

**The psychological consequences of online harassment on adults**

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**Declaration**

I, Carlee Evans, declare that this report contains no material which has been accepted for the award of any other degree or diploma in any University, and, to the best of my knowledge, this report contains no materials previously published except where due reference is made.



Carlee Evans  
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**Research approaches to cyberbullying victimisation in adult populations: A systematic review**

## **ABSTRACT**

Cyberbullying has become increasingly prevalent with the development of modern technology and social-networking platforms. Whilst cyberbullying has been associated with various negative outcomes for victims, the current understanding of cyberbullying is predominantly based upon studies of adolescent and younger populations, with adult populations receiving limited attention. The present study is a systematic review of empirical academic papers on cyberbullying in adult populations. A search of online databases (Embase, Pubmed, PsychINFO, and Scopus) identified 4996 references that were reduced to 17 studies published between 2008 and 2018. In order to be considered for analysis studies needed to include participants over the age of 18 and assess cyberbullying in relation to another variable. Each study was analysed regarding its definition and conceptualisation of cyberbullying, sample characteristics, and approaches to measuring correlates of cyberbullying. Results indicated that there has been an inconsistent approach to defining and measuring cyberbullying in empirical studies. Whilst cyberbullying victimisation was associated with negative psychosocial outcomes, there is a need for further empirical studies which corroborate this and examine potential mediating variables, such as coping strategies, social support, and frequency and type of victimisation.

## 1. Introduction

Bullying behaviours have become increasingly prevalent with the development of portable online-enabled devices and social networking platforms that have enabled ‘cyberbullying’. Studies suggest that cyberbullying may be more pervasive than traditional forms of bullying because digital technologies can be used any place and at any time of the day (Slonje & Smith, 2008; Tokunaga, 2010). The negative outcomes of cyberbullying for young victims include depression, anxiety, loneliness, and poorer academic outcomes (Tokunaga, 2010; Livingstone & Smith, 2014; Nixon, 2014). These adverse outcomes may even be comparable, if not more detrimental, to the consequences of traditional (non-technology based) bullying (Ortega et al., 2012). There is emerging evidence to suggest that cyberbullying is not limited to children and adolescents (i.e., individuals known to be regular users of social media) but can also be quite prevalent among adults (Jenaro, Flores & Frias, 2018).

Studies of cyberbullying among adults have indicated that adults’ experiences of cyberbullying are similar to those reported by adolescents, and may involve unwanted sexual solicitation, verbal abuse, humiliation, and unwanted sharing of personal information (Crosslin & Golman, 2014; Vitak, Chadha, Steiner & Ashktorab, 2017). Whilst young people’s technology use may be regulated by parents, schools, and other authorities, adults typically have more freedom and therefore opportunity to access the internet and potentially experience victimisation. Accordingly, some researchers suggest that adults may be more at-risk of some types of cyberbullying than young people. There are multiple reports of adults experiencing pervasive cyberbullying, particularly in work and university settings (Jenaro et al., 2018).

Available research on cyberbullying among adults report negative outcomes among victims such as psychological distress and lowered wellbeing and self-esteem (Shneck & Fremouw, 2012; Kowalski, Toth & Morgan, 2018). Furthermore, maladaptive patterns of behaviour change related to experiences of cyberbullying such as substance abuse, and withdrawal from study and work have been observed among adults (Smith & Yoon, 2013; Gardner et al., 2016). However, the evidence

base on cyberbullying among adults has not yet been reviewed as a whole. It is unclear what constitutes cyberbullying across different studies and the way in which outcomes and predictors of cyberbullying are typically examined.

## **1.2 Defining cyberbullying**

Research and theories of cyberbullying are largely guided by the literature on traditional bullying. The concept of cyberbullying is a relatively new phenomena which can be viewed as an intersection of traditional bullying with new technologies which mediate the transgressive behaviours.

As the field of research on cyberbullying is currently in the early stages, there have been inconsistencies in the definition of cyberbullying across studies. This inconsistency in what constitutes cyberbullying and a variation in how it's measured has seen great discrepancy in findings of research studies concerning cyberbullying. For example, prevalence studies of adolescent cyberbullying have been inconsistent in quality and reported prevalence, with victimisation ranging from 3% to 72% (Selkie, Fales & Moreno, 2016). Whilst there is a lack of prevalence studies of cyberbullying victimisation in adult populations, a systematic review of existing studies on cyberbullying reported victimisation rates to range from 2.4% up to 90.9% (Jenaro et al., 2018). A further complicating factor is the reported perceptions of young people (aged 18-27) that the term 'cyberbullying' itself is outdated and unable to encompass the diverse incidents of harassment perpetrated online (Crosslin & Golman, 2014). Findings from this study suggested that whilst young adults may experience cyberbullying, it is potentially underreported as their experiences aren't perceived as fitting within the traditional notion of cyberbullying. Similarly, more general terms such as "electronic aggression" tend to be favoured by agencies such as the Centers for Disease Control and Prevention, likely due to its applicability to newer forms of technology and its separation from any preconceived notions of cyberspace and cyberbullying (Aboujaoude, Savage, Starcevic & Salame, 2015).

Many attempts have been made to encompass the varying methods and media employed for cyberbullying (I.e. Willard, 2007; Smith et al., 2008). However, as digital technologies are



continually developing, specific categorisations quickly become outdated and incomplete. A review of the literature conducted by Tokunaga (2010) intended to unite the inconsistent definitions that appear in the literature by offering the definition: “Cyberbullying is any behaviour performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others”. However, this has not necessarily been reflected in the extant literature nor the public understanding of cyberbullying. Numerous definitions are still used across different research studies, and the most widely cited definition of cyberbullying remains to be Patchin and Hinduja’s (2006) definition of “wilful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices”. In regard to public understanding of cyberbullying, in the US this is based on official expert councils such as the National Crime Prevention Council. In Australia, the definition is complicated by the use of various terms by the Australian government for seemingly comparable concepts. For example, the Australian government’s Office of the eSafety Commissioner provides information on two separate phenomena called “cyber abuse” and “cyberbullying” (Australian Government, 2018), though little explanation is given as to the contextual or practical differences between the two concepts. In the United Kingdom, the lack of a legal definition has meant that public understanding of cyberbullying tends to be based on the definitions provided by expert councils and organisations such as the UK Safer Internet Centre and The Cybersmile Foundation. The definitions provided by these bodies largely overlap with conceptual research definitions, and although there are some discrepancies there appears to be several common components; (1) the use of technology; (2) intentionality; (3) resultant harm; and (4) repetition over time. Consequently, it was considered appropriate to examine any variance in definitions used among different studies of cyberbullying.

### **1.3 Social media facilitated cyberbullying**

Social-networking-sites are becoming an increasingly prominent platform for the perpetration of cyberbullying. In 2016–2017 86% of households in Australia had access to the internet, and of those household users, 80% used the internet for social networking (Australian Bureau of Statistics, 2018a).

This equates to 1.47 billion daily active users of Facebook worldwide in 2017 (Facebook, 2017). In another assessment, 79% of those surveyed reported using social-networking sites, with 62% accessing their social-networking accounts daily (*Yellow Social Media Report*, 2018). A survey of Australian businesses also indicated that 51% of businesses had an internet presence, and 40% had a social-networking presence in 2016-2017 (Australian Bureau of Statistics, 2018b). Evidently, online technologies and by extension social networking are becoming increasingly prevalent in society, existing as a significant influence in the realms of business, households, and individual life. Accordingly, in Whittaker and Kowalski's (2015) study investigating prevalence rates of cyberbullying among college-age students and the venues through which cyberbullying occurs, it was reported that social-networking sites (alongside texting) were the most commonly utilised platform for cyberbullying. In another study, cyberbullying victimisation was found to fully mediate the relationships between the use of social-networking sites with psychological distress (Sampasa-Kanyinga & Hamilton, 2015). As social-media becomes more entrenched within the daily lives of society, people become reachable in every area of their lives and harassment becomes potentially commonplace.

#### **1.4 Current Review**

The present review aims to evaluate the extant evidence for cyberbullying among adults. As this field of research is in the early stages of development, there appears to be a lack of consensus over the predictors, outcomes, and definitions of cyberbullying. It may be useful to compile the current evidence to be examined as a whole and evaluate the presence of inconsistencies and constants. In particular, it was determined to be of value to examine the various outcomes and predictors related to cyberbullying victimisation and the role social-networking sites may play in these incidents. Examining antecedents of and contexts in which cyberbullying occurs may contribute to a more comprehensive understanding of factors that place individuals at a higher vulnerability of victimisation. Furthermore, examining the current knowledge of the outcomes of cyberbullying will

provide insight into presentations that may present in clinical practice. This may have practical implications to the prevention and management of cyberbullying and its consequences.

