cyber victims should go beyond the traditional method of providing information only and include other variables such as intervention motivation and behavioural skills.

Motivation for intervention

Motivation is another key construct of the IMB model. Although information may relate to preventive behaviours in some circumstances as discussed above, Fisher and Fisher (1992) maintain that information alone is not enough since "even a well-informed and behaviourally skilled person must generally be highly motivated to initiate and maintain. .. behaviour" (p. 466). According to the IMB model, intervention motivation is comprised of two types, *personal motivation* and *social motivation*. Personal motivation is constituted by the attitudes towards the performance of defending roles which then supports the individual in performing the defending behaviour. Social motivation or the perceived social support for performing defensive acts

would assist the individual in practising preventive behaviours (Fisher et al., 1999; Fisher & Fisher, 1992; Sharma, 2012).

With regard to online adolescent bystanders, the personal motivations to intervene or not to intervene for the victim would include various aspects such as attitude towards cyberbullying behaviour, attitude towards being a defender, perceived capacity to perform the behaviour, and tendency for moral disengagement. In particular, adolescents who have unfavourable attitudes toward cyberbullying, considering it as an immoral and inappropriate behaviour that need to be stopped, are more likely to be motivated to defend the victims compared to those who consider cyberbullying as fun or normal behaviour. In other words, online adolescent bystanders who oppose cyberbullying are more likely to take responsibility for intervening on behalf of the victims and are less likely to blame the victim or justify online bullying behaviours (morally engaged) compared to their counterpart who glorify bullying and blame victims for the bullying incidents (morally disengaged).

Even further, adolescents who have a favourable attitude regarding online defender roles are more likely to intervene on behalf of the online victim compared to their counterparts who have negative attitude or belief towards being a defender. This is consistent with an argument that adolescents who have basic moral sensitivity are likely to have positive attitudes toward defender roles compared to those who have lower moral sensitivity (Thornberg & Jungert, 2013). Hence, intervention programmes that promote moral sensitivity and favourable attitudes or beliefs toward defenders and

their roles may be important for both offline and online bullying intervention motivation.

Furthermore, online adolescents' decision to practise defending roles is also a function of the social motivation to engage in the defending acts (DeSmet et al., 2014). From the IMB model, social motivation would include perceived social norms and the levels of perceived social support from significant others for performing intervention acts (Fisher & Fisher, 1992; Fisher et al., 1999; Sharma, 2012). In the case of cyberbullying, online adolescent bystanders are more likely to intervene for the victims in social contexts where defending is considered as a relevant and desirable social norm. With this in mind, the perceived social norms from parents', teachers', and peers' expectation of children and adolescents to practise defending roles have been reported to have a substantial influence on individuals' motivation to practise online defending roles (DeSmet et al., 2014). This is also consistent with findings from traditional bystanders models (Forsberg et al., 2014; Thornberg et al., 2012).

In addition, in a study exploring self-reported cyberbullying bystanders' behaviour, DeSmet et al. (2014) found that online adolescents who have high levels of support from trusted significant others such as parents, guardians, teachers, school administrators, counselors, coaches, SNS administrators, and peers are more likely to practise defending roles on behalf of the victims of online bullying compared to their counterparts who are perceived to have little social support or less social pressure from significant others. In other words, adolescents are likely to be motivated to help if there is high social

fuel, that is significant others and adults who insist that they should help, and provide them with the necessary resources and support to practise online defending roles. In order to provide effective support for children and youth to practise defending roles in the virtual world, adults need basic training in information and communication technologies so as to bridge the technological gap that exists between them and the contemporary generation of youth who are the oldest in terms of technological savvy.

Being a friend with the victim has been associated with the motivation to defend victims of online bullying (DeSmet et al., 2014) and offline settings (Forsberg et al., 2014; Thornberg et al., 2012). However, having friendship with a bully and non-friendship with the victim has been linked with abstaining from intervening on behalf of the victim in both traditional and online bullying situations (DeSmet et al., 2014; Forsberg et al., 2014; Thornberg et al., 2012). This is consistent with the results from a recent cyberbullying experimental study by (Bastiaensens, 2014) who found that online adolescent bystanders are more likely not to reinforce bullying behaviours when their friends in the SNS are not condoning the behaviour and would support bullying in situations where a network of online friends support bullying behaviours. However, both traditional and online bystanders may be in dilemma when both bully and victim are his or her close friends. Bystanders' dilemma may contribute to higher levels of moral distress, which may lead to abstaining from intervening in bullying episodes. In this kind of situation, bystanders would require additional intervention skills to assume effective defender roles.

