Cyberbullying. The Impact on Empathy Levels, Quality of Friendships and Coping Styles among Teenagers

Fionnuala Whelan

Submitted in partial fulfilment of the requirements of the Bachelor of Arts degree (Psychology specialisation) at Dublin Business School, School of Arts, Dublin

Supervisor: Cathal O’Keeffe

Programme Leader: Dr. Rosie Reid

March 2016

Department of Psychology

DBS School of Arts
<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Title Page</td>
<td>1</td>
</tr>
<tr>
<td>2. Contents</td>
<td>2</td>
</tr>
<tr>
<td>3. Acknowledgements</td>
<td>4</td>
</tr>
<tr>
<td>4. Abstract</td>
<td>5</td>
</tr>
<tr>
<td>5. Introduction</td>
<td>6</td>
</tr>
<tr>
<td>Evolution of Bullying</td>
<td>6</td>
</tr>
<tr>
<td>Cyberbullying</td>
<td>6</td>
</tr>
<tr>
<td>Effects of Cyberbullying</td>
<td>8</td>
</tr>
<tr>
<td>School Policy and Legislation</td>
<td>10</td>
</tr>
<tr>
<td>Empathy</td>
<td>11</td>
</tr>
<tr>
<td>Quality of Friendships</td>
<td>12</td>
</tr>
<tr>
<td>Coping Strategies</td>
<td>14</td>
</tr>
<tr>
<td>Rationale</td>
<td>16</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>18</td>
</tr>
<tr>
<td>6. Method</td>
<td>19</td>
</tr>
<tr>
<td>Participants</td>
<td>19</td>
</tr>
<tr>
<td>Design</td>
<td>19</td>
</tr>
<tr>
<td>Materials</td>
<td>20</td>
</tr>
<tr>
<td>Procedure</td>
<td>22</td>
</tr>
<tr>
<td>Ethical Considerations</td>
<td>23</td>
</tr>
<tr>
<td>7. Results</td>
<td>25</td>
</tr>
<tr>
<td>Demographic Data</td>
<td>25</td>
</tr>
<tr>
<td>Descriptive Statistics</td>
<td>26</td>
</tr>
<tr>
<td>Inferential Statistics</td>
<td>29</td>
</tr>
<tr>
<td>Additional Analysis</td>
<td>33</td>
</tr>
<tr>
<td>8. Discussion</td>
<td>36</td>
</tr>
<tr>
<td>Limitations</td>
<td>43</td>
</tr>
<tr>
<td>Future Research</td>
<td>44</td>
</tr>
<tr>
<td>Conclusion</td>
<td>46</td>
</tr>
<tr>
<td>9. References</td>
<td>47</td>
</tr>
<tr>
<td>10. Appendix</td>
<td>51</td>
</tr>
<tr>
<td>A. Consent from School Principal</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>B.</td>
<td>Letter of Non-consent to Parents</td>
</tr>
<tr>
<td>C.</td>
<td>Information Sheet</td>
</tr>
<tr>
<td>D.</td>
<td>Full Questionnaire</td>
</tr>
<tr>
<td>E.</td>
<td>Debrief Sheet</td>
</tr>
</tbody>
</table>
Acknowledgements

I would like to express my gratitude to the principals, staff and students of the two schools that participated in this study, without whom, this would not have been possible.

A special thank you to my project supervisor Cathal O’Keeffe, for his endless patience, encouragement, and invaluable guidance throughout the completion of this thesis.

Finally I would like to thank all my friends and family for their love, support and friendship over the past four years, particularly to my mother and my aunt Bernie for their encouragement and belief in me.
Abstract

The aim of this study is to investigate the impact of empathy, quality of friendships and coping styles on cyberbullying among teenagers. It utilised quantitative comparative correlational non-experimental design, using an anonymous self report questionnaire comprised of; The Cyberbullying Questionnaire (Sticca, Ruggieri, Alsaker and Perren, 2013), Coping with Cyberbullying Questionnaire (Sticca et al., 2015), The McGill Friendship Scale-Respondents Affection (MFQ-RA, 1999) (Mendelson and Aboud, 2012), and The Basic Empathy Scale (Jolliffe and Farrington, 2006) which was administered to 198 second year students. Insignificant results indicated no relationship between empathy and cyberbullying and cybervictimisation and quality of friendships. Students with higher empathy levels experienced higher quality of friendships. Cybervictims engaged in retaliation and helplessness/self blame. A relationship was discovered between quality of friendships and close support but not with technical coping, distal advice or assertiveness. Results and implications of the findings are discussed within.
Introduction

Evolution of bullying

Traditionally bullying was viewed as a problem affecting children in the schoolyard, however, bullying today is a relatively common societal problem (Ross, 2002 as cited in Saunders, 2004) with cases occurring across all settings such as the workplace, homes, schools, prisons and nursing homes, to name but a few (Smith and Brain, 2000 as cited ibid). With changing trends in society, the problem of bullying appears to be worsening and cases are reportedly becoming more volatile (Beale and Scott, 2001, Ma, 2001, Marsh, Parada, Yeung and Healey, 2001 as cited ibid). Bullying in schools is an international problem, its victims are often at their most vulnerable and today we are seeing evidence that cyberbullying is becoming increasingly problematic. Bullying may take many different forms, including physical, emotional and/or mental abuse. According to Campbell, Spears, Slee, Butler and Kift (2012), cyberbullying is more harmful than traditional bullying (as cited in Price et al, 2014). One of the reasons cyberbullying is proving problematic for statutory agencies is the difficulty encountered in detecting and policing it.

Cyberbullying

Cyberbullying may be defined as “an aggressive and intentional behaviour repeated frequently over time by means of the use, by an individual or group, of electronic facilities targeting a victim who cannot easily defend him or herself” (Smith et al., 2008, p. 376). Cyberbullying may take many forms such as intimidation, impersonation, exclusion and humiliation. Numerous platforms exist online which facilitate cyberbullying such as instant messaging sites (Viber/Whatsapp) or social media sites, for example Facebook or the highly
controversial ‘ask.fm’, which has been linked to high profile cyberbullying cases both in Ireland and internationally. A study conducted among young people aged 9-16 years by O’Neill and Dinh (2014) showed that 3% of bullying occurred on gaming websites, instant messaging accounted for 2% of bullying cases and mobile phone calls accounted for 2% of bullying instances.

According to this study 22% of children surveyed had been bullied, either on or off-line with 6% saying they were ‘very’ or 10% reporting they were ‘a little upset’ by this experience. Of all age groups surveyed, 13-14 year olds were the most vulnerable as 27% of them had experienced bullying (ibid). Hateful and discriminatory communications were the most common form of bullying at 15% with negative content regarding eating disorders accounting for 14% of bullying instances. Other forms of negative content experienced by participants was self-harm sites (9%), suicide related material (8%) and drug related experiences (7%) (ibid). YouGov conducted an international study incorporating 11 countries comprised of approximately 5,000 teenagers and concluded that teenagers in Irelands are at considerably higher risk of cyberbullying, with one in four teenagers disclosing they had been cyberbullied, a marked dissimilarity to a rate of one in five across all other countries. They also noted that more than half of Irish teenagers surveyed perceived the issue of cyberbullying to be worse than drug abuse (Pope, 2015).

Traditional bullying is often visible to others and may only take place in certain settings, for example school or the workplace. Cyberbullying on the other hand, may offer anonymity to the perpetrator (or perpetrators) and can be completely hidden from everybody, apart from the bully and the victim. With new technological advances, society is becoming
progressively more ‘plugged into’ cyberspace, accessible at the touch of a button, offering no reprieve for its victims, hence why cyberbullying has been branded as “social terror by technology” (Smith et al, 2008, p. 42). Vandebosch (2006) highlighted how cyberbullying is more permanent, with victims repeatedly traumatised as defamatory comments online can be continually accessed and reread by the victim and others in comparison to verbal insults or comments which are temporary, as they can only be overheard by those present (as cited in O'Moore and Minton, 2011). In addition to this, Slojne (2012) indicated a lack of regret or guilt experienced by cyberbullies with only 42% feeling remorse compared to 70% of traditional bullies (as cited Slonje, Smith and Frisén, 2013), which is a worrying development.

**Effects of Cyberbullying**

The effects of cyberbullying are quite varied, with extreme cases often making headline news for all the wrong reasons. Armario (2007) identified that “social anxiety, lower self esteem, psychological disturbances and aggression” are just some of the issues that may result from cyberbullying (Price et al, 2014, p. 2). It has been known to cause sadness, anger, frustration, fear and other harmful emotions (Hinduja and Patchin 2007; Patchin and Hinduja, 2011) which have been linked with criminal and aggressive behaviour among juveniles and young adults (Aesltine et al 2000, Briody and Agnew, 1997, cited in Hinduja and Patchin, 2013).