## 2. Method

### 2.1 Study Selection

An electronic database search of Embase, Scopus, Pubmed, and PsychINFO was conducted using the following search terms and logic [adult AND ((online AND (harassment OR victim\*)) OR (cyberbullying))], and [(“social media” or “social network”) AND (harassment OR victim\* OR cyberbullying)]. The first search term produced a total of 2621 results (Embase = 161, Scopus = 601, Pubmed = 1436, and PsychINFO = 423). The second search term produced a total of 2375 results (Embase = 404, Scopus = 253, Pubmed = 1217, and PsychINFO = 501). Searches were limited to full text articles published between 2007 and 2018, as this time-period saw the introduction of online social networking platforms (e.g., *Facebook*) and was consequently deemed most relevant to the present study. Studies were selected for inclusion on the basis of including a survey measure of cyberbullying where cyberbullying was the primary variable of interest (i.e. as a predictor or the main outcome variable).

Of the 4996 search results, 49 studies were identified as potentially appropriate for review. This was then reduced to a final pool of 17 studies for analysis. Studies were excluded where; cyberbullying was not analysed in relation to other variables (n=13); the sample was less than 100 (n=5); participants were below the age of 18 (n=8); the study examined a specific subset of cyberbullying, i.e. cyberstalking (n=3) and; participants had not experienced victimisation, i.e. Participants were perpetrators or witnesses of cyberbullying (n=3). The final pool of studies were categorised into ‘predictor’ studies (n=4) (i.e., studies examining any factors predicting victimisation), ‘outcome’ studies (n=7) (i.e., studies that examined outcomes or consequences associated with cyberbullying), and ‘combined predictor and outcome’ (henceforth, ‘combined’) studies (n=6).

## 2.2 Study Assessment

The purpose of this review was to evaluate the extant literature on experiences of cyberbullying among adults, with specific attention to: (1) reviewing what constitutes cyberbullying across different studies; (2) outcomes of cyberbullying victimisation; and (3) risk factors and predictors of cyberbullying victimisation. All included articles were evaluated for the following characteristics: (1) the concept of cyberbullying; (2) the sample characteristics of each study; and (3) the study's outcome variables.

### 2.2.1 Definitions

All studies were assessed in terms of their definitions. The label and components of the definition of cyberbullying used by each study was recorded and compared across studies. The definitions provided in each study were also compared with the widely used definition by Patchin and Hinduja (2006), which states "wilful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices". The components of this definition include: (1) *digital technology*: the act of harassment occurs through the medium of digital technology; (2) *intentionality*: an intentional act of malice rather than an incidental act of harassment or harm; (3) *resultant harm*: the act of harassment causes the victim harm (i.e., stress, psychological distress); (4) *repetition over time*: the harassment involves multiple incidents over time, and; (5) *power imbalance*: perceived personal or situational characteristics put the victim at a disadvantage to the perpetrator. Once the five components were identified, the list of components were independently coded against each of the definitions in the identified studies. The two researchers conferred on the components to confirm they were being rated using the same reasoning. There was 100% agreement in the coding of the components.

### 2.2.2 Sample Characteristics

The sample characteristics of all studies were examined. This included the demographics (e.g., gender ratio, population type) of the participants, the location (country) of the study, and the

proportion of participants who reported victimisation in each study. The recruitment method (i.e., self-selection or random selection) for participants was also evaluated.

### 2.2.3 *Study characteristics*

Study variables (e.g., correlates of cyberbullying) and their associated measures were examined. The screening tools used to measure cyberbullying were also identified and summarised. The study variables (i.e., predictors and outcomes of cyberbullying) were examined and categorised into five different domains; (1) psychological distress; (2) social functioning; (3) coping and wellbeing; (4) maladaptive behaviours and; (5) personality and individual differences. Study design (e.g., cross-sectional, or longitudinal design) and data type (e.g., quantitative, qualitative, or mixed methods) was also summarised. In addition, it was noted whether the study referred to social-networking sites in relation to cyberbullying.

## **3. Results**

### **3.1 Inconsistent definitions**

Research studies were inconsistent in their view of what actions or behaviours constitute “cyberbullying”. Whilst cyberbullying was the most common label used to refer to harassment perpetrated through digital technologies, a total of six different terms were identified; (1) cyberbullying; (2) cyber victimisation; (3) cyber aggression; (4) electronic harassment; (5) online harassment; and (6) online aggression. Most studies (n=16, 94%) provided a definition of cyberbullying, with a total of 11 different definitions of cyberbullying used throughout the studies. Table 1 presents a summary of the definitions according to their reference to the five components of cyberbullying, including: (1) use of digital technology (2) intentionality, (3) resultant harm, (4) repetition over time and, (5) power imbalance. Only one component (i.e., component 1: the use of digital technologies) was present in all 17 study definitions. The second component of intentionality was present in 14 research studies (82%). Only 11 studies (65%) referred to the repetition of the

harassment over time. Only 6 studies (35%) referred to harms resulting from harassment and the power imbalance between perpetrator and victim.

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Table 1  
Definition labels and components

Author	Label	Definition	Components				
			Digital Tech	Repeated	Intentionality	Power Imbalance	Resultant Harm
Schenk & Fremouw (2012)	Cyberbullying	“Repeated, intentional act done with the purpose of harming another person through technologies”	✓	✓	✓		
Smith & Yoon (2013)	Cyberbullying	“The repeated use of technology to threaten or harass”	✓	✓	✓		
Kokkinos et al. (2014)	Cyberbullying	“An aggressive, intentional act carried out by a group or individual using electronic forms of contact, repeatedly and over time, against a victim who cannot easily defend him/herself”	✓	✓	✓	✓	
Zalaquett & Chatters (2014)	Cyberbullying	“Any behavior performed through electronic or digital media by individuals or groups who repeatedly communicate hostile or aggressive messages intended to inflict harm or discomfort on others”	✓	✓	✓		
Balakrishnan (2015)	Cyberbullying	“Any behaviour performed through electronic media by individuals or groups of individuals that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others”	✓	✓	✓		
Francisco et al. (2015)	Cyberbullying	“The use of ICT as a support for deliberate, repeated and hostile behaviour developed by an individual or group, with the intent of harming others “ “wilful and repeated harm inflicted through the use of computers, cell phones and other electronic devices”	✓	✓	✓		✓
Na et al. (2015)	Cyberbullying	“Wilful and repeated harm inflicted through the use of computers, cell phones & other electronic devices”	✓	✓	✓		✓
Peluchette et al. (2015)	Cyberbullying	“Behaviours which are intended to publicly shame another individual, but some can be unintended, like a joke that goes too far or involve what might be viewed as excessive/annoying behaviours”	✓		✓		
Selkie et al. (2015)	Cyberbullying	“Wilful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices” or “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself.”	✓	✓	✓	✓	✓
Tennant et al. (2015)	Cyber victimisation	“Intentional acts of aggression directed toward a less powerful peer through electronic means”	✓		✓	✓	
Wright (2015)	Cyber victimisation	<i>No explicit definition provided</i> “experienced... negative behaviours online or through text messages”	✓				
Gahagan et al. (2016)	Cyberbullying	“Bullying via technology... Any behaviour performed through electronic media by individuals that repeatedly communicates hostile or aggressive messages”	✓	✓			
Gardner et al (2016)	Cyberbullying	“a situation where a person feels they have repeatedly been on the receiving end of negative actions from one or more other people, when it is difficult to defend themselves against these actions... negative actions carried out online”	✓	✓	✓	✓	✓
Wright (2016)	Cyber victimisation	“being purposefully embarrassed or intimidated by others in a repetitive and hostile way through digital technologies...includes an imbalance of power between the perpetrator and the victim”	✓	✓	✓	✓	✓
Lee (2017)	Cyberbullying	“Aggression that is intentionally and repeatedly carried out in an electronic context... against a person who cannot easily defend themselves”	✓	✓	✓	✓	
Vitak et al. (2017)	Online harassment	“Intentional behaviour aimed at harming another person or persons through computers, cell phones, and other electronic devices, and perceived as aversive by the victim”	✓		✓		✓
Kowalski et al. (2018)	Cyberbullying	“When someone intentionally and repeatedly harasses, mistreats, or makes fun of another person online or using a cell phone or other electronic devices. The victim cannot easily defend him or herself”	✓	✓	✓	✓	

### 3.2 Sample characteristics

Study sample sizes ranged from  $n=121$  (Na, Dancy & Park, 2015) to  $n=3699$  (Kowalski et al., 2018). However, analyses were often focussed on the proportion of the sample which identified as being a victim of cyberbullying. Rates of victimisation in the different studies ranged from 2.8% (Gardner et al., 2016) to 91% (Peluchette, Karl, Wood & Williams, 2015). One study (Na et al., 2015) only recruited participants who were victims of cyberbullying. Two studies (Tennant et al., 2015; Wright, 2016) did not report the proportion of their sample which had experienced cyberbullying.