The construct of motivation in the IMB model can also be explained and expanded from the traditional bullying bystanders' models that include the level of harm and emotional reactions. Similar to traditional bullying, the degree to which online bystanders interpret the harm in cyberbullying situations may influence their motivation to intervene or not intervene (Bastiaensens et al., 2014). In particular, students are less motivated to help in situations where there is low or no perceived harm, and could help when the perceived harm is high (Bastiaensens et al., 2014; Thornberg et al., 2012). But then, who defines the level of harm in the virtual world?

Perhaps, the level of emotional reaction coupled with capacity for empathy and emotional recognition may reflect the perceived level of harm online, which may in turn influence online adolescent bystanders' motivation to help or abstain from helping victims. Similar to the reviewed traditional bystanders' models, individual or personal motivations including high levels of self-efficacy and empathic reactions have been linked with adolescent's motivation for intervention while low levels of self-efficacy, fear of being victimized, and audience excitement are associated with abstaining from intervening on behalf of the victim (Forsberg et al., 2014; Thornberg et al., 2012). To this end, intervention programmes that can influence perceptions of significant others, taking into account peer social processes and relationships, appraisal of the threat and emotional reactions are critical in enhancing defender roles among children and youth.

Although the first two constructs of the IMB model (information and motivation*)* appear to have a direct link in predicting individual's likelihood to

engage in intervention or preventive behaviours, both intervention information and motivation to intervene would likely have direct effects on practising preventive behaviours such as cyberbullying intervention behaviours in situations “in which complicated or novel behavioural skills are not required for the” performance of defending acts (Fisher et al., 1999, p. 14).

Additionally, the model also asserts that preventive or intervention information and motivation for intervention are generally independent from each other. This has been supported in health-related disciplines including research on AIDS, in which the two constructs appeared to work independently through preventive behavioural skills to influence the performance of preventive behaviours (Fisher et al., 1999; Fisher & Fisher, 1992). This also suggests that being well-informed about cyberbullying is necessary but a sufficient condition for motivation to intervene. Moreover, higher motivation to intervene for victims of cyberbullying does not necessarily translate into being well-informed about cyberbullying and its associated preventive behaviours. Altogether, the independence or the interdependence of *information* and *motivation* to practise particular intervention behaviour will depend on the nature of the phenomenon under study, methods applied and the participants involved in the study. In general and according to IMB model, the two constructs can have a substantial influence on individual’s performance of intervention behaviours such as cyberbebullying indirectly through behavioural intervention skills (Fisher & Fisher, 1992; Zhu et al., 2013).

Behavioural intervention skills

Behavioural skills, which consist of "individual's objective ability and self-efficacy" to perform a preventive behaviour is the third construct of the IMB model (Fisher et al., 1999; Fisher & Fisher, 1992; Sharma, 2012, p, 4). The model posits that a behavioural skill is the most immediate determinant of practising a particular preventive behaviour and that all other factors including *information* and *motivation* will be mediated through such behavioural skills (Fisher et al., 1999; Fisher & Fisher, 1992). The model emphasises that information and motivation alone cannot bring a significant impact in practising a particular behaviour if individuals lack the skills or the confidence to perform the acts of preventive behaviours. Again, this has been shown in the case of HIV/AIDS and smoking interventions where the knowledge and awareness among youth seems to be high but the prevalence rate is still highest among youth population (Zhu et al., 2013), suggesting the mediation role of behavioural skills. This is also true in cyberbullying behaviours. For example, DeSmet et al. (2014, p. 3) reported that "all participants knew what constitutes cyberbullying" but still they could not easily perform defending roles. In their IMB model, Fisher and Fisher (1992) found certain behavioural skills as critical in practising preventive behaviours, and in this case, the defender role in cyberbullying episodes.

Intervention self-efficacy, referred to as beliefs in individual's effectiveness or ineffectiveness to carry out a particular preventive behaviour (Thornberg et al., 2012), is a crucial skill for the performance of defender roles. Similar to offline bystanders intervention self-efficacy, online adolescents who have accurate intervention information, high intervention motivation and high level

of intervention self-efficacy are more likely to intervene on behalf of cyber victims compared to their peers with low levels of intervention self-efficacy. Regardless of having accurate preventive information and motivation to intervene, adolescents with lower levels of intervention self-efficacy would feel incapable of helping online victims and may assume the role of either 'guilty' passive bystanders or 'unconcerned' passive bystanders (Obermann, 2011). This is especially true in situations where there is an established power difference and social hierarchy where there is a "fear of retaliation, social disapproval, social blunders, getting bullied, losing friends or loosing social status" (Forsberg et al., 2014, p.10).