Depression is another factor frequently experienced as a result of cyberbullying, which may lead to a multitude of other risk factors. Hawker and Boulton (2000) identified a powerful correlation between victimisation and depression (as cited in Kowalski, Limber and
Agatston, 2012). Victims who experienced isolation rather than more direct forms of harassment such as physical bullying; were found to be more vulnerable to depression and suicidal ideation (van der Wal, de Wit and Hirasung, 2003 as cited in Kowalski et al, 2012). Low self-esteem, anxiety and depression are commonly viewed as consequences of cyberbullying although some debate exists as to whether this is one of the reasons victims are targeted in the first place (Fekkes, Pijpers, Fredriks, Vogels and Verloove-VanHorick, 2006; Swearer, Grills, Haye, Cary, 2004 as cited in Kowalski et al, 2012).

In recent years, a number of cases of cyberbullying have been highly publicised in the media, illustrating the devastation that cyberbullying can cause. The heartbreaking story of the deaths of two young sisters, Erin and Shannon Gallagher is widely recognised throughout Ireland, as well as international cases such as Phoebe Prince and Amanda Todd, whose plights were highlighted all too late. The Phoebe Prince case is one which sparked massive controversy in the United States and led to the subsequent criminal prosecution of six teenagers following the tragic suicide of the Irish adolescent. Phoebe Prince was alleged to have taken her own life due to incessant bullying, both physical and online in a case which had far reaching consequences for both the victim and the bullies (Lynch, 2010). On September 7th 2012, a video was posted to YouTube by Canadian teenager Amanda Todd entitled 'My Story: struggling, bullying, suicide and self-harm' in which she used a series of flash cards to outline the bullying and harassment she suffered at the hands of her abusers. The video was viewed by 1.6 million people worldwide, which no doubt raised some serious concerns about the welfare of the teen but unfortunately it was not enough to prevent her suicide just over one month later on September 10th 2012 (Ó Cionnaith, 2012).
In September 2012, 15 year old school girl Ciara Pugsley from Leitrim, committed suicide after being subjected to a horrendous campaign of online abuse. Similar circumstances occurred in October 2012, when Erin Gallagher, a 13 year old girl from Donegal took her own life following weeks of torment from cyberbullies (Ó Cionnaith, 2012) and tragically, just two months after this, her older sister Shannon also took her own life (Harkin, 2013). In spite of cases like these, the problem is just as prevalent in Ireland today with cyberbullying taking place almost on a national level in some cases. Consider the case of Slane girl, whose identity went viral after she was photographed at a concert engaged in sexual acts. The Irish Media and public alike assumed the role of the cyberbully and publicised details of the case with little regard for the consequences this could have on a vulnerable teenage girl.

School Policy and Legislation

In September 2013, the Department of Education and Skills published Anti-Bullying Procedures for Primary and Post-Primary Schools, a formal policy document requiring each school to have an Anti-Bullying Policy contained within their Code of Conduct. This is not a legal requirement however, merely procedural. While there is no specific criminal legislation in existence to tackle cyberbullying, often the behaviours involved may constitute a criminal offence in itself. Harassment, contrary to section 10 and threats to kill or cause serious harm, contrary to section 5 of the Non-Fatal Offences Against the Person Act, 1997, are sometimes utilised in cases of extreme cyberbullying (Irish Statute Book).
Research has centred on interventions such as the Olweus Bullying Prevention programme which showed a 50% reduction in bullying (Olweus 1993; Olweus, 1999, as cited in Pepler, Rigby and Smith, 2004), however much debate exists about this and subsequent studies have proved inconsistent, failing to yield significant results (ibid). A few anti-cyberbullying programmes have been developed, specifically the KiVa programme, which has proven to be quite effective, resulting in a decrease in victimisation and identifying areas that need to be addressed (Kärnä et al, 2011). Although responsibility frequently falls on our schools to tackle the problem of cyberbullying, the situation is quite complex as research has shown that it is more likely to occur outside of school, making it relatively difficult for schools to deal with the issue (Smith et al, 2008).

**Empathy**

Empathy may be defined as a “*fundamental social skill which allows the individual to anticipate, understand, and experience the point of view of the other people*” (Davis and Franzoi, 1991 as cited in Van Cleemput, Vandebosch and Pabian, 2014, p. 3). Empathy is comprised of two distinct features, cognitive and affective empathy (Davis, 1994; Olweus and Endresen, 2001 as cited ibid). Cognitive empathy involves comprehending other people’s emotions (Hogan, 1969 as cited in Ang and Goh, 2010) which is distinguishable from affective empathy, which involves the capacity to actually experience and identify with others emotions (Mehrabian and Epstein, 1972 as cited ibid). Although a great deal of research has been conducted on bullying and empathy, the area of cyberbullying is comparatively undeveloped and investigations into the link between cyberbullying and empathy appear to be in their infancy. In spite of this, some studies have yielded useful information, Ang and Goh (2010) for instance, discovered that those with low cognitive
empathy admitted engaging in cyberbullying behaviours more frequently than those with considerably higher cognitive empathy, particularly with regard to males. Further studies have also indicated that a distinct lack of affective empathy was evident in those that cyberbully (Renati, Berrone and Zanetti, 2012 as cited in McNulty, 2014). More specifically, males who engaged in bullying behaviours regularly were found to be lacking in affective and total empathy (Jolliffe and Farrington, 2006).

Furthermore, Jolliffe and Farrington (2006) argued that based on their studies, there was a reliable link between antisocial and aggressive behaviour and low levels of empathy and moral development. Crick (1995) highlighted a link between indirect bullying, which is the primary method of cyberbullying and cognitive empathy, identifying that children who engage in indirect means of bullying were unable to accept the viewpoint of others, demonstrating low levels of cognitive empathy (as cited in Ang and Goh, 2010). Loudin, Loukas and Robinson (2003) established that it was more probable that those with reduced perception would demonstrate more aggressive social behaviours (ibid). The need to consider both cognitive and in particular, affective empathy when devising strategies to prevent physical aggression was also identified (Feshbach, 1987 cited in McNulty, 2014).

Quality of Friendships

It is long established that victims of bullying are often vulnerable members of society and bullying behaviours serve only to isolate children further and heighten their vulnerabilities (Schwartz, Dodge and Cole, 1993 as cited in Saunders, 2004). Olweus (1993a) was cited as attributing a number of common characteristics in bullied children; they may be
insecure, have little confidence and suffer from low self-esteem, have few friends and are socially isolated, find it easier to spend time with adults (parents, teachers, coaches) than same age peers (Kowalski et al, 2012, p. 25). A comparison of behavioural problems in children revealed a strong correlation with victimisation where the child had few friends, friends they viewed as more vulnerable than themselves or where they were rejected by their peers in comparison to those with a strong circle of friends (Hodges and Perry, 1997 as cited in Smith, 1999), thus signifying that high quality friendships are somewhat of a protective factor. Subsequent studies have highlighted that strong peer attachment significantly lessens bullying behaviours, as those not involved in traditional bullying or cyberbullying reported considerably higher peer attachment than that of bullies or victims (Burton, Florell and Wygant, 2013).

The formation of positive friendships during adolescents is significant and sometimes viewed as a measure of success or well being (Bagwell et al, 2005, as cited in Chow, Ruhl, and Buhrmester, 2013). Friendships of the same sex have been found to be of particular importance in the establishment of a network of close support and intimacy (Chow, Roelse, Buhrmester and Underwood, 2011 cited ibid). High empathy levels are believed to enhance quality of friendships as those involved possess the ability to appropriately deal with conflict, show compassion, care and overall contribute to a positive experience for all parties involved (Clark and Ladd, 2000; Smith and Rose, 2011, as cited ibid). The development of friendships can be difficult to navigate for teenagers; they may feel vulnerable and run the risk of rejection and betrayal. Those with high empathy levels however, are believed to be less susceptible to this as they are able to read the emotions of others more easily and respond appropriately (Batson, 1991; Burleson, 2003, as cited in ibid).
Cases of cyberbullying are often revealed to friends, as per O’Moore and Minton (2009) who found that 66.3% of the adolescent group surveyed would prefer to report an incidence of cyber bullying to a friend, with only 14.3% seeking the assistance of an adult at school, thus highlighting the importance placed upon these friendships. This has been confounded by Monks et al, (2009) and O’Moore (2012) who also identified a number of gender discrepancies here. Many explanations for this lack of reporting have been proposed, such as fear of having access to social media or technology curtailed, or a perceived lack of understanding on the part of their parents of cyberbullying and the internet in general (Smith et al, 2008; Hoff and Mitchell, 2009; Kolalski and Limber, 2008, as cited in Cowie, 2013). Unfortunately cyberbullying is often viewed as somewhat acceptable and some may trivialise the occurrence, while other victims feel that they are responsible for solving the problem themselves (Juvonen and Gross, 2008 as cited ibid). This failure to disclose cyberbullying is concerning considering as previously stated, victims are quite often isolated and do not develop strong quality friendships and this may potentially lead to the development of maladaptive coping strategies.