In terms of participant recruitment, as seen in Table 2, 88% ( $n=15$ ) of the 17 studies used participant self-selection, where participants responded to advertisements or invitations to participate in the study. Furthermore, many of these studies employed convenience sampling within universities so that 82% ( $n=14$ ) of the samples consisted solely of college students. Alternatively, two studies (Gardner et al., 2016; Kowalski et al., 2018) were conducted in the context of a workplace, and one study (Balakrishnan, 2015) was conducted among the general public, including a combination of students and working professionals. Two studies (Selkie, Kota, Chan & Moreno, 2015; Vitak et al., 2017) employed female-only samples based on the rationale that females are more likely to experience cyberbullying than males. Further to this, 82% ( $n= 14$ ) of the studies employed a sample where the majority of participants were female. Participants were predominantly based in the United States ( $n=13$ , 76%), with other studies conducted in Australia, Germany, Greece, Malaysia, and Portugal.



Table 2  
Sample characteristics

Author	Victims (%)	Sample				
		n =	Country	Gender	Recruitment	Type
Schenk & Fremouw (2012)	9%	799	USA	F – 71%	Self-selected	College students
Smith & Yoon (2013)	≥10%	276	USA	F – 76%	Random	College students
Kokkinos et al. (2014)	44%	430	Greece	F – 57%	Self-selected	College students
Zalaquett & Chatters (2014)	19%	613	USA	F – 75%	Self-selected	College students
Balakrishnan (2015)	40%	393	Malaysia	F – 49%	Self-selected	Random
Francisco et al. (2015)	28%	519	Portugal	F – 78%	Random?	College students
Na et al. (2015)	100%	121	USA	F – 61%	Self-selected	College students
Peluchette et al. (2015)	91%	572	USA & Australia	F – 47%	Self-selected	College students
Selkie et al. (2015)	24%	265	USA	F – 100%	Self-selected	College students
Tennant et al. (2015)	≥7.5%	267	USA	F – 57%	Self-selected	College students
Wright (2015)	38%	703	USA	F – 60%	Self-selected	College students
Gahagan et al. (2016)	19%	196	USA	F – 79%	Self-selected	College students
Gardner et al. (2016)	2.8%	826	New Zealand	F – 59%	Self-selected	Working professionals
Wright (2016)	Not reported	1483	USA	F – 48%	Self-selected	College students
Lee (2017)	≥15%	321	USA	F – 51%	Self-selected	College students
Vitak et al. (2017)	78%	659	USA	F – 100%	Random	College students
Kowalski et al. (2018)	24%	3699	USA	F – 51%	Self-selected	Working professionals

### 3.3 Study characteristics

Instruments used to measure cyberbullying differed across studies. A total of 17 different instruments were used to measure cyberbullying across the 17 studies (NB: some studies used multiple measures), including four different standardised measures, and 15 instruments that had been adapted or developed for the study. Furthermore, measures had varying cyberbullying parameters (e.g., time-frame of victimisation). For example, Kowalski et al., (2018) assessed prevalence of victimisation based on any experience during the entirety of the participants' adulthood. Conversely, Francisco, Simão, Ferreira, and das Dores Martins (2015) required victims to have experienced cyberbullying on more than one occasion in the past three months and self-identify as a victim of cyberbullying. The occurrence of cyberbullying through social-networking sites was seen in 94% (n=16) of studies, and 59% (n=10) of studies examined the use social-networking sites in relation to cyberbullying. Social-media-facilitated cyberbullying appeared to be a common occurrence with 10.7% (Lee, 2017) to 70% (Kowalski et al., 2018) of victims reporting being bullied through social-networking sites. Facebook was most commonly identified platform in terms of frequency of use, and frequency of victimisation.

Studies were categorised based on how cyberbullying was analysed in relation to other variables, with 24% (n=4) predictor studies, 59% (n=9) outcomes studies, and 24% (n=4) combined studies. The predictors and outcomes of victims of cyberbullying were then categorised into five separate categories; (1) psychological distress; (2) social functioning; (3) coping and wellbeing; (4) maladaptive behaviours and; (5) personality & individual differences. *See Table 3.* However, with only two longitudinal studies (Wright, 2015; Wright 2016), the progression of the various outcomes and predictors of victimisation over time is unclear.

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Table 3  
Study characteristics: approaches to assessing cyberbullying

Author	Study design	Screening tools used		Cyberbullying		Variables***					Social Media
		Cyberbullying*	Other**	Predictor	Outcome	Psychological Distress	Social Functioning	Coping & Wellbeing	Maladaptive behaviours	Personality & Individual Diff	
Kokkinos et al. (2014)	Cross-sectional	CBVEQ	BSI PHQ-9 EQ-8 SIAS BSSS-8 YPI	✓		DEP, ANX	HOS, IS	-	-	PERS, GEND	✓
Balakrishnan (2015)	Cross-sectional	Self-developed measures		✓		-	-	-	-	TECH, GEND, AGE	✓
Peluchette, et al. (2015)	Cross-sectional	Self-developed measures	Mini-markers	✓		-	-	-	-	PERS, TECH	✓
Lee (2017)	Cross-sectional	Self-developed measures	SAMA SRCS BPAQ	✓		-	Verbal Aggression ANG	-	-	TECH, GEND	✓
Smith & Yoon (2013)	Cross-sectional	Self-developed measures			✓	DEP	ANG, SE	SE	A. DISEN	-	✓
Na et al. (2015)	Cross-sectional	CVS	DASS-21 RSES		✓	DEP, ANX	-	CS, SE, Stress	-	-	
Selkie et al. (2015)	Cross-sectional	Self-developed measures	AUDIT PHQ-9		✓	DEP	-	-	AA	-	
Wright (2015)	Longitudinal	Self-developed measures			✓	-	-	COP	-	-	
Gahagan, et al (2016)	Phenomenological	Self-developed measures			✓	-	-	COP	-	-	✓
Gardner et al. (2016)	Repeated Measures	Self-developed measures	GHQ-12 Self-developed measures		✓	STRAIN	-	Phys. Health	J.DISEN	-	
Kowalski et al. (2018)	Cross-sectional	Self-developed measures	CES-D IAS RSES		✓	DEP, ANX	-	SE	-	-	✓
Zalaquett & Chatters (2014)	Cross-sectional	Self-developed measures	Self-developed measures	✓	✓	-	ANG	Stress	A. DISEN.	TECH, GEND, AGE, ETHNICITY	✓
Schenk & Fremouw (2012)	Cross-sectional	Self-developed measures	SBQ-R SCL-90-R	✓	✓	DEP, ANX, SI, PA, PSYCHO, SOM	HOS, IS	-	-	GEND, PERS	
Francisco et al. (2015)	Cross-sectional	CICS		✓	✓	-	-	COP	-	TECH, GEND, AGE	✓
Tennant et al. (2015)	Cross-sectional	BVQ – revised CVS	BASC-2 SRP-COL CASSS-college	✓	✓	DEP	-	-	-	SOC. SUP, GEND	

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Wright (2016)	Longitudinal	Self-developed measures	BDI BAI	✓	✓	DEP, ANX, SI	-	-	-	GEND
Vitak et al. (2017)	Cross-sectional	Self-developed measures	UCLA Loneliness Scale RSES	✓	✓	-	Loneliness	SE	-	TECH, GEND, SO ✓

\*CBVEQ; Cyberbullying Victimization Experiences Questionnaire, CICS; Cyberbullying Inventory for College Students, CVS; Cyberbullying Victimization Scale, BVQ; Bully/Victim Questionnaire.