As noted before, anonymity and multiple inbuilt private and public communication settings in the SNS could make online bystanders more likely to demonstrate higher level of intervention self-efficacy compared to offline bystanders who have to meet the bullies in person or have to contact an adult for help. In general, physical contact with bullies and asking for help from significant others may demand higher levels of self-efficacy compared to dealing with bullies behind a screen of a device such as computer screen or I-phone screen. For example, defending behind the screen may sometimes require simple actions such as deleting, not forwarding or not liking the posted intimidating information or photo.

Individual adolescents will vary on how effective or ineffective they feel and whether or not they believe they can use a particular intervention strategy in taking up a defender role (Thornberg et al., 2012). For example, depending on their levels of self-efficacy, some adolescents would feel capable in confronting and telling bullies to stop by sending text or instant messages or

by calling them by phone, while others may focus on the victim by providing comfort online, talking to friends or asking for help from trusted adults (Barlińska et al., 2013; Bastiaensens et al., 2014). Therefore, programmes focusing on enhancing adolescents' self-efficacy for performing online preventive behaviours using strategies or a combination of various strategies that they feel comfortable using are vital.

Assertiveness as a communication skill is another important component of behavioural skill identified in the IMB model. The model posits that the performance of a preventive behaviour requires an individual to have effective communication skills (Fisher & Fisher, 1992). For example, in reference to HIV/AIDS prevention where the model has been widely applied, adolescents need to have the ability to negotiate their feelings and thoughts confidently and consistently for the performance of a particular HIV/AIDS preventive behaviour. For instance, using contraceptives or abstaining from sex requires an individual to negotiate their feelings and thoughts confidently and consistently (Fisher et al., 1999; Fisher & Fisher, 1992).

In the case of cyberbullying, online adolescent bystanders who have accurate knowledge about cyberbullying, are motivated to intervene, and have high level of assertiveness are more likely to take up defending roles compared to their peers who demonstrate lower levels of assertiveness. For example, adolescents who are assertive may have confidence and ability to express their feelings and thoughts by texting and providing comments that challenge bullying behaviours in the SNS (Bastiaensens et al., 2014; DeSmet et al., 2014) without jeopardizing their rights and the rights of the parties involved. In

contexts where all involved are familiar with one another, adolescents who are assertive are likely to call the bully or the victim and talk about the problem. Additionally, sometimes an assertive adolescent can meet those in the bully-victim dyad offline and discuss the problem. It is also possible for an assertive adolescent to share the bullying problem they have witnessed online with other peers or trusted adults for more help.

Based on the IMB model, regardless of having accurate preventive information and intervention motivation, adolescents who demonstrate lower levels of assertiveness are less likely to be effective defenders. It is true that an adolescent who is assertive may have confidence to use the inbuilt online communication applications to communicate his or her feelings and thoughts openly in the social network of familiar and unfamiliar friends. However, unlike offline bystanders who may need to demonstrate more competencies in both verbal and non-verbal assertiveness to tackle offline bullying, the mechanisms and applications in the SNS may provide online bystanders who are less assertive with multiple and less complicated opportunities to practise defending roles online. In particular, less assertive online bystanders who have relevant knowledge about cyberbullying and are highly motivated to intervene are likely to use the SNS application tools to practise online defending roles. For example, deleting or not forwarding an intimidating information or photo posted online does not necessarily require someone to have sophisticated communication skills. Additionally, due to anonymity, some adolescents may have the confidence to communicate their thoughts and feelings when they are online compared to when they are offline. To this end, there is a need for an empirical study to delineate dynamics in the

pendulum of assertiveness when it comes to practising offline and online defending roles.