**Coping strategies**

The ability of victims to cope with cyberbullying and the coping strategies employed has major consequences for the mental health and welfare of children, or indeed even adults. Coping strategies are utilised in times of stress and “refers to conscious efforts individuals use to regulate emotion, cognition, behaviour, internal states or situation to reduce threat” (Kokkinos, Antonia dou, Dalara, Koufogazou and Papatziiki, 2013 as cited in Raskauskas and Huynh, 2015, p. 2). It may also be defined as the action taken to “manage stress and other related emotions” which is necessary for “emotional and psychological well-being” in times of stress (Lazarus, 2006, cited in Sticca et al, 2015, p. 2) Research has identified two forms of
coping – emotion and problem focused. Emotion focused involves the adjustment of a person’s emotional response and is sometimes considered maladaptive as it focuses on internal states, such as helplessness and avoidance or ignoring. For instance, a belief that nothing can be done and wishful thinking are examples of emotion focused coping. Alternatively, problem focused is more direct and adaptive, requiring the acquisition of new skills, direct action or seeking advice or guidance (Jurvonen and Graham, 2001).

Studies on bullying revealed that bullies and victims both scored low on problem solving skills, which is considered an important coping strategy (Andreou, 2001, cited in Riebel, Jaeger, and Fischer, 2009). Riebel et al, (2009) identified a number of different coping strategies, such as social/technical coping where the victim engages in practical behaviour to tackle the bullying such as reporting it to the appropriate person, aggressive coping such as retaliation for instance and avoidant coping such as ignoring the issue (as cited in Vollink, Bolman, Dhue and Jacobs, 2013). According to Jurvonen and Graham (2001), coping strategies are directly influenced by both internal and external factors and adaptive coping positively impacts upon mental health, however, little research exists to corroborate this. Problem focused coping strategies allow for easier adjustment to threatening situations (Lazarus and Folkman, 1987, cited in Raskauskas and Huynh, 2015). The application of adequate coping strategies will have a positive impact on an individuals physical health, by decreasing the instant effects experienced in threatening or traumatic situations and avoiding lasting consequences as a result of this stress (Machmutow et al., 2012; Perren et al., 2010, as cited ibid), therefore having a positive effect in cases of cyberbullying.
Engaging in “problem-focused coping” in order to eliminate cyberbullying resulted in fewer health concerns than cybervictims that engaged in avoidance, which is a form of “emotion-focused coping” (Burton, Stice and Seeley, 2004; Cassidy and Taylor, 2005, Hunter, Mora-Merchan and Ortega, 2004, cited in Vollink et al, 2013, p. 3). In addition, Lodge and Frydenberg (2007) discovered that girls who engaged in emotion focused behaviour (for instance apprehensive or avoidant coping strategies) developed more health problems (as cited ibid). Vollink et al, (2013), recognised that these emotion based coping strategies as a reaction to cyberbullying, created a vicious cycle of abuse with the development of cyber-specific depressive coping, which in turn caused depression and ill health (as cited ibid).

Rationale

The objective of this research is to establish a link between empathy levels, quality of friendships and coping strategies among teenagers in Ireland. Studies on cyberbullying in Irish schools are still relatively underdeveloped and while some research exists in relation to cyberbullying, empathy, quality of friendships and coping strategies, the impact each variable has on each other in relation to cyberbullying and cybervictimisation has yet to be examined.

Anecdotal evidence would suggest that issues relating to cyberbullying emerge in second year in secondary schools in Ireland, when students are aged on average, 13 or 14 years old, a view which many school principals would agree with. Statistical data appears to support this claim as almost a quarter of 15-16 year olds (24% of those surveyed) admitted having bullied others. In addition to this, almost half of those cyberbullies have themselves
been victims of cyberbullying (O’Neill and Dinh, 2013), identifying the presence of a vicious circle of abuse. Two groups were identified as experiencing the most bullying, 9-10 and 13-14 year olds with 27% in each age group, again reinforcing this anecdotal evidence. A shocking 13% of 13-14 year olds reported having bullied on a social networking site alone (ibid). In order to get an accurate understanding of the problem, this study examined cyberbullying and the impact of empathy, friendship quality and coping styles in second year students, specifically addressing these issues at the stage the problems are believed to emerge. In addition to this, Irish teens have reported a considerably higher risk of cyberbullying, with one in four teenagers disclosing abuse compared with one in five internationally, which certainly warrants further investigation (Pope, 2015).

O’Moore (2012) highlighted issues regarding the application of international studies in an Irish contextual setting, proving problematic due to diverging classification and characterisation of cyberbullying and its sub-categories. She also highlighted issues regarding the comparison of age, methods and time of reporting, making comparison of these studies a complex task, thus emphasising the necessity to conduct Irish studies on the subject.

The significance of high empathy levels in the development and enhancement of high quality friendships has been highlighted (Clark and Ladd, 2000; Smith and Rose, 2011, cited in Chow et al, 2013) and the relevance of this to cyberbullying is clearly evident. In addition to this, the quality of friendships experienced may have a detrimental effect on the types of coping strategies utilised in a particular context, with evidence suggesting that problem focused coping strategies may significantly lessen the negative effects of cyberbullying (Machmutow et al., 2012; Perren et al., 2010, as cited in Raskauskas and Huynh, 2015). With
all of this in mind, the magnitude of a study examining the impact of empathy, quality of friendships and coping styles on cyberbullying among teenagers in an Irish setting cannot be disputed.

**Hypothesis**

1. Those involved in cyberbullying will display significantly lower empathy levels than those not involved.
2. Victims of cyberbullying will exhibit significantly lower quality of friendships.
3. Students with higher quality friendships will also exhibit greater levels of empathy.
4. Victims of cyberbullying will exhibit inferior coping strategies compared to those who are not cyberbullied.
5. There will be a significant positive relationship between high quality of friendships and positive coping strategies.
Method

Participants

The sample comprised of 198 second year students from two different secondary schools in Dublin, an all girls school (N=106) and a mixed school (N=92). The average age of participants was 14 years. Convenience sampling was utilised in this study and all participants completed the same questionnaire under the same conditions. A meeting was held with both principals individually, wherein, the study was explained to them and they were invited to take part, which they accepted. Letters of non-consent were distributed to each parent or guardian of second year students, informing them of the study and its aims and invited their children to participate. The students themselves were provided with this information on the day the study was conducted and again invited to contribute. Participation was completely voluntary, no incentives were offered and informed consent was given. All second year students in attendance participated in the study.

Design

This study makes use of a quantitative comparative correlational non-experimental design, by means of anonymous self-administered questionnaire (Appendix D). Differences in relation to cyberbullies and those who do not cyberbully were examined, as well as the differences between cybervictims and non-victims. The correlational aspect examined the relationship between cyberbullies, cybervictims and the variables empathy, quality of friendships and coping styles. The variables being measured are cyberbullying, cybervictim
and quality of friendships as predictor variables (PV) and empathy, quality of friendships and coping strategies as criterion variables (CV).

**Materials**

A self-administered questionnaire was utilised in this study, consisting of four separate scales (Appendix D).

*The Cyberbullying Questionnaire* (Sticca, Ruggieri, Alsaker and Perren, 2013) measures aggressive or bullying behaviours online. The first six items (Q8-13) solicit information regarding the frequency participants have engaged in cyberbullying, while the second six items (Q14-19) determine if participants have been the victim of cyberbullying. Participants were provided with twelve separate scenarios and asked to rate their response, based on frequency of occurrence, ranging from 1 ‘never’, to 5 which stood for ‘almost daily’. Participants who scored above six in the cyberbullying and/or cybervictimisation section were classified as cyberbullies and/or cybervictims. A definition of what constituted cyberbullying was also included. The internal consistency, as measured by Cronbach’s Alpha was found to be .856, for cyberbullies and .821 for cybervictims, both of which are highly reliable.

The *Coping with Cyberbullying Questionnaire* (Sticca et al., 2015). This scale consists of 36 different responses to cyberbullying and participants are asked to select the likelihood of responding in that manner, based on a five point Likert scale of A ‘Definitely Not’, B ‘Probably Not’, C ‘Probably’, D ‘Definitely Yes, to E ‘No Answer’. Each question or scenario assesses the type of coping strategy employed by the participant. Positive coping
strategies include distal advice, technical coping, close support and assertiveness, while negative strategies were retaliation, active ignoring, and helplessness/self blame. Retaliation, for instance, is assessed in questions 4, 18, 26, 29, 33 and the average for each sub-scale or type of coping strategy is obtained, giving a range of scores from each sub-scale from 1 (lowest) to 4 (highest). The internal consistency, as measured by Cronbach’s Alpha was found to be .856, which is highly reliable.

*The McGill Friendship Scale-Respondents Affection* (MFQ-RA, 1999), is a 16 item questionnaire which determines the respondents’ feelings towards a particular friend (nine items) and their satisfaction with that friendship (seven items). It contains statements such as ‘I enjoy having ___ as a friend’ to which respondents are asked to select a number on a 9 point scale ranging from -4 ‘very much disagree’ to 4 ‘very much agree’. Each of the respondents scores are then added together, with higher scores reflecting higher quality friendships. The scores were recoded to range from 1-9, to allow the results to be read more easily. Reliability as per Cronbach’s alpha was found to be .769, which is acceptable.