\*\*BSI; Brief Symptom Inventory, PHQ-9; Patient Health Questionnaire-9; EQ-8; Empathy Quotient-8, SIAS; Social Interaction Anxiety Scale, BSSS-8; Brief Sensation Seeking Scale, YPI; Youth Psychopathic traits Inventory, Mini-markers; Mini-markers Big-Five, SAMA; SRCS; Self-Report Coping Scale, BPAQ; Buss-Perry Aggression Questionnaire, SBQ-R; Suicide Behaviors Questionnaire-Revised, SCL-90-R; Symptom Checklist-90-Revised, DASS-21; Depression Anxiety Stress Scale -21, RSES; Rosenberg Self-Esteem Scale, AUDIT; Alcohol Use Disorder Identification Test; GHQ-12; General Health Questionnaire, BDI; Beck's Depression Inventory, BAI; Beck's Anxiety Inventory, CES-D; Center for Epidemiologic Studies Depression Scale, IAS; BASC-2 SRP COL; The Behavior Assessment System for Children 2nd Edition, College Level, CASSS-college; College Student Experiences Questionnaire.

\*\*\*DEP; Depression, ANX; anxiety, SI; Suicidal Ideation, STRAIN; Psychological Strain, SE; Self-Esteem, COP; Coping Strategies, Phys Health; Physical Health, PA; Paranoia, PSYCHO; Psychoticism, SOM; Somatisation, AA; Alcohol Abuse, HOS; Hostility, SENS; Interpersonal Sensitivity, ANG; Anger, A. DISENG; Academic Disengagement, J. DISENG; Job disengagement, TECH; Technology Use, GEND; Gender.

### *3.3.1 Outcomes of cyberbullying*

Psychological distress was examined as an outcome of cyberbullying within 50% of the studies (n=8). Within this category, the most commonly examined variable was depression (n=7) followed by anxiety (n=4). Suicidal ideation was examined as an outcome of cyberbullying in 13% of studies (n=2), and one study examined paranoia and psychoticism (Schnek & Fremouw, 2012). One study (Gardner et al., 2016) also assessed for a non-specific measure of “psychological strain”. In every study, it was reported that cyberbullying victimisation was positively associated with higher rates of psychological distress. Coping and wellbeing was examined as an outcome of cyberbullying in 59% (n=10) of the studies, with coping strategies (n=4) and self-esteem (n=4) being the most frequently examined variables. This was followed by stress appearing in two studies (Zalaquett & Chatters, 2014; Na et al., 2015), and a general measure of wellbeing and physical health each appearing in one research study (Gardner et al., 2016). Self-esteem had a negative relationship with cyberbullying victimisation and coping strategies were identified as a mediating factor to the severity of other negative psychosocial outcomes of victimisation (i.e. depression, anxiety and self-esteem) (Na et al., 2015).

Social functioning was examined as an outcome of cyberbullying in 24% (n=4) of studies. There was a lack of consistency in variables measured across the different studies, as the different measures of social functioning (interpersonal sensitivity, loneliness, hostility, and social withdrawal) were only examined in one study each. The exception to this was anger, which was examined within three research studies (Smith & Yoon, 2013; Zalaquett & Chatters, 2014; Lee, 2017). Lastly, maladaptive behaviours were examined as an outcome of cyberbullying in 24% (n=4) of studies. Substance abuse, lowered GPA, job performance, and absenteeism from work, were all examined on one occasion. Academic disengagement was examined by two research studies (Smith & Yoon, 2014; Zalaquett & Chatters, 2014). Cyberbullying victimisation was associated with lower social functioning in the way of increased substance-use and lowered performance in academic and professional contexts. One study (Vitak et al., 2017) examined individual differences (technology usage) as an outcome of

cyberbullying. It was reported that victims of cyberbullying were more likely to have a negative perception of social-networking sites and spent more time managing their online presence. Whilst the majority of studies excluded singular, once-off incidents of harassment, those studies which did include this within their definition of cyberbullying (Peluchette et al., 2015; Tennant et al., 2015; Vitak et al., 2017) reported that victims of single incidents of harassments also experienced adverse outcomes which were comparable to the victims of repeated harassment. Lastly, whilst studies applied varying parameters to their definition of victims based upon the frequency of victimisation, only one study examined whether the frequency of victimisation was associated with more severe psychosocial outcomes (Na et al., 2015). Na et al. (2015) reported the frequency of victimisation mediated the severity of depression, anxiety and self-esteem.

### *3.3.2 Predictors of cyberbullying*

Predictors of cyberbullying victimisation were examined less frequently than outcomes. The most commonly examined predictors of cyberbullying fell under the category of personality and individual differences.

Technology usage was examined as a predictor of cyberbullying in 29% (n= 5) of studies, which reported that more frequent use of digital technologies was associated with higher rates of cyberbullying victimisation. Further to this, two studies (Peluchette et al., 2015; Lee, 2017) reported that patterns of technology use also contributed to an increased likelihood of victimisation (i.e. engaging in “risky behaviours”, posting indiscreet images, and sharing personal information). Gender was examined as a predictor of cyberbullying in 47% (n=8) of the studies. Whilst four of these studies reported no significant differences in the rates of victimisation among males and females, three studies (Francisco et al., 2015; Kokkinos, Antoniadou & Markos, 2014; Lee, 2017) reported males to experience higher rates of victimisation than females. One study (Zalaquett & Chatters, 2014) reported that females experienced higher victimisation than males.

Personality traits were examined as a predictor of cyberbullying in 12% (n=2) of studies. Peluchette et al. (2015) reported that extroversion and openness were positively related to

cyberbullying victimisation, whereas emotional stability, conscientiousness and agreeableness were negatively related. Kokkinos et al. (2014) reported empathy to predict cyberbullying victimisation. Social support was examined as a predictor of cyberbullying in one study, which reported it to be a protective factor against both the incidence of cyberbullying victimisation and the negative psychosocial outcomes associated with cyberbullying (Tennant et al., 2015). Factors of social functioning and coping and wellbeing were examined as predictors of cyberbullying in one study (Vitak et al., 2017). It was reported that lowered self-esteem, higher levels of loneliness, and sexual orientation were all significant predictors of cyberbullying.

#### **4. Discussion**

The purpose of this review was to examine the extant literature on cyberbullying among adult populations, with attention to what constitutes cyberbullying across different studies and the way in which outcomes and predictors of cyberbullying have been examined. It was found that the selected studies varied significantly in the labels, definitions, and assessment tools used to quantify cyberbullying. Secondly, it was noted that outcomes of cyberbullying and were typically associated with negative psychosocial outcomes, though variables aside from mental health outcomes (e.g. health, social, and behavioural) were rarely examined. Lastly, whilst a variety of individual differences (e.g. technology use) were identified as predicting victimisation, little attention was given to mediating factors of victimisation. Overall, it was noted that studies on cyberbullying among adults lack representative samples, as the majority of research has been conducted among young college students in the US.

Contrary to Langos' (2012) assertion that an act of cyberbullying must involve the essential four factors of repetition, power imbalance, intentionality, and aggression, different approaches have been taken to defining cyberbullying across various research studies. Despite being the most commonly used definition in across the research studies, Patchin and Hinduja's (2006) definition of cyberbullying ("wilful and repeated harm inflicted through the use of computers, cell phones, and

other electronic devices”) only appeared within 3 of the 17 studies. This indicates that there is variation in what different researchers consider to be main features of cyberbullying. Few studies considered the victim’s perceptive of the harassment (resultant harm) and the relative standing of the victim and perpetrator (power imbalance) to be necessary components of cyberbullying. Whilst most studies considered the repetition of harassment as essential to the definition of cyberbullying, several studies which included victims who had experienced singular incidents of harassment in their analysis, also found negative outcomes amongst victims. Studies which utilised a more specific definition of cyberbullying (one which encompassed each of the five identified components of cyberbullying) tended to examine outcomes of cyberbullying without considering the role of specific technology platforms and the way in which technology usage mediates cyberbullying outcomes. Conversely, when researchers applied less stringent definitions of cyberbullying they were able to apply their definition to various media platforms and examine the way in which cyberbullying occurs through different mediums (e.g. social-networking sites compared to texting). The inconsistency in cyberbullying definitions is likely to have contributed to the significant range in reported victimisation prevalence across different studies and may mediate the presence and severity of correlates. However, there was still significant variance in the rate of cyberbullying victimisation when studies were grouped based on the specificity of cyberbullying definitions.

Studies of cyberbullying among adults typically examined outcomes associated with incidents of victimisation, with a focus on psychological outcomes. However, it was reported that cyberbullying was also associated with functional impairment and may even influence an individual’s beliefs about the world, self, and other people. Victims in one study (Vitak et al., 2017) reported lower self-esteem, were more likely to have a negative perception of social-networking sites, and spent more time managing their online presence. The outcomes of cyberbullying appear to be more extensive than negative mental health outcomes alone, though this is not reflected in the extant literature which scarcely examines other correlates of cyberbullying among adults. Research examining cyberbullying victimisation among adolescents has involved some longitudinal studies which have reported



cyberbullying victimisation, depression, and anxiety to have a reciprocal relationship (Rose & Tynes, 2015). As the extant literature among adults relies on cross-sectional studies, there is a lack of insight into the relationship and trajectory of variables associated with cyberbullying among adults over time. Preliminary research into the longitudinal associations has supported the notion of bi-directional relationships of cyberbullying victimisation and negative psychosocial outcomes among adults.