Strengths and limitations of the IMB model

One of the advantages and which could also be considered as a disadvantage of the IMB model is that it is a simple model which adheres to the parsimonious principle (Sharma, 2012). The model has only three constructs (information, motivation, and behavioural skills), which can be easily operationalised in a study concerning cyberbullying. Additionally, the model has been extensively applied to understanding performance of behaviours in health-related disciplines such as HIV/AIDS, alcohol, smoking and substance abuse and has been shown to be effective in predicting behaviours across populations including adolescents. From the models reviewed concerning online (DeSmet et al., 2014) and offline (Forsberg et al., 2014; Thornberg et al., 2012) bystanders' defending behaviours, none of the models had information or knowledge about bullying as a unique construct essential in influencing the performance of defending roles, the gap which is filled by this model. According to the IMB model, specific type of information, specific motivational issues, and specific behavioural skills will be required in the performance of particular preventive or intervention behaviours. Similarly, the model seems to be effective in capturing basic constructs that have been proposed in other reviewed models as sub-constructs under its three main constructs. This suggests that the IMB model can provide a strong framework for incorporating other models and constructs for a deeper and holistic understanding of online adolescent bystanders' behaviours.

Nevertheless, the model has some limitations. Empirically, there is inconsistency of the information or knowledge construct in predicting the performance of preventive or intervention behaviours. In particular, the model postulates that, although necessary, information alone is not a sufficient condition for behavioural change. In addition, the model lacks environmental and cultural factors (Sharma, 2012), which are not only essential but also important in understanding, explaining and predicting individuals' behaviours in various contexts. Depending on the behaviour under study, there is a need to expand the IMB model to capture other relevant environmental, cultural, demographic, emotional reaction, exposure to social media and moral sensitivity variables for a comprehensive understanding of the specific behaviour of interest. Thus, without research, any judgment on the effectiveness of the three constructs of the model in understanding, explaining and predicting online bystanders' behaviour among adolescents, may be considered premature.

Conclusion

Apart from the identified limitations, the IMB model holds some promise in informing intervention and prevention efforts in cyberbullying. In particular, the model suggests particular critical considerations that adolescents who have relevant information about cyberbullying and its associated negative consequences. It is deduced that individuals who are motivated to intervene and who have adequate intervention behavioural competencies are more likely to perform online defending roles unlike their counterparts who demonstrate deficit in the identified three constructs of the model.

Furthermore, the model holds that both intervention information and intervention motivation are mediated through intervention behavioural skills for a substantial and sustainable practice of a preventive behaviour such as online defending roles (Fisher et al., 1999; Fisher & Fisher, 1992). However, there is a need for empirical research to establish the applicability of the IMB model in explaining and predicting online adolescent bystanders' behaviours to intervene or not intervene on behalf of cyber victims. In summary, adolescent bystanders' behaviour to intervene or not intervene is a function of many factors that could be better understood through a theoretical lens. This paper hopes to spur future research that would be founded under the theoretical framework to understand, explain and predict bystanders' behaviours in the digital world.

References

Barlińska, J., Szuster, A., & Winiewski, M. (2013). Cyberbullying among adolescent bystanders: role of the communication medium, form of violence, and empathy. *Journal of Community & Applied Social Psychology*, *23*(1), 37-51.

Bastiaensens, S., Vandebosch, H., Poels, K., Van Cleemput, K., DeSmet, A., & De Bourdeaudhuij, I. (2014). Cyberbullying on social network sites. An experimental study into bystanders' behavioural intentions to help the victim or reinforce the bully. *Computers in Human Behaviour*, *31*, 259-271.

Bonanno, R. A., & Hymel, S. (2013). Cyberbullying and internalizing difficulties: Above and beyond traditional forms of bullying. *Journal of Youth and Adolescence, 42*, 685-697.

Cortés-Pascual, A., Cano-Escorianza, J., Elboj-Saso, C., & Iñiguez-Berrozpe, T. (2020). Positive relationships for the prevention of bullying and cyberbullying: a study in Aragón (Spain). *International Journal of Adolescence and Youth*, *25*(1), 182-199.

DeSmet, A., Veldeman, C., Poels, K., Bastiaensens, S., Van Cleemput, K., Vandebosch, H., & De Bourdeaudhuij, I. (2014). Determinants of self-reported bystander behavior in cyberbullying incidents amongst adolescents. *Cyberpsychology, Behavior, and Social Networking*, *17*(4), 207-215.

Fisher, J. D., & Fisher, W. A. (1992). Changing AIDS-risk behaviour. *Psychological Bulletin*, *111*(3), 455-474.

Forsberg, C., Thornberg, R., & Samuelsson, M. (2014). Bystanders to bullying: Fourth-to seventh-grade students' perspectives on their reactions. *Research Papers in Education*, 29(5), 557-576.

Gourneau, B. (2012). Students' perspectives of bullying in schools. *Contemporary Issues in Education Research*, *5*(2).117-125.

Hawkins, D. L., Pepler, D. J., & Craig, W. M. (2001). Naturalistic observations of peer interventions in bullying. *Social Development*, *10*(4), 512-527.