The *Basic Empathy Scale* (Jolliffe and Farrington, 2006) is a 20 item scale designed to measure affective and cognitive empathy. Participants were presented with 20 statements which they were asked to respond to on a five point Likert Scale ranging from 1 Strongly Disagree to 5 Strongly Agree. There are eleven statements to measure affective empathy, such as ‘I often become sad when watching sad things on TV or film’, while nine statements measure cognitive empathy (Q3, 6, 9, 10, 12, 14, 16, 19, 20), for instance, ‘I can usually realise quickly when a friend is angry’. Eight questions in total require reverse scoring (Q1, 6, 7, 8, 13, 18, 19, 20). Scores on this scale range from 20-100, with the higher results reflecting
greater emotional responses. The internal consistency as measured by Cronbach’s alpha was found to be .716, which is reasonable.

The data was then entered into IBM SPSS Statistics 22 and analysed.

**Procedure**

Firstly, a research proposal and a research ethics review application form were submitted to Dublin Business School Board of Ethics for approval, which was successfully obtained. A meeting was held with both school principals individually whereby the study was explained and they agreed to participate. Written consent was obtained from the principals (Appendix A). Letters of non-consent (Appendix B) were provided to the schools for distribution to each parent or guardian of second year students, outlining the study, its aims and inviting their children to participate. A statutory declaration was obtained and submitted in order to allow the researcher to conduct research with children. All four questionnaires (Appendix D) were approved by the appointed supervisor prior to distribution and subsequently by the school principals.

On the day of the study, the questionnaires were delivered to both schools and verbal instructions provided. Each questionnaire had an Information sheet (Appendix C) outlining the following; the researcher was completing the final year of a BA (Hons) Psychology in Dublin Business School, the purpose of the study, that the results gathered would be submitted as part of a final year project to Dublin Business School, participation in the study was entirely voluntary, responses were confidential and they were advised not to write their names on the questionnaire. Students were invited to participate and informed that once the questionnaires were submitted, they would be unable to withdraw from the study. A Debrief
Sheet (Appendix E) which they were instructed to retain was attached to the back of the questionnaire thanking them for their participation and outlining contact information for a number of different organisations offering various supports to those affected by cyberbullying. The questionnaires were distributed at the beginning of a 40 minute class period and were administered under normal class conditions so that each respondent was assured confidentiality. Participants were informed the purpose of the study was to further investigate cyberbullying and how it was influenced by factors such as empathy, quality of friendships and methods of coping. Assistance was provided to any students requiring clarification regarding the meaning of certain questions or instructions. Upon completion, which took on average 15 minutes (however some students did take up to 25 minutes), the questionnaires were handed up and subsequently collected from the school.

Initially a small pilot study was conducted with four teenagers, aged 13 to 16 in order to ensure the questionnaires were suitable for the relevant age group, were clear and relatively straightforward to complete without help from an adult and took an appropriate length of time to complete. The participants were known to the researcher, parental consent was obtained and informed consent was provided.

**Ethical Considerations**

As the study involved teenagers, a statutory declaration was completed as required. Letters of non-consent were also submitted well in advance of the study, allowing parents adequate time to decline on behalf of their child. Participants were assured that all data collected would remain anonymous and therefore were instructed not to write their names on the questionnaire. It was explained to them that for this reason they would be unable to withdraw from the study, after submitting their questionnaire as it would not be identifiable.
The data was kept secure in a locked filing cabinet and was saved onto a password protected memory stick. Dublin Business School Code of Ethics was strictly adhered to at all times.
Results

Data Analysis

The data was then entered into IBM SPSS Statistics 22 and statistically analysed. Checks were conducted and it was ascertained that the data was not normally distributed; the Shapiro-Wilks values were all below .05. Non-parametric tests were conducted in order to analyse the data.

Demographic Data

Of the 198 participants that completed the study, 25.13% were male (N=49) and 74.87% were female (N=146) from a mixed (N=92) and an all girls school (N=106). The average age was 14 (53.33%). 47.4% of the students surveyed admitted to engaging in cyberbullying on at least one occasion, while 68.9% reported they had been the victim of cyberbullying, see Table 1.

Table 1 Cyberbullying and Cybervictim Frequency

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyberbully</td>
<td>92</td>
<td>47.42%</td>
</tr>
<tr>
<td>Non-bully</td>
<td>102</td>
<td>52.58%</td>
</tr>
<tr>
<td>Cybervictim</td>
<td>135</td>
<td>68.88%</td>
</tr>
<tr>
<td>Non-victim</td>
<td>61</td>
<td>31.12%</td>
</tr>
</tbody>
</table>
Descriptive Statistics

Descriptive statistical analysis was conducted on all variables in order to ascertain the mean, median, standard deviation and minimum and maximum scores. Although the mean and standard distribution is reported, as the data is not normally distributed the median is also provided in order to more accurately interpret the data.

In response to how frequently they accessed the internet, students reported the mean hours spent online as 2.91 (SD=1.30) and the median was 3.0 (Figure 1). The 5-10 hours online category accounted for 29.29% of students, whereas 16.16% stated they spent 20 or more hours online. Most students (76.26%) reported accessing the internet several times a day (Figure 2). Just over half a percent of students accessed the internet less than once a week.

Figure 1 Hours Online Per Week
A significant relationship was identified between certain coping strategies and cybervictims, see Table 2. Of the three negative coping strategies examined, active ignoring was engaged in most frequently by both cybervictims (M=2.96, SD=0.65, Median=3.00) and non-victims (M=2.92, SD=0.57, Median=3.00), although no significant relationship was discovered.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cybervictim</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retaliation</td>
<td>1.78</td>
<td>1.4</td>
<td>.20</td>
<td>4</td>
<td>.81</td>
</tr>
<tr>
<td>Helplessness / self blame</td>
<td>1.96</td>
<td>2</td>
<td>.20</td>
<td>3.6</td>
<td>.66</td>
</tr>
<tr>
<td>Active ignoring</td>
<td>2.96</td>
<td>3</td>
<td>.20</td>
<td>4</td>
<td>.65</td>
</tr>
<tr>
<td><strong>Non-victim</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retaliation</td>
<td>1.58</td>
<td>1.4</td>
<td>.20</td>
<td>4</td>
<td>.79</td>
</tr>
<tr>
<td>Helplessness / self blame</td>
<td>1.67</td>
<td>1.6</td>
<td>.60</td>
<td>3</td>
<td>.58</td>
</tr>
<tr>
<td>Active ignoring</td>
<td>2.92</td>
<td>3</td>
<td>.60</td>
<td>4</td>
<td>.57</td>
</tr>
</tbody>
</table>
**Inferential Statistics**

Those involved in cyberbullying will display significantly lower empathy levels than those not involved.

Cyberbullies (M=29.23, SD=2.97) were found to have slightly lower cognitive empathy levels than those that did not bully (M=29.48, SD=3.23). The median and interquartile range (IQR) was 29.5 and 3.25 for the non-bully group and 30 and for the bullies with an interquartile range of 4. Cyberbullies (M=32.41, SD=5.52) were found to have slightly lower affective empathy levels than those that did not bully (M=32.89, SD=4.97). The median was 33 for the non bully group and 34 for the bully group and the IQR was 7 for both groups.

A Mann-Whitney U test revealed that the cognitive empathy levels for cyberbullies (mean rank = 88.40) and non-bullies (mean rank = 94.04) did not differ significantly (Z = -.72, p = .470).

A Mann-Whitney U test revealed that that the affective empathy levels for cyberbullies (mean rank = 95.09) and non-bullies (mean rank = 87.54) did not differ significantly (Z = -.97, p = .333).

As the significance is greater than .05, there is no statistically significant relationship between the cyberbully and non-bully group in relation to either cognitive or affective empathy. Therefore the null hypothesis can be accepted.
Victims of cyberbullying will exhibit significantly lower quality of friendships than those that are not bullied.

Cybervictims (M=132.76, SD=17.39, Median=140) were found to have slightly lower quality of friendships than those who were not victims of cyberbullying (M=138.38, SD=7.23, Median=141).

A Mann-Whitney U test revealed that the cybervictims (mean rank = 93.10) and non-victims (mean rank = 102.33) did not differ significantly in relation to quality of friendships (Z = -1.08, p = .278)

As the significance is greater than .05, the Mann-Whitney test found there was no statistically significant relationship in quality of friendships between cybervictims and non-victims. Therefore the null hypothesis can be accepted.

Students with higher quality of friendships will also exhibit greater levels of empathy.

Cognitive empathy levels (M=29.46, SD=3.11, Median=30) and affective empathy levels (M=33.17, SD=5.21, Median=34) were examined in relation to quality of friendships.