Studies that examine predictors of cyberbullying have reported several factors which may increase an individual's vulnerability to victimisation. Despite multiple studies reporting technology usage to be a factor associated with increased cyberbullying, few studies (n=5, 31%) within the review examined this. It was suggested that a victim's experiences of cyberbullying may be influenced by the platform on which they were harassed. Further analysis on the role technology plays in cyberbullying victimisation could help inform preventative public health measures. The extant literature on cyberbullying among adolescents has indicated that females are typically more vulnerable to victimisation (Aboujaoude et al., 2015; Jenaro et al., 2018). However, this finding was inconsistent with two European studies which reported that males experienced comparable if not higher rates of victimisation to females. Due to the lack of prevalence studies of adult victims of cyberbullying, the actual rate of victimisation among adults and the distribution of age and gender in this population is unknown.

Extensive research has been conducted among adolescents examining protective and mediating factors influencing experiences of victimisation (Zych, Farrington, & Ttofi, 2018). Among the few selected studies which did examine protective and mediating factors (i.e. social support, coping strategies, frequency of victimisation) a significant association was found. However, little research has been dedicated to this among adults. Examining protective factors for cyberbullying among adults may inform preventative and intervention strategies in both clinical practice and organisational settings. For example, if further research corroborates the finding that social support buffers negative outcomes of cyberbullying, implementing social support networks in workplaces may serve as a mean means of managing the effects of victimisation.

The current evidence of predictors and outcomes of cyberbullying is predominately based upon US studies of college students where participation is self-selected. The incidence of cyberbullying in studies of non-college populations indicates that it is likely that young adults who attend university are not the only subset of the population experiencing cyberbullying. For example, research examining cyberbullying in the adult workplace showed comparable results to college-based studies (Gardner et al., 2016). Further research using more representative samples may be informative in determining whether correlates of cyberbullying are mediated by variables relevant to particular groups (i.e. age).

#### **4.1 Future research directions**

A significant weakness of the extant literature is a focus on cyberbullying which pertains to adolescents and children. In future studies concerning cyberbullying, it would be valuable to investigate outcomes and predictors among a sample of adults outside of the United States, where the majority of research has been conducted. Furthermore, future studies should consider the use of a broad sample, avoiding convenience samples of university students in order to investigate the incidence of cyberbullying among a more general population. Given the findings that males experience comparable victimisation to females, researchers should aim to include males in their samples. Further longitudinal studies would be valuable in order to assess the trajectory of cyberbullying victimisation and associated variables over time. Future studies may consider investigating protective and mediating factors of victimisation. For example, analysis of different subsets of cyberbullying, the role of victimisation frequency, and coping strategies would each add novel insights to the current understanding of cyberbullying. Furthermore, given that the term cyberbullying is viewed by some as “outdated” (Crosslin & Golman, 2014) it may be valuable for researchers to be flexible in the terminology used with participants. However, consistency in the parameters applied to cyberbullying is paramount. It is likely worthwhile to examine how the frequency of victimisation (and other interceding factors such as technology use and specific platforms) mediates the severity of negative outcomes among victims.

## **4.2. Limitations of the review**

The review contained several limitations. Firstly, it should be acknowledged that the search terms and relatively limited number of databases utilised by the researchers may not have encompassed every eligible article for review. Furthermore, as the search was limited to full-text articles written in English, some eligible studies from non-English journals may have been unintentionally overlooked. This review examined the approach to research on cyberbullying in adult populations thus far. Consequently, the researchers chose not to examine the empirical relationship of variables (i.e. effect sizes and the context of data). Furthermore, the scope of the review was limited in some ways. The review focussed only on the victims of cyberbullying and did not examine the variables associated with perpetrators and bystanders of victimisation. The researchers also decided to exclude specific subsets of cyberbullying such as cyberbullying in the context of domestically violent relationships and cyberstalking. As the review only examined published studies, there may be an overrepresentation of significant results which are more likely to gain publication. Lastly, the researchers did not examine any raw data and were reliant on the reported statistics, which may have omitted insignificant results and thus been subject to outcome reporting bias.

## **4.3. Conclusions**

Further research on adults' experiences of cyberbullying is warranted given the current evidence of negative outcomes for adult victims. As technology is continually developing, many different approaches have been taken to applying conceptual and operational definitions of cyberbullying to research. Using less stringent definitions of cyberbullying appears to be an appropriate approach to conducting research that considers the role that various media platforms may have in experiences of victimisation. Further empirical research will be required to support and further elucidate the findings that cyberbullying is related to increased rates of negative psychosocial outcomes among adults across different media platforms. It will be necessary for future research to be conducted in diverse contexts to increase the generalisability of findings as current research has largely focussed on cyberbullying among university and college students in the US. A significant omission in the current research base

appears to be the investigation of protective and mediating factors of victimisation, which may be important in informing preventative operations of cyberbullying. To address this, future research should aim to include representative samples and examine the role of variables such as different types of victimisation, frequency of victimisation, coping strategies and social support. These variables should be considered in relation to behaviour change in a variety of domains, such as social functioning, addictive behaviours, and academic or professional performance. Given the emerging prominence of technology and the relatively young state of the field of research examining cyberbullying, it is timely to conduct research to examine the correlates of adult cyberbullying.

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**Research article**

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**Title**

An investigation of the psychological harms associated with four types of online harassment on Australian adults

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**An investigation of the psychological harms associated with four types of online harassment on Australian adults**

**ABSTRACT**

Cyberbullying has been recognised as a pervasive issue among adolescents and children with various negative psychosocial outcomes for victims. However, research investigating this among adults is uncommon and inconsistent. This study sought to add to the existing knowledge base by investigating the psychological harms experienced by individuals who were victims of online harassment via social-networking sites in the past 12 months. This study built upon previous research by specifically examining the influence of various types of harassment (i.e. deception, malice, public humiliation, and unwanted contact) on psychological outcomes. Participants included (n=471) adults from various backgrounds including students, working professionals, and unemployed persons. Between group comparisons indicated that participants categorised as victims experienced higher levels of psychological distress than those categorised as non-victims. Multiple hierarchical regression and post hoc analysis indicated frequency of victimisation and the malice subtype of victimisation to be significant predictors of psychological harms. Finally, logistic regression indicated that gender, relationship status, and patterns of technology use (i.e. risky behaviours and online impression management behaviours) were associated with an increased likelihood of online victimisation. Practical and theoretical implications of these findings and directions for future research are discussed.

## **1. Introduction**

### **1.1 Cyberbullying populations**

The psychological impact of harassment and bullying behaviours is of growing concern. Harassment has become increasingly prevalent with the development of digital technologies, particularly social-networking sites. These technologies create opportunities for individuals to be accessible at any time of day and allow a degree of anonymity, unlike face-to-face harassment (Slonje & Smith, 2008; Tokunaga, 2010). Studies have identified a myriad of negative outcomes for young victims of online harassment, including depression, anxiety, loneliness and decline in academic performance (Tokunaga, 2010; Livingstone & Smith, 2014; Nixon, 2014; Hamm et al., 2015). These adverse outcomes appear to be comparable to the reported consequences of traditional (non-technology based) harassment (Ortega et al., 2012), suggesting that online harassment may be as harmful, if not more detrimental, to psychological wellbeing. Online harassment is typically perceived as an issue that is most relevant to children and adolescents and thus most of the research has been dedicated to investigating outcomes among young people. However, some investigations of online harassment among adults have suggested that adults report comparable experiences of victimisation (Jenaro, Flores & Frias, 2018).

Adult victims reportedly describe incidents of unwanted sexual solicitation, verbal abuse, humiliation, and unwanted sharing of personal information (Crosslin & Golman, 2014; Vitak, Chadha, Steiner & Ashktorab, 2017). Whilst children tend to report higher levels of harassment outside of school hours, adults report experiences of pervasive online harassment in work, university, and private (home) settings (Jenaro et al., 2018). Experiences of adult harassment appear to be particularly prevalent in university college settings, though it is unclear whether this is a result of convenience sampling, as few studies have examined more representative samples of the general public. The limited studies which have been conducted in the general public, workplace, and university settings tend to report negative outcomes among victims such as psychological distress and lowered wellbeing and self-esteem (Shneck & Fremouw, 2012; Kowalski, Toth & Morgan, 2018).