Hinduja, S., & Patchin, J. W. (2012). Cyberbullying: Neither an epidemic nor a rarity. *European Journal of Developmental Psychology*, *9*(5), 539-543.

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of

cyberbullying research among youth.*Psychological Bulletin*. doi: 10.1037/a0035618.

Lenhart, A., Madden, M., Smith, A., Purcell, K., Zickuhr, K., & Rainie, L. (2011). Teens, kindness and cruelty on social network sites: How American teens navigate the new world of" digital citizenship". *Pew Internet & American Life Project*.

Li, Q., & Fung, T. (2012). Predicting student behaviour. Cyberbullies, cybervictims, and bystanders. In Q. Li, D. Cross, & P. K. Smith (Eds*.), Cyberbullying in the global playground. Research from international perspectives* (pp.99-114). West Sussex: Wiley-Blackwell.

Onditi, H. Z., & Shapka, J. D. (2020). Cyberbullying and Cybervictimization in Tanzanian Secondary Schools: Prevalence and Predictors. *Journal of Education, Humanities and Sciences (JEHS)*, *8*(1).

Patchin, J. W., & Hinduja, S. (2020). It is time to teach safe sexting. *Journal of Adolescent Health*, *66*(2), 140-143.

Rideout, V., *& Robb, M. (2019). The common sense census: Media use by tweens and teens,2019.* Retrieved from https://www.commonsensemedia.org/research/the-common-sense-census-media-use-by-tweensand-teens-2019

Rongkavilit, C., Naar-King, S., Kaljee, L. M., Panthong, A., Koken, J. A., Bunupuradah, T., & Parsons, J. T. (2010). Applying the information-motivation-behavioural skills model in medication adherence among Thai youth living with HIV: A qualitative study. *AIDS Patient Care and STDs*, *24*(12), 787-794.

Salmivalli, C. (2014). Participant roles in bullying: How can peer bystanders be utilized in interventions? *Theory Into Practice*, *53*(4), 286-292.

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behaviour*, *22*(1), 1-15.

Salmivalli, C., Voeten, M., & Poskiparta, E. (2011). Bystanders matter: Associations between reinforcing, defending, and the frequency of bullying behaviour in classrooms. *Journal of Clinical Child & Adolescent Psychology*, *40*(5), 668-676.

Sharma, M. (2012). Editorial: Information-Motivation-Behaviour Skills (IMB) Model: Need for utilization in alcohol and drug education. *Journal of Alcohol and Drug Education*, *56*(1), 3-7.

Thornberg, R., & Jungert, T. (2013). Bystander behaviour in bullying situations: Basic moral sensitivity, moral disengagement and defender self-efficacy. *Journal of Adolescence*, *36*(3), 475-483.

Thornberg, R., Tenenbaum, L., Varjas, K., Meyers, J., Jungert, T., & Vanegas, G. (2012). Bystander motivation in bullying incidents: to intervene or not to intervene? *Western Journal of Emergency Medicine*. doi:10.5811/westjem.2012.3.11792

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behaviour*, *26*(3), 277-287.

Trach, J., & Hymel, S. (2020). Bystanders' affect toward bully and victim as predictors of helping and non-helping behaviour. *Scandinavian journal of psychology*, *61*(1), 30-37.

Trach, J., Hymel, S., Waterhouse, T., & Neale, K. (2010). Bystander responses to school bullying: A cross-sectional investigation of grade

and sex differences. *Canadian Journal of School Psychology*, *25*(1), 114-130.

Obermann, M. L. (2011). Moral disengagement among bystanders to school bullying. *Journal of School Violence*, *10*(3), 239-257.

Waasdorp, T. E., & Bradshaw, C. P. (2015). The overlap between cyberbullying and traditional bullying. *Journal of Adolescent Health*, *56*(5), 483-488.

Ybarra, M. L., Korchmaros, J., Kiwanuka, J., Bangsberg, D. R., & Bull, S. (2013). Examining the applicability of the IMB model in predicting condom use among sexually active secondary school students in Mbarara, Uganda. *AIDS and Behaviour*, *17*(3), 1116-1128.

Zhu, C., Cai, Y., Ma, J., Li, N., Zhu, J., He, Y., ... & Qiao, Y. (2013). Predictors of intention to smoke among junior high school students in Shanghai, China: An Empirical Test of the Information-Motivation-Behavioural Skills (IMB) Model. *PLOS One*, *8*(11), 1-7.