A one-tailed Spearman’s rho correlation found that there was a weak positive significant relationship between quality of friendships and cognitive empathy levels (rs(183) = 0.16, p = .016) and affective empathy (rs(182) = 0.17, p = .012). This relationship can account for 2.56% of variation of scores for cognitive empathy and 2.89% for affective empathy.

There is a statistically significant relationship between quality of friendships and both cognitive and affective empathy. Although the relationship between the variables is low, it
shows that increasing quality of friendships will result in higher cognitive and affective empathy levels and vice versa. Therefore, the null hypothesis can be rejected.

Victims of cyberbullying will exhibit inferior coping strategies (retaliation, active ignoring, helplessness/self blame) compared to those who are not cyberbullied.

Victims of cyberbullying were found to have slightly higher levels of engagement in unhelpful coping strategies like retaliation (M=1.79, SD=0.81, Median=1.40) than non-victims (M=1.58, SD=0.79, Median=1.40). Levels of helplessness/self blame was also reported to be higher in cybervictims (M=1.96, SD=0.66, Median=2.00) than non-victims (M=1.67, SD=0.58, Median=1.60). Active ignoring appeared to be similar in both cybervictims (M=2.96, SD=0.65, Median=3.00) and those that were not victims of cyberbullying (M=2.92, SD=0.57, Median=3.00) (Figure 3).

A Mann-Whitney U test revealed that that the cybervictims (mean rank = 103.10) and non-victims (mean rank = 84.99) did in fact differ significantly in relation to retaliation ($Z = -2.09, p = .036$).

A Mann-Whitney U test revealed that the cybervictims (mean rank = 104.06) and non-victims (mean rank = 79.86) differed significantly in relation to helplessness/self blame ($Z = -2.81, p = .005$).

As the significance was less than .05, the Mann-Whitney test found there was a statistically significant relationship in the coping strategies retaliation and helplessness/self blame between cybervictims and non-victims. Therefore the null hypothesis can be rejected.
A Mann-Whitney U test revealed that the cybervictims (mean rank = 100.77) and non-victims (mean rank = 91.92) did not differ significantly in relation to active ignoring (Z = -1.02, p = .306).

As the significance is greater than .05, the Mann-Whitney test found there was no statistically significant association between the coping strategy active ignoring in cybervictims and non-victims.

Figure 3 Inferior Coping Strategies and Cybervictimisation
There will be a significant positive relationship between high quality of friendships and positive coping strategies (technical coping, distal advice, close support, assertiveness).

A one tailed Spearman’s rho correlation found that there was no significant relationship between quality of friendships and technical coping ($rs(190) = 0.03$, $p = .339$), distal advice ($rs(190) = 0.05$, $p = .231$) or assertiveness ($rs(191) = -0.01$, $p = .444$).

A statistically significant weak relationship was found between quality of friendships and close support ($rs(190) = 0.23$, $p = .001$) ($p < .01$). Therefore the null hypothesis can be rejected.

**Additional Analysis**

Additional analysis was conducted to examine other data. A Mann-Whitney U test revealed that cyberbullies (mean rank = 108.11) and non-bullies (mean rank = 87.93) differed significantly with regard to time spent online, with cyberbullies spending more time online than the non-bully group ($Z = -2.56$, $p = .010$).

A Mann-Whitney U test also found a significant difference between cybervictims (mean rank = 109.80) and non-victims (mean rank = 73.49) in relation to time spent online ($Z = -4.25$, $p < .001$), see Figure 4.
Further analysis was also conducted on the remaining variables in relation to the four categories, cyberbully/non-cyberbully and cybervictim and non-victim. A Mann-Whitney U test illustrated that the cyberbully and non-cyberbully group differed significantly in relation to a number of coping strategies, such as technical coping ($Z = -3.16, p = .002$), retaliation ($Z = -4.85, p < .001$) and close support ($Z = -2.71, p = .007$), see Table 3.

A Mann-Whitney U test indicated that the cybervictim and non-victim group also differed significantly in relation to a number of variables, such as affective empathy ($Z = -2.00, p = .046$) and close support ($Z = -2.04, p = .041$), as per Table 4.
Table 3 A Mann-Whitney U Test Comparing Copying Styles and Cyberbully/Non-Bully Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>Cyberbully</td>
<td>90</td>
<td>82.67</td>
<td>7440.00</td>
<td>-3.16</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Non-Bully</td>
<td>101</td>
<td>107.88</td>
<td>10896.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retaliation</td>
<td>Cyberbully</td>
<td>91</td>
<td>116.82</td>
<td>10630.00</td>
<td>-4.85</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Non-Bully</td>
<td>101</td>
<td>78.19</td>
<td>7879.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>Cyberbully</td>
<td>90</td>
<td>84.58</td>
<td>7612.50</td>
<td>-2.71</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>Non-Bully</td>
<td>101</td>
<td>106.17</td>
<td>10723.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>Cyberbully</td>
<td>90</td>
<td>81.15</td>
<td>7303.50</td>
<td>-3.52</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Non-Bully</td>
<td>101</td>
<td>109.23</td>
<td>11032.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 A Mann-Whitney U Test Comparing Cybervictim/Non-Victim Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Empathy</td>
<td>Cybervictim</td>
<td>128</td>
<td>97.11</td>
<td>12430.00</td>
<td>-2.00</td>
<td>.046</td>
</tr>
<tr>
<td></td>
<td>Non-Victim</td>
<td>55</td>
<td>80.11</td>
<td>4406.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retaliation</td>
<td>Cybervictim</td>
<td>134</td>
<td>103.10</td>
<td>13815.50</td>
<td>-2.09</td>
<td>.036</td>
</tr>
<tr>
<td></td>
<td>Non-Victim</td>
<td>60</td>
<td>84.99</td>
<td>5099.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>Cybervictim</td>
<td>133</td>
<td>91.53</td>
<td>12173.00</td>
<td>-2.04</td>
<td>.041</td>
</tr>
<tr>
<td>Support</td>
<td>Non-Victim</td>
<td>60</td>
<td>109.13</td>
<td>6548.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpless/self blame</td>
<td>Cybervictim</td>
<td>132</td>
<td>104.06</td>
<td>13736.50</td>
<td>-2.81</td>
<td>.005</td>
</tr>
<tr>
<td></td>
<td>Non-Victim</td>
<td>60</td>
<td>79.86</td>
<td>4791.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion

The objective of this research was to examine the presence and strength of the relationship between empathy levels, quality of friendships and coping strategies among teenagers in Ireland. Although a great deal of research exists on traditional bullying, the investigation into the phenomena of cyberbullying is comparatively underdeveloped. While research has been conducted in other countries, O’Moore (2012) advised caution in the application of these findings to Ireland, due to discrepancies in the definition and categorisation of cyberbullying and its sub-groupings. Considering Irish teenagers have been found to be more vulnerable to cyberbullying than teenagers internationally, Irish based investigations into the problem are urgently required (Pope, 2015). Additionally, analysis on cyberbullying and the role of empathy, quality of friendships and coping strategies have yet to be conducted. Understanding these issues and their relationship, would provide professionals working with teenagers with a much better understanding on the subject and could lead to the development and implementation of improved cyberbullying policies and interventions in Irish schools.

In this study, 47.42% of the students disclosed that they had engaged in cyberbullying on at least one occasion, while 68.88% divulged they had been the victim of cyberbullying. This is a considerable increase on the study conducted by O’Neill and Dinh (2014), in which 22% of all children surveyed reported bullying (either online or otherwise), with 14% admitting to bullying/cyberbullying in the preceding 12 months. These figures represent a startling rise in the incidence of cyberbullying and cybervictimisation. This study identified no significant relationship between empathy and cyberbullying and between cybervictimisation and quality of friendships. Students with higher empathy levels were reported to experience higher quality of friendships. A small but significant difference was observed in the frequency
cybervictims engaged in retaliation and helplessness/self blame when compared to non-victims. A positive relationship was discovered between quality of friendships and close support but not in association with technical coping, distal advice or assertiveness.

**Cyberbullying and Empathy**

It was hypothesised that those involved in cyberbullying would display significantly lower levels of cognitive and affective empathy, than those that did not bully. This hypothesis was rejected as no statistically significant difference was detected between the two groups in relation to either cognitive or affective empathy. Overall the cognitive and affective empathy scores for all students were relatively high. Although the mean cognitive empathy score for cyberbullies was lower than the non-cyberbully group, as the data was skewed, the median was examined but was discovered to be slightly larger for the cyberbully group. Cyberbullies were found to have a slightly lower mean for affective empathy, but again the median score was higher, when compared to those that did not bully.

These findings do not fit with previous research conducted by Renati, Berrone and Zanetti (2012), which found that cyberbullies appeared to be lacking in affective empathy (cited in McNulty, 2014). Jolliffe and Farrington (2006), established that females scored higher on cognitive and in particular, affective empathy, than males. This was confirmed by Ang and Goh (2010), whose results correlated consistently with other such studies conducted in the UK, Canada and the U.S.A, identifying that males with lower cognitive empathy cyberbullied more frequently. Considering female students accounted for just below three quarters of the distribution of this sample, it is possible that a more evenly spread gender distribution may have yielded more significant results. Future research could examine if a gender difference
exists among Irish students in relation to cognitive and affective empathy and try to account for this.