This highlights the importance of further investigation of online harassment among adult populations that are not limited to university settings.

## **1.2 Defining cyberbullying**

The concept of online harassment is a relatively new phenomena which is most commonly referred to as “cyberbullying” and can be conceptualised as merging of traditional bullying behaviours with new technologies. In the extant literature there are variances in the essential components of the definitions of online harassment, with different researchers placing varying importance on different elements of the definitions, (i.e. repetition of the behaviours, victim’s perception, and the relative standing of the victim and perpetrator are inconsistently present in varying definitions employed by different studies). The inconsistencies in the definition and measurement of online harassment and cyberbullying are well documented (e.g. Grigg, 2010; Tokunaga, 2010, Corcoran Guckin & Prentice, 2015) and have resulted in significant discrepancies in findings of research studies concerning online harassment. For example, prevalence rates of victimisation among adults has varied significantly; a systematic review of existing studies on online harassment reported victimisation rates to range from 2.4% up to 90.9% (Jenaro et al, 2018). For the purpose of this study, a broad approach was taken to defining harassment, conceptualising online harassment as the “harm intentionally inflicted through the use of computers, cell phones, and other electronic devices”. A further complicating factor is the reported perceptions of young people (aged 18–27) that the most commonly utilised term for online harassment, “cyberbullying”, is outdated and fails to encompass the variety of incidents of harassment perpetrated online (Crosslin & Golman, 2014). For this reason, cyberbullying has been referred to under the umbrella term “online harassment” for the purpose of this study.

## **1.3 Types harassment**

Many attempts have been made to define the varying methods and media employed for online harassment (e.g.. Willard, 2007; Smith et al., 2008). However, as digital technologies are continually developing, specific categorisations quickly become outdated and incomplete. An alternative

approach to categorising online harassment by media platform, is to examine types of harassment. Multiple studies describe specific harassment behaviours, such as “flaming”, “cyberstalking” (Willard, 2006), threats, humiliation, and rumour-spreading (Rivers & Noret, 2010). Menesini, Nocentini, and Calussi (2011) found that certain types of harassment had more severe outcomes than others, specifically that visual forms of online harassment (i.e. receiving graphic, violent, or unpleasant images) were more impactful than forms of unwanted contact (i.e. nasty messages or prank calls).

Doane, Kelley, Chiang & Padilla, (2013) built upon these findings, developing a questionnaire through an exploratory factor analysis which identified and measures four distinct types of victimisation experiences; (1) deception; (2) malice; (3) unwanted contact and; (4) public humiliation. The authors grouped the different constructs thematically, but do not provide any theory to underpin the different categorisations. The category of deception covers incidents in which the victim is misled by the perpetrator (e.g. *“Has someone pretended to be someone else while talking to you electronically?”*). The malice category covers communications occurring directly between the victim and perpetrator that are perceived as hostile (e.g. *“Has someone called you mean names electronically?”*). Unwanted Contact includes incidents in which the victim is subject to unsolicited, transgressive communications from the perpetrator: (e.g. *“Have you received an unwanted sexual message from someone electronically?”*). Lastly, Public Humiliation refers to incidents where the victim is the target of shaming in a public forum: (e.g. *“Has someone written mean messages about you publicly electronically?”*). Whilst preliminary investigation has suggested that the incidence of certain types of harassment may mediate psychosocial outcomes among young people, there has been no analysis to corroborate this finding among adults.

### **1.3 Social media facilitated harassment**

Social-networking sites are becoming an increasingly prominent platform for the perpetration of online harassment. In 2016–2017, 86% of households in Australia had access to the internet, and of

those household users, 80% used the internet for social networking (Australian Bureau of Statistics, 2018a). This equates to 1.47 billion daily active users of Facebook worldwide in 2017 (Facebook, 2017). In another assessment, 79% of those surveyed reported using social-networking sites, with 62% accessing their social-networking accounts daily (*Yellow Social Media Report*, 2018). A survey of Australian businesses also indicated that 51% of businesses had an internet presence, and 40% had a social-networking presence in 2016 to 2017 (Australian Bureau of Statistics, 2018b). In Whittaker and Kowalski's (2015) study investigating prevalence rates of online harassment among college-age students and the venues through which this harassment occurs, it was reported that social-networking sites (alongside texting) were the most commonly utilised platform for harassment. In another study, online victimisation was found to fully mediate the relationships between the use of social-networking-sites with psychological distress (Sampasa-Kanyinga & Hamilton, 2016).

#### **1.4 Frequency of victimisation**

Few studies have examined the relationship between frequency of victimisation and psychosocial outcomes, however this has been examined extensively in studies of traditional bullying and in adolescent populations of online harassment. For example, Rigby (2000) asked 845 high school students to report their experiences of bullying, mental health outcomes, somatic symptoms, and social functioning, concluding that frequent bullying significantly and independently predicted poor overall mental health. In cyberbullying populations, a number of cross-cultural studies have been examined in adolescent populations, with data from Swiss and Australian high school students showing more frequent victimisation to be associated with higher levels of depressive symptoms (Perren, Dooley, Shaw & Cross, 2010). Similarly, Olweus (2012) examined data of USA and Norwegian students which indicated a linear relationship between frequency of victimisation and poor self-esteem (Olweus, 2012). However, research among adults has typically examined incidence of victimisation as a discrete variable, categorising participants as victims, non-victims, bystanders, and perpetrators (e.g. Kokkinos, Antoniadou & Markos, 2014; Balakrishnan, 2015; Francisco, Simão, Ferreira & das Dores Martins, 2015). Frequency of



victimisation is seen as an important factor of victimisation, as various definitions consider the repetition of victimisation to be an essential element to defining cyberbullying and online harassment (Langos, 2012). Furthermore, in adult studies of online victimisation researchers typically take care in considering the frequency of and timeframe in which victimisation has occurred for participants to be categorised as victims or non-victims of harassment. Despite this, Na, Dancy and Park (2015) have conducted the only investigation into the relationship between frequency of victimisation and psychosocial outcomes among adults. Consistent with research conducted in traditional forms of bullying and enquiry into adolescent populations experiencing online harassment, Na et al. (2015) reported that frequency of victimisation explained significant variance in depression, anxiety, and self-esteem. As Doane et al. (2013) surmised, frequent or ongoing harassment has more potential than singular incidents of harassment to cause severe and long-term negative outcomes. Accordingly, further examination of the relationship between victimisation frequency and psychosocial outcomes is necessary in adult populations.

### **1.5 Predicting Victimisation**

Of the limited investigation into vulnerability factors for victimisation, personality and individual differences are the most commonly examined predictors of online harassment among adults. Above all other variables, likelihood of victimisation has consistently been found to have a positive association with frequency of technology use (Balakrishnan, 2015; Peluchette, Karl, Wood & Williams, 2015; Vitak et al., 2017). Furthermore, some studies have indicated that patterns of technology use also contributed to an increased likelihood of victimisation (i.e. engaging in “risky behaviours”, posting indiscreet images, sharing personal information, and spending time engaging in online impression management behaviours) (Peluchette et al., 2015; Lee, 2017; Vitak et al., 2017). However, not only are these novel and unconfirmed findings, they are based upon self-developed and unstandardised measures that quantify online behaviour.

The extant literature on online harassment among adolescents has indicated that females are typically more vulnerable to victimisation (Aboujaoude, Savage, Starcevic & Salame, 2015; Jenaro

et al., 2018). Whilst these findings have been corroborated in one adult study (Zalaquett & Chatters, 2014), several European and American studies have reported males to experience comparable, if not higher, rates of victimisation than females (Francisco et al., 2015; Kokkinos et al., 2014; Lee, 2017). Furthermore, several other studies (i.e. Schnek & Fremouw, 2012; Tennant, Demaray, Coyle & Malecki, 2015) have reported insignificant differences in victimisation between genders. The inconsistency in these results indicates an inconclusive understanding of the role in which gender plays in an individual's likelihood of victimisation. It should also be recognised that these studies were not formal prevalence studies, as they typically used small sample sizes and only reported frequencies of rates of victimisation, rather than including these figures in predictive models. Due to the lack of prevalence studies of adult victims of online harassment, the actual rate of victimisation among adults and the distribution of age and gender in this population is unknown and warrants further investigation.