**Cybervictims and Quality of Friendships**

The second hypothesis predicted that there would be a significant relationship between victims of cyberbullying and quality of friendships. Although cybervictims were discovered to have lower quality of friendships than the non-victim group, a statistically significant relationship was not established and therefore the hypothesis was not supported. This finding contradicts previous research establishing a strong relationship between the two variables. Olweus (1993a), among others, identified that victims of bullying were often socially isolated with few friends and found it difficult to spend time with people their own age (as cited in Kowalski, Limber and Agatston, 2012). Greater peer attachments have been identified in non-victims and non-bullies, than in victims, bullies or cyberbullies (Burton, Florell and Wygant, 2013).

The insignificant result may be due to a number of diverse factors. Both schools involved in this study have taken a proactive approach to the problem of cyberbullying and have developed stringent anti-bullying policies. Anti-bullying campaigns and strategies aimed at promoting inclusiveness are undertaken regularly. Coupled with this, school guidance counsellors are available to all students and open lines of communication exist between the students, school staff and parents/guardians. A limitation of The Cyberbullying Questionnaire (Sticca et al, 2013) was that it failed to specify a time period that the victimisation occurred within, which may have affected the results in this case. Although rates of victimisation are
relatively high within this sample group, the bullying may have occurred a number of months or even years before this study was conducted. As discussed, previous research has shown that cyberbullying is more likely to occur outside of school (Smith et al., 2008), therefore the quality of friendships experienced between these particular second year students may have been unaffected by the cyberbully/victim relationship.

**Quality of Friendships and Empathy**

It was predicted that students with higher quality of friendships would exhibit greater levels of empathy. A Spearman's Rho correlation identified a significant relationship between quality of friendships and both cognitive and affective empathy in this study, albeit a weak one. Although the relationship between the variables is weak, it shows that increasing quality of friendships will result in higher cognitive and affective empathy levels and vice versa. This is in keeping with previous research, as per Clark and Ladd (2000) and Smith and Rose (2011) which found that high empathy levels serve to strengthen quality of friendships, allowing for better functioning relationships (as cited in Chow, Ruhl and Buhrmester, 2013). As per previous research, the hypothesis that high quality of friendships correlates with higher levels of affective and cognitive empathy was supported in this instance.

**Cybervictimisation and Emotion Based Coping Strategies**

It was predicted that victims of cyberbullying would exhibit inferior or unhelpful coping strategies, such as retaliation, active ignoring and helplessness/self blame, when compared to those who were not cyberbullied. Levels of engagement in active ignoring appeared to be engaged in most frequently by both cybervictims and non-victims with cybervictims found to
have a slightly higher mean than non-victims and an identical median. It was not found to be statistically significant.

The results of a Mann-Whitney U test revealed that victims of cyberbullying were indeed found to employ unhelpful coping styles like retaliation and helplessness/self blame more frequently than non-victims. This statistically significant result is in keeping with previous research. Kochenderfer-Ladd and Skinner (2002) is cited to have found that emotional ways of coping like crying or acting out of anger, shame, fear, or being upset, subsequently worsen victimization (Völlink, Bolman, Eppingbroek, Dehue, 2013), thus establishing a negative cycle of abuse. According to Völlink, Bolman, Dehue and Jacobs (2013) students employing emotion based coping strategies are at greater risk of developing cyber-specific depressive coping, which in turn may cause ill health (as cited ibid). A study by YouGov revealed Irish teenagers are not equipped with the necessary coping skills to appropriately deal with the issue of cyberbullying with 45% of teenagers admitting they felt helpless and 29% reporting they felt alone (Pope, 2015). This is an area of concern which needs to be addressed and future research could focus on the success of interventions aimed at eliminating these emotion based coping styles, such as meditation, ‘talk therapy’ and other therapeutic interventions.

Quality of Friendships and Problem Based Coping Strategies

The final hypothesis predicted that there would be a significant positive relationship between high quality of friendships and positive coping strategies (technical coping, distal advice, close support, assertiveness), which was partially upheld. A one tailed Spearman’s
rho correlation found that there was no significant correlation between quality of friendships and technical coping, distal advice or assertiveness. This may be due to the actions of the schools as previously discussed which have helped develop high quality friendships within the peer group. Cyberbullying has become so common that unfortunately, it is often considered an acceptable form of behaviour and consequently trivialised. This may result in a reluctance to report its occurrence, while others may simply feel there is nothing to be done and do not take practical steps to tackle it, such as seeking distal advice, employing technical methods (blocking the bully or reporting them) or standing up to them (Juvonen and Gross, 2008 as cited in Cowie, 2013). Students may be reluctant to take proactive steps to eliminate the bullying for these reasons or as previously discussed they may fear their access to technology or the internet may be restricted.

A Mann-Whitney U test revealed a statistically significant relationship between quality of friendships and close support, thereby supporting the hypothesis. This is in line with previous research as high functioning friendships are believed to provide safety, comfort and support to individuals. O’Moore and Minton (2009) revealed that 66.3% of the adolescent group surveyed would prefer to report an incidence of cyber bullying to a friend, with only 14.3% seeking the assistance of an adult at school, thus highlighting the importance of this support network. These findings have been confounded by Monks et al, (2009) and O’Moore (2012). Interestingly, Chow, Roelse, Buhrmester and Underwood (2011) were cited as finding same-sex friendships to be of particular significance in the development of a network of close support and intimacy (Chow, Ruhl and Buhrmester, 2013). As one of the schools involved in this study was an all-girls school and female participants accounted for almost three quarters of the sample, this may very well have influenced results.
Additional Analysis

The analysis revealed a significant correlation between internet use and cyberbullying, with cyberbullies spending more time online than non-bullies. A significant relationship was also established between cybervictims and time spent online, with the cybervictim group spending more time online than non-victims. This is comparative to previous research of O’Neill and Dinh (2013) which concluded that experienced internet users and children who used social media sites frequently, experienced more bullying than those that surfed the net less regularly. Hasebrink, et al (2011) and Smahel and Blinka (2012) were cited as having noted an association between excessive time online and hazardous internet behaviours such as cyberbullying. In addition to this, Raya, Casas Del Ray and Ortega (2012) were cited as finding excessive internet use a predictor of cyberbullying and cybervictimisation (Athanasiades, Kamariotis, Psalti, Baldry and Sorrentino, 2015).

Further analysis was also conducted on the remaining variables to examine their relationship with cyberbullying and cybervictimisation, if any. A Mann-Whitney U test revealed that the cyberbully and non-cyberbully group differed significantly in relation to a number of coping strategies, such as technical coping, retaliation and close support. It also revealed that the cybervictim and non-victim group differed significantly in relation to a number of variables, such as affective empathy and close support. These are areas that need further analysis to establish the nature of their relationship and the significance of it and may prove worthy of future studies.
Limitations

A number of strengths and weaknesses were observed in this study. One of the major strengths is the relatively large sample size of 198 participants, thereby providing more representative results. As previously discussed however, a strong gender imbalance was experienced as female participants accounted for just below 75% of the sample. Previous research has found females are more likely to cyberbully than males so this may have had an effect on findings (Kowalski et al, 2012, Ang and Goh, 2010). A more evenly distributed sample may yield more significant results. The sample in this study was urban based and including a rural demographic may provide a more representative result. Three out of the five proposed hypothesis in this study were proven to be significant and have been reinforced by previous research, which adds merit to these findings.

A point of the five point Likert Scale was accidentally omitted (Strongly Disagree) in the questionnaires distributed to the schools, from the Basic Empathy Scale, so that it ranged from Disagree to Strongly Agree. This limited responses to Disagree if participants were not in agreement with the given statement. Although it may have had a bearing on the range of scores, it did not invalidate the results as participants still had the option of disagreeing with statement and the results were then calculated based on a four point scale.

Another strength is the use of the Cyberbullying Questionnaire (Sticca, 2013), a multiple measure which has been found to be more reliable as it uses a number of factors such as messages, pictures/videos and rumours, to evaluate bullying and victimisation. It also contained a definition of what constituted cyberbullying, which was helpful. Despite
assurances of confidentiality however, as the data was obtained by the administration of a self-report questionnaire, some students may not have been fully truthful in disclosing cyberbullying or cybervictimisation. As per research, there also appears to be an acceptance of certain cyberbullying behaviours and students may not believe certain behaviours constitute cyberbullying. However, the rates of cyberbullying and cybervictimisation were relatively high in this study and both schools appeared to score consistently with one another which would indicate a true reflection of the incidence of cyberbullying among the peer group. This scale however assessed the students’ entire history of cyberbullying and cybervictimisation, it did not specify a particular time period. Future studies on the topic could bear this in mind and perhaps couple this with measures to enquire about recent bullying experience, revealing a clearer picture of the current levels and severity of cyberbullying among the peer group.