### **1.6 Research aims and the present study**

Past research suggests that adults experience negative psychosocial outcomes as a result of online harassment. However, to date, there have been few empirical studies examining the psychological outcomes of adults who are victims of online harassment. This area of research lacks consistent results and attempts to examine mediating factors of psychosocial outcomes, such as different types of harassment and frequency of victimisation. The current study seeks to address these limitations by focusing on Australian, adult victims of online harassment using a cross-sectional design that also takes into consideration various types of victimisation. Given the growing relevance of social-networking sites and some preliminary evidence demonstrating the importance these platforms have in mediating online harassment, the present study chose to examine incidents of online harassment that occur exclusively on social-networking sites. It is expected that this should provide a more informed representation of the experiences of adult victims of online harassment.

The following hypotheses were proposed: (1) Victims of online harassment will report significantly higher scores of psychological distress than non-victims: (2) Four types of victimisation (deception, malice, unwanted contact, and public humiliation) will independently predict variance of psychological harms above other characteristics (i.e. demographics): (3) There will be a positive relationship between frequency of victimisation and psychological harms: (4) Frequency of victimisation will explain significant variance in psychological harms above other characteristics (i.e. demographics): (5) Technology use will predict incidents of victimisation; risky behaviours, online impression management, and more frequent use of social-networking-sites will be associated with an increase in the likelihood of victimisation.

## **2. Method**

### **2.1 Participants**

The total sample ( $n= 471$ ) included 159 males and 312 females, ranging in age from 18 to 69 years ( $M= 25$ ,  $SD= 8.1$ ). All participants were permanent residents of Australia, comprising of 38% university students, 57.4% working professionals and 4.6% unemployed persons. The inclusion criteria required participants to be (a) over the age of 18; (b) residents of Australia; and (c) users of social-media (i.e. having at least one active social-networking account).

### **2.2 Measures**

All surveys completed by participants were hosted online on Survey Monkey. The survey included basic demographic information, information detailing participants' social media use, and a selection of standardised and adapted measures to assess psychological outcomes. Questions relating to participant demographics covered age, gender, relationship status, employment status, education, sexual orientation, and ethnicity. Questions relating to social media use included; time spent on social media; devices used to access social media and; number and names of active social media accounts. In addition, the following standardised and adapted measures were included.

### 2.2.1 Social Media Use

A series of questions were adapted from Vitak et al.'s (2017) self-developed measure of online impression management. The questions assess an individual's engagement in impression management online, with questions in the domains of social, cognitive, and technical behaviours. Further questions were adapted from Peluchette, et al.'s (2015) self-developed measure of "Indiscreet Facebook Content", where participants were asked about different types of information they share online. The questions were modified to be applicable to a range of social-media platforms and the same timeframe as used in the other measures was applied. For both sets of questions, participants were prompted with the question *'in the past 12 months have you done any of the following?'* and responded on a five-point Likert scale ranging from 1=not at all, 2=less than a few times a year, 3=a few times a year, 4=once or twice a month, and 5=once or twice a week.

#### The Social Media Disorder Scale (van den Eijnden, Lemmens & Valkenburg, 2016)

The Social Media Disorder Scale (SMD Scale) is a 9-item instrument measuring social media addiction. The scale contains a clear diagnostic cut-off point to distinguish between disordered (i.e. addicted) and high-engaging non-disordered social media users. The SMD Scale was developed based on the nine DSM-5 criteria for Internet Gaming Disorder (IGD), i.e. preoccupation, tolerance, withdrawal, persistence, escape, problems, deception, displacement, and conflict. The instrument asks respondents to answer "yes" or "no" to nine questions based on the last 12 months. In accordance with the cut-off point for IGD in the DSM-5, at least five or more (out of nine) criteria must be met for a formal diagnosis of "disordered social media user" to be considered.

### 2.2.2 Experiences of Harassment

#### Cyberbullying Experiences Survey (Doane et al., 2013)

The Cyberbullying Experiences Survey (CES) is an assessment tool designed to measure an individual's experiences of online victimisation and perpetration. The questionnaire contains a 21-item victimization scale and 20-item perpetration scale which are separated into four factors of

cyberbullying; (1) malice; (2) public humiliation; (3) unwanted contact and; (4) deception.

Participants rate their experiences of each behaviour on a 6-point scale that includes: never (0), less than a few times a year (1), a few times a year (2), once or twice a month (3), once or twice a week (4), and every day/ almost every day (5). As the present study only aims to understand experiences of victimisation rather than perpetration, only the 21-item victimisation scale was used. Participants were classified as victims if they had experienced at least one of the 21 questions in the past 12 months.

### *2.2.3 Psychological Harms*

These questions were adapted from Browne et al's (2016) study which assessed gambling-related harms in multiple domains (i.e. financial, work and study, health, emotional and psychological, and relationships). Participants were asked to consider the psychological impacts of any experiences of social-media facilitated harassment in the past 12 months. Participants were asked 11 specific questions relating to mental health and were given response options of "Not at all", "Sometimes", and "Often" to describe how often they had experienced these harms. Participants were also able to select the response option "Not applicable" in the case that they had not experienced social-media facilitated harassment in the past 12 months. Participants were then required to evaluate and provide an overall rating for how their experiences of harassment on social-media had impacted their mental health).

### *2.2.4 Psychological Distress*

#### The Kessler Psychological Distress Scale (Kessler & Mroczek, 1994)

The Kessler Psychological Distress Scale 10 (K10) is a brief measure of non-specific psychological distress in the anxiety-depression spectrum. The K10 comprises ten questions about psychological distress and is designed to quantify the frequency and severity of anxiety and depression related symptoms experienced in the four weeks prior to screening. Each of the 10 questions are scored 1 (none of the time) to 5 (all of the time). Developers of the scale recommended that scores should be

interpreted according to the population studied. Several methods of scoring the K10 have been used in Australia, with the following scoring used by the Victorian Population Health Surveys: 10–15 = No/Low level of psychological distress, 16–21 = Moderate level of psychological distress, 22–29 = High level of psychological distress, 30–50 = Very high level of psychological distress.

### **2.3 Procedure**

Participant recruitment was self-selected, with the researchers using several methods to share and advertise the study including; (1) online sharing of the survey link, (2) advertising posters displayed in various locations around university campuses, and (3) the first year psychology students' research participation system at the University of Adelaide. Participants were informed of the research aims of the study and required to give consent before completing the questionnaires through an online survey link. The survey had a completion rate of 92% as n=516 participants started the survey, and 473 participants completed the survey, whilst two participants were excluded from analysis for not meeting the inclusion criteria (i.e. below the age of 18). The average time participants spent completing the survey was 13 minutes.

## **3. Results**

### **3.1 Normality and outliers**

Shapiro Wilk's test of normality was used to assess the distribution of the dataset. All variables examined in the analysis were statistically significant ( $p < .05$ ), indicating that the variables did not follow a normal distribution. Multivariate outliers (n=17) were detected using Mahalanobis distance. Univariate outliers were detected using the outlier labelling technique. This involved a formula using the first and third quartiles and a multiplier of 2.2 to determine upper and lower bounds for potential outliers. Incidents of outliers were examined and determined to be not influence the analysis and were consequently included in the data analysis.

### **3.2 Analysis**

Descriptive statistics were generated through an examination of frequencies of various responses to main outcomes variables within the dataset. A Kruskal-Wallis test was used to conduct between groups analysis of the main outcome variables between victims and non-victims as measured by the Cyberbullying Experiences Survey and self-report measures. Mann Whitney U tests were used to conduct post-hoc analysis and determine the significance between each group. To assess the association between the main variables, correlational analysis was conducted using Spearman's  $R_2$ . A hierarchical multiple regression was then conducted in order to examine the variance of psychological harms explained by the main dependent variables. This was followed by a logistic regression which assessed the variables predicting victimisation.

### **3.3 Rate of victimisation**

In response to the survey question "Have you been harassed online in the past 12 months?", 24% of participants (n=97) answered yes. However, 75.4% (n=355) of participants responded affirmatively to having experienced various incidents of online harassment as measured by the Cyberbullying Experiences Questionnaire. This shows a 51% discrepancy in the reported victimisation dependent upon the approach to measurement. Consequently, three groups were identified (1) Victims-CES: Participants who were categorised as victims based on the CES alone (n=261); (2) Victims-CES-SR: Participants who were categorised as a victims based on the CES and the self-report question (n=94); and (3) Non-victims: Participants who responded no to the self-report question and had also not endorsed any of the experiences of harassment on the CES (n=113). Individuals who self-reported having experienced harassment but had not experienced any of the types of harassment in the Cyberbullying Experiences Survey (n=3) were excluded from analysis.