A number of questionnaires were observed to be partially incomplete during the analysis. It is possible students lost concentration and chose not to complete the remainder. Adequate class time was allocated to the students and no issues were raised at the time of conducting the study. A pilot study was carried out, prior to conducting the study in schools, to ensure the questionnaires were suitable for the relevant age group, which added to the reliability and validity of the study.

**Future Research**

This study has identified a number of potential avenues for future research, some of which have already been discussed. The results of this study have in particular highlighted
the need for further analysis on the effectiveness and impact of various coping strategies in relation to cyberbullying. Jurvonen and Graham (2001) previously highlighted the need for further research assessing the effect on mental health of engaging in certain coping strategies. The effectiveness of interventions focusing on meditation such as mindfulness, talk therapy and physical exercise to eliminate or reduce unhelpful coping strategies such as retaliation and helplessness/self blame is required in our schools. Consideration should be given to exploring how best to help teenagers develop problem based coping skills, for instance close support, which as we have observed, is central to the issue of cyberbullying. Students’ motivation for continuing to engage in particular coping styles could also be examined, as well as the health impacts on this in an Irish context.

The impact of interventions aimed at parental awareness is another area of further study identified. As observed from previous research, it is more probable that cyberbullying will occur outside of school (Smith et al, 2008), thus the effectiveness of raising parental awareness and education on the subject needs to be addressed. Coupled with this, further research is required on the effect of curtailing access to the internet or imposing strict monitoring conditions, given the association between excessive internet use and cyberbullying and cybervictimisation.

This study did not examine the crossover of cyberbullying/victimisation among Irish students or the type of cyberbullying students engage in, which also provides much scope for further research. The additional analysis conducted in this study revealed significant relationships between cyberbullying and a number of coping strategies, with cyberbullies engaging in retaliation more frequently and close support and technical coping less frequently
than non-bullies. Further investigation into motivations for cyberbullying, specifically in relation to these coping styles, is warranted.

Conclusion

In order to obtain a greater understanding of the issue of cyberbullying, this study examined the rate of cyberbullying and cybervictimisation and the influence of empathy levels, quality of friendships and coping strategies among teenagers in Ireland. Results of the analysis revealed no significant relationship between empathy and cyberbullying or between cybervictimisation and quality of friendships and various factors were suggested to account for this. A significant correlation was observed between high empathy levels and higher quality of friendships. A small but significant difference was observed in the frequency cybervictims engaged in retaliation and helplessness/self blame when compared to non-victims. A positive relationship was also observed between quality of friendships and close support and the relevance of this was discussed. It is hoped that future research will continue on this issue and lead to the development of effective interventions and perhaps stronger legislation to tackle the issue.
References

Ang, R. P., & Goh, D. H. (2010). Cyberbullying Among Adolescents: The Role of Affective and Cognitive Empathy, and Gender. *Child Psychiatry & Human Development, 41*(4), 387-397. doi:10.1007/s10578-010-0176-3 retrieved December 9th 2015 from [http://eds.a.ebscohost.com/eds/detail/detail?sid=3840ef37-aa1a-454f-a44d-f6f1a61b359f%40sessionmgr4004&vid=0&hid=4113&bdata=JkF1dGhUeXBIPWlwLGN1c3R1aWQsY29ya2I1LHVybCxhdGhlbnMmY3VzdGlkPX2MTc1OTYzJnNpdGU9ZWdLWxpmU%3d#AN=50034664&db=a9h](http://eds.a.ebscohost.com/eds/detail/detail?sid=3840ef37-aa1a-454f-a44d-f6f1a61b359f%40sessionmgr4004&vid=0&hid=4113&bdata=JkF1dGhUeXBIPWlwLGN1c3R1aWQsY29ya2I1LHVybCxhdGhlbnMmY3VzdGlkPX2MTc1OTYzJnNpdGU9ZWdLWxpmU%3d#AN=50034664&db=a9h).


Department of Education – Anti Bullying Policy available at [https://www.education.ie/en/Publications/Policy-Reports/Anti-Bullying-Procedures-for-Primary-and-Post-Primary-Schools.pdf](https://www.education.ie/en/Publications/Policy-Reports/Anti-Bullying-Procedures-for-Primary-and-Post-Primary-Schools.pdf). Accessed 26/11/15


To whom it concerns:

This is to confirm that I have given Fionnuala Whelan permission to survey our 2nd Year pupils as part of her research project to survey the 2nd Years about cyber bullying.

The parents of the girls would need to give permission also that their daughters be surveyed. The dates can be decided at a later stage.

I wish her well with this important research,

Margaret O’Donoghue

Margaret O’Donoghue
Principal
Loreto High School
Beaufort
Rathfarnham
Dublin 14
Appendix B

2nd December 2015

Re: Cyberbullying Questionnaire

Dear Parent / Guardian,

I am a student at Dublin Business School. I am in my final year of a BA(Hons) Degree in Psychology and I’m currently compiling a research project on cyberbullying among teenagers.

I’m specifically interested in learning more about:

- Prevalence of cyberbullying
- Levels of empathy among cyberbullies
- Quality of friendships among victims and non-victims of cyberbullying
- Coping strategies of victims and non-victims of cyberbullying

Firhouse Community College has very kindly allowed me to conduct a survey with second year students, subject to parental consent. I would like to invite your child __________________ to participate in this exciting study, which will be conducted during school hours and take no more than 20 minutes. It is hoped that participation in this study will allow us a greater understanding of cyberbullying and equip us to tackle the problem more effectively. The school will not be named in the study and the students’ responses are entirely confidential, therefore once the questionnaires are submitted, students will be unable to withdraw. Participation is entirely voluntary. The study has been approved by Dublin Business School Ethics Committee.

If you want any further information, please do not hesitate to contact me. If you do not wish your child to participate in the study, please sign and return the form below. Otherwise, we hope that you are happy to engage with this excellent opportunity.

Yours sincerely,

________________________

Fionnuala Whelan

XXXXXX@mydbs.ie

I do not wish for ________________ to participate in the programme.

Signed: __________________
Appendix C

Cyberbullying Questionnaire

My name is Fionnuala Whelan and I am in my final year of a BA (Hons) Psychology in Dublin Business School. I am interested in cyberbullying and how it can be affected by other factors.

I would appreciate your assistance in completing this questionnaire and participation is completely voluntary. The questions refer to your use of the internet and any experience of cyberbullying.

Please read each question carefully and answer each question fully. If you feel unable to answer a question or part of it please move onto the next question. The results of the questionnaire will be submitted as part of my final year project however all of your answers to this questionnaire will remain confidential and will not be shown to anyone in your school.

Please do not write your name on the questionnaires, they are completely anonymous so you will not be identifiable. For this reason you will be unable to withdraw once your questionnaire has been handed up.

Thank you.

________________

Fionnuala Whelan
Appendix D

Name of school: __________________________
Class/year: __________________________
Your age: __________________________
Gender: Male / Female

General information about internet use

Q1. Have you ever used a computer?
   Yes      No

Q2. Have you ever been online?
   Yes      No

Q3. How often do you use the internet?
   - Do not use the internet
   - Once a day
   - Several times a day
   - Once a week
   - Several times a week
   - Once a month
   - Other (please state)_______________________

Q4. On average, how long do you spend on the internet per week?
   - 0-5 hours
   - 5-10 hours
   - 10-15 hours
   - 15-20 hours
   - 20 or more hours
Q5. Where are you most likely to use the internet? (please tick all boxes that apply)

- I do not use the internet
- In my bedroom
- At home, not in my bedroom
- At school
- Friend’s house
- Work
- At the local library
- Internet café
- At a relative’s house
- Other (please state)_______________________

Q6. What activities do you use the internet for? (please tick all boxes that apply)

- I do not use the internet
- Surfing the Net
- Chat rooms
- To send/receive emails
- Instant Messaging i.e. MSN Messenger/AOL/Yahoo
- Schoolwork
- Downloading music, films or programs
- Playing games
- Online shopping
- Other (please state)_______________________

Q7. How would you rate your ability to use computers?

- Have never used a computer
- Not very good
- Okay
- Excellent
The following questions will ask about your experiences of Cyberbullying.

**Definition of cyberbullying:**

Cyberbullying is a new form of bullying which involves the use of e-mail, instant messaging, chat rooms, websites, mobile phones or other forms of information technology to deliberately harass, threaten, or intimidate someone. Cyberbullying can include such acts as making threats, sending personal, racial or ethnic insults or repeatedly victimizing someone through electronic devices.

**Cyberbullying includes bullying through**

- text messaging, pictures/photos or video clips
- phone calls (nasty, silent etc.)
- email
- Chat rooms
- instant Messaging
- websites such as Ask.fm
- social media networking sites such as Facebook

Bullying can happen through text messages/pictures/clips/email/messages etc **sent to you**, but also when text messages/pictures/clips/email/messages etc **are sent to others, about you**.

Q.8 Have you sent mean or threatening messages to anyone (text messages, MSN, Facebook etc.)?


Q.9 Have you sent mean or threatening pictures or videos to anyone (picture messages, Facebook, etc.)?

Q.10 Have you sent mean or embarrassing messages or spread rumours about anyone to your friends (text messages, MSN, Facebook, etc.)?

Q.11 Have you sent mean or embarrassing pictures or videos of anyone to your friends (picture messages, Facebook, etc.)?

Q.12 Have you posted mean or embarrassing messages or spread rumours about anyone on the Internet (Facebook, YouTube, etc.)?

Q.13 Have you posted mean or embarrassing pictures or videos of anyone on the Internet (Facebook, YouTube, etc.)?

Q.14 Have you received mean or threatening messages from anyone (text messages, MSN, Facebook)?

Q.15 Have you received mean or threatening pictures or videos from anyone (picture messages, Facebook, etc.)?

Q.16 Have you received mean or embarrassing messages or had rumours spread about you to your friends (text messages, MSN, Facebook, etc.)?
Q.17 Have you received mean or embarrassing pictures or videos of you (picture messages, Facebook, etc.)?

Q.18 Have you received mean or embarrassing messages or had rumours spread about you on the Internet (Facebook, YouTube, etc.)?

Q.19 Have you had mean or embarrassing pictures or videos of you posted on the Internet (Facebook, YouTube, etc.)?
Current English version of the Coping with Cyberbullying Questionnaire (CWCBQ).

Sometimes, the Internet or mobiles are used to bully others.

Imagine that for a few weeks, you have been receiving nasty and threatening text messages. Aside from that, you found out that embarrassing pictures of you are being spread around.

Did you ever experience something like that? (Yes/No)

What would you do in this situation? “I would…”

1. report the incident to the website owner or to the telephone company (e.g., YouTube)

2. go to the police

3. change my contact details (phone number, email address, chat name, profile on social networking sites)

4. be totally desperate
5. write mean and threatening things to the bully

6. avoid any further contact with the bully

7. seek advice on an online platform

8. go to someone who listens to me and comforts me

9. tell the bully to stop it

10. keep out of the bully’s way

11. spend time with my friends to take my mind off it

12. think that it is my fault

13. pretend that it does not bother me at all
14. talk to my friends about it

15. accept the situation as it is because there is nothing you can do to stop bullying

16. tell the bully that this is not ok at all

17. inform a teacher or the principal

18. get back at the bully in the real world (offline, e.g., at school)

19. ignore all messages/pictures so that the bully would lose interest

20. ask myself why this is happening exactly to me

21. not know what to do

22. tell the bully that I don’t think this is funny at all
23. seek professional advice  

24. pay more attention to who has access to my data  

25. tell the bully that his behaviour is hurting me  

26. get back at the bully personally  

27. go to someone who accepts me the way I am  

28. block the bully to prevent him from contacting me again  

29. get back at the bully together with my friends  

30. try not to think about it  
A) Definitely Not B) Probably Not C) Probably D) Definitely Yes E) No Answer

31. post less personal information on the Internet  
A) Definitely Not B) Probably Not C) Probably D) Definitely Yes E) No Answer
32. call a helpline (e.g. Kids Helpline, CyberBullyHotline)
A) Definitely Not B) Probably Not C) Probably D) Definitely Yes E) No Answer

33. get back at the bully in cyber space (online, e.g., text message, email)
A) Definitely Not B) Probably Not C) Probably D) Definitely Yes E) No Answer

34. ask the bully why he/she is doing this
A) Definitely Not B) Probably Not C) Probably D) Definitely Yes E) No Answer

35. go to someone I can trust
A) Definitely Not B) Probably Not C) Probably D) Definitely Yes E) No Answer

36. save messages/pictures as evidence (e.g., copies or screenshots)
A) Definitely Not B) Probably Not C) Probably D) Definitely Yes E) No Answer
McGill Friendship Questionnaire–RAi

The items on this form concern your feelings for your friend. Imagine that the blank space in each item contains your friend's name. With him or her in mind, decide how much you agree or disagree with the item. On the scale directly to the right of each item circle the number that indicates how much you agree that the statement describes your feelings. There are no right or wrong answers, because adults' feelings for friends differ from person to person. Just honestly describe your feelings for your friend.

<table>
<thead>
<tr>
<th>Very</th>
<th>Some-</th>
<th>Some-</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much</td>
<td>what</td>
<td>what</td>
<td>Much</td>
</tr>
<tr>
<td>Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
</tbody>
</table>

-4 -3 -2 -1 0 1 2 3 4

1. I am happy with my friendship with ___.     -4 -3 -2 -1 0 1 2 3 4
2. I care about ___.                          -4 -3 -2 -1 0 1 2 3 4
3. I like ___ a lot.                         -4 -3 -2 -1 0 1 2 3 4
4. I feel my friendship with ___ is a great one. -4 -3 -2 -1 0 1 2 3 4
5. I am satisfied with my friendship with ___.  -4 -3 -2 -1 0 1 2 3 4
6. I feel my friendship with ___ is good.      -4 -3 -2 -1 0 1 2 3 4
7. I want to stay friends with ___ for a long time. -4 -3 -2 -1 0 1 2 3 4
8. I prefer ___ over most people I know.       -4 -3 -2 -1 0 1 2 3 4
9. I feel close to ___.                      -4 -3 -2 -1 0 1 2 3 4
10. I think my friendship with ___ is strong.   -4 -3 -2 -1 0 1 2 3 4
11. I am pleased with my friendship with ___.   -4 -3 -2 -1 0 1 2 3 4
12. I am glad that ___ is my friend.            -4 -3 -2 -1 0 1 2 3 4
13. I hope ___ and I will stay friends.         -4 -3 -2 -1 0 1 2 3 4
14. I would miss ___ if he/she left.            -4 -3 -2 -1 0 1 2 3 4
15. I am content with my friendship with ___.   -4 -3 -2 -1 0 1 2 3 4
16. I enjoy having ___ as a friend.             -4 -3 -2 -1 0 1 2 3 4
The following are characteristics that may or may not apply to you.

Please circle one answer for each statement to indicate how much you agree or disagree with each statement.

Please answer as honestly as you can.

1. My friend’s emotions don’t affect me much.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

2. After being with a friend who is sad about something, I usually feel sad.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

3. I can understand my friend’s happiness when she/he does well at something.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

4. I get frightened when I watch characters in a good scary movie.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

5. I get caught up in other people’s feelings easily.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

6. I find it hard to know when my friends are frightened.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

7. I don’t become sad when I see other people crying.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree
8. Other people’s feelings don’t bother me at all.
   Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

9. When someone is feeling ‘down’ I can usually understand how they feel.
   Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

10. I can usually work out when my friends are scared.
    Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

11. I often become sad when watching sad things on TV or in films.
    Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

12. I can often understand how people are feeling even before they tell me.
    Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

13. Seeing a person who has been angered has no effect on my feelings.
    Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

14. I can usually work out when people are cheerful.
    Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

15. I tend to feel scared when I am with friends who are afraid.
    Disagree  Neither Agree nor Disagree  Agree  Strongly Agree

16. I can usually realise quickly when a friend is angry.
    Disagree  Neither Agree nor Disagree  Agree  Strongly Agree
17. I often get swept up in my friend’s feelings.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

18. My friend’s unhappiness doesn’t make me feel anything.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

19. I am not usually aware of my friend’s feelings.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

20. I have trouble figuring out when my friends are happy.
   Disagree    Neither Agree nor Disagree    Agree    Strongly Agree

Thank you for your participation.
Appendix E

PLEASE KEEP THIS SHEET

If you have a problem with any of the issues relating to bullying or cyberbullying mentioned in this questionnaire, please talk to someone such as a teacher who will be able to help you. If you do not feel comfortable talking to someone in your school you can talk to a parent or guardian, and they can come with you to talk to a teacher or can contact an internet service provider about the problem.

The following helplines may also be of assistance to you:

- **Childline** 1800 66 66 56  
  TeenText: ‘talk’ or ‘bully’ to 50101  
  [www.childline.ie](http://www.childline.ie)  
  Children and teenagers talk to Childline about a lot of different things. You don’t have to have a problem to contact them.

- **Samaritans** 1850 60 60 90

- **Teen Ireland** 1800 833 634  
  Free phone service open every day of the week from 7pm-11pm (Wednesday 4-11pm)  
  Email: [info@teenline.ie](mailto:info@teenline.ie)

- **HSE Suicide Prevention** 1800 2427100

- **Parentline** 1890 927277

- [www.webwise.ie](http://www.webwise.ie)

- [www.samaritans.org](http://www.samaritans.org)

- [www.spunout.ie](http://www.spunout.ie)

- [www.mindingyourhead.info](http://www.mindingyourhead.info)

It is important to remember that bullying and cyberbullying happens to many people, and you are not alone. There are people in your school and trained professionals who can listen and offer advice.  
**REMEMBER**

**KEEPING QUIET ABOUT BULLYING ALLOWS IT TO GO ON**