#### **3.3.1 Between Groups Analysis**

A Kruskal-Wallis test was conducted in order to determine whether there was a significant difference between the three identified groups (i.e. Victims-CES, Victims-CES-SR, Non-victims) in

psychological distress. As scores of psychological harms was an adapted measure dependent upon participants self-identifying as victims, psychological distress (as measured by the Kessler Psychological Distress Scale [k-10]) was deemed an appropriate variable for comparison. Distributions of psychological distress were similar for all groups, as assessed by visual inspection of a boxplot. Median scores of psychological distress were statistically significantly different between groups,  $\chi^2(2) = 15.04, p = .002$ .

Post hoc analysis was conducted using a Mann-Whitney U test with a Bonferroni correction (adjusted p-value =.016) for multiple comparisons. This post hoc analysis revealed scores of Psychological distress to be significantly higher in Victims-CES (Mdn = 18) than non-victims (Mdn = 15)  $U = 12038.5, z = -2.83, p = .005$ , and in Victims-CES-SR (Mdn = 19.5) than non-victims (Mdn = 15),  $U = 3682, z = -3.80, p < .001$ . However, psychological distress was not statistically significantly different between Victims-CES (Mdn = 18) and Victims-CES-SR (Mdn = 19.5),  $U = 10,802, z = -1.72, p = .086$ .

As the Cyberbullying Experiences Questionnaire is considered to be a standardised measure of online harassment, it was determined that participants would be categorised as victims or non-victims based on their responses to this questionnaire for subsequent analysis. Thus, the sample consisted of 75.4% victims (n=355) and 24.6% non-victims (n=116).

### 3.4 Descriptive

In terms of psychological harms, 34% of participants (n=160) reported online harassment to have had an impact on their psychological wellbeing. Of this sample, 21.9% (n=103) reported a minor impact, 9.3% (n=44) reported a moderate impact, and 2.8% (n=13) reported a major impact. The most commonly reported harms was “*feeling insecure or vulnerable*”, with 34% of participants (n=161) responding affirmatively to this question. Feelings of ‘depression’ (26.4%, n=124), feelings of anger (23.5%, n=111), and feelings of worthlessness (19.7%, n=93) were also notable outcomes that participants reported having directly resulted from their experiences of online harassment. Lastly,



10% of the sample (n=47) reported thinking about self-harm and 4% (n=20) reported having committed acts of self-harm as a direct result of their experience(s) of online harassment.

### 3.5 Correlational analysis

A Spearman's rank-order correlation was conducted to determine the relationship between victimisation and individual differences. *See Table 1.* A moderate, positive correlation was found between frequency of victimisation and psychological harms ( $r_s(458) = .53, p = .000$ ), impression management ( $r_s(458) = .41, p = .000$ ), and risky behaviours ( $r_s(458) = .38, p = .000$ ). A weak to moderate positive correlation was found between frequency of victimisation and number of SNS accounts ( $r_s(458) = .24, p = .000$ ), hours on social media ( $r_s(458) = .30, p = .000$ ), and psychological distress ( $r_s(458) = .24, p = .000$ ). A weak, negative correlation was found between frequency of victimisation and age ( $r_s(458) = -.23, p = .000$ ). There was a statistically significant, moderate, positive correlation between psychological harms and each of the four categories of victimisation. The strongest correlation was found between psychological harms and malice ( $r_s(458) = .53, p = .000$ ), followed by deception ( $r_s(458) = .46, p = .000$ ), unwanted contact ( $r_s(458) = .46, p = .000$ ), and then public humiliation ( $r_s(458) = .45, p = .000$ ).

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*Table 1*  
*Correlation table of the main outcome variables including individual differences and frequency and types of victimisation*

	Age	Impression management	Risky behaviours	Number of accounts	Number of devices	Hours on social media	Deception freq.	Malice freq.	Public Humiliation freq.	Unwanted Contact freq.	Frequency of victim.	Psych harms	Psych distress (k-10)
Age													
Impression management	-.16**												
Risky behaviours	-.10*	.42**											
Number of accounts	-.09*	.18**	.29**										
Number of devices	.12*	.08	.13**	.29**									
Hours on social media	-.31**	.25**	.29**	.28**	.01								
Deception freq.	-.05	.29**	.27**	.16**	.07	.18**							
Malice freq.	-.29**	.36**	.32**	.15**	.05	.30**	.48**						
Public Humiliation freq.	-.20**	.37**	.32**	.23**	.01	.25**	.39**	.61**					
Unwanted Contact freq.	-.09	.37**	.39**	.23**	-.00	.22**	.55**	.45**	.39**				
Frequency of victim.	-.23**	.41**	.38**	.24**	.03	.30**	.64**	.84**	.71**	.71**			
Psych harms	-.24**	.43**	.24**	.13**	.04	.18**	.46**	.53**	.45**	.46**	.53**		
Psych distress (k-10)	-.28**	.29**	.13**	.09*	.04	.22**	.15**	.26**	.24**	.19**	.24**	.36**	

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 3.6 Regression Analysis

#### 3.6.1 Assumptions testing

Linearity was assessed by partial regression plots and a plot of studentized residuals against the predicted values. There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.87. There was homoscedasticity, as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. There was no evidence of multicollinearity, as assessed by tolerance values greater than 0.1. There were no studentized deleted residuals greater than  $\pm 3$  standard deviations, no leverage values greater than 0.2, and values for Cook's distance above 1. The assumption of normality was not met.

#### 3.6.2 Predicting psychological harms

A hierarchical multiple regression was run to determine if the addition of frequency of online victimisation and then type of online victimisation (i.e. deception, malice, public humiliation, and unwanted contact) improved the prediction of psychological harms over and above individual differences (i.e. gender, age, relationship status, engagement in risky behaviours online, engagement in online impression management behaviours online, total number of active social networking accounts, weekly hours spent on social-networking-sites). See Table 3 for full details on each regression model. The first model of the regression, was statistically significant,  $R^2 = .404$ ,  $F(11, 476) = 25.85$ ,  $p < .001$ , explaining 23% of variance in psychological harms. The addition of frequency of victimisation (model 2) explained an additional 9.3% of unique variance of psychological harms,  $F(8, 479) = 27.68$ ,  $p < .001$ ,  $R^2 = .32$ . The addition of type of victimisation (model 3) explained an additional 8% of unique variance of psychological harms, so that the full model explained 40.4% of variance in psychological harms  $F(11, 476) = 25.85$ ,  $p < .001$ ,  $R^2 = .40$ .

Table 2

*Multiple regression analysis predicting psychological harms from individual differences and types of victimisation experiences*

	$R^2$	p-value (SE)	b [95% CI]
Step 1	.231		
Age		.008 (.022)	-.112 [-.102, -.015]
Gender		.058 (.374)	.080 [-.025, 1.443]
Relationship Status		.045 (.354)	-.084 [-1.407, -.017]
Risky Behaviours		.148 (.054)	.069 [-.028, .184]
Online Impression Management		.000 (.045)	.368 [.269, .445]
Number of SNS accounts		.979 (.099)	.001 [-.191, .197]
Weekly hours spent on SNS		.241 (.013)	.051 [-.010, .041]
Step 2	.093		
Total victimisation frequency		.000 (.004)	.332 [.021, .035]
Step 3	.080		
Deception		.002 (.384)	.139 [.459, 1.968]
Malice		.000 (.382)	.169 [.676, 2.179]
Public Humiliation		.228 (.369)	.053 [-.280, 1.172]
Unwanted Contact		.051 (.379)	.087 [-.003, 1.487]
Total $R^2$	.404		

### 3.6.3 Predicting victimisation

A logistic regression was performed to ascertain the effects of various individual differences (i.e., age, gender, social media addiction, relationship status, engagement in risky behaviours, engagement in online impression management behaviours, number of active social media accounts, and frequency of social media use) on the likelihood that participants experience online harassment. The logistic regression model was statistically significant,  $\chi^2(9)$

= 77.5,  $p < .001$ . The model explained 23% (Nagelkerke  $R^2$ ) of the variance in experiences of harassment and correctly classified 78% of cases. Females were 1.73 x (73%) more likely to experience online harassment than males and those who were single were 1.89x (89%) more likely to experience online harassment than those who were in a relationship. Increasing risky behaviours and online impression management behaviours was associated with an increase in the likelihood of experiencing harassment.

#### **4. Discussion**

The aim of the present study was to assess the psychological impacts of social-media-facilitated harassment among adults. The results showed a significant difference in psychological distress between non-victims and victims of online harassment, where victimisation was positively associated with psychological distress. There were discrepant rates of victimisation based on the way in which harassment was measured as 24% of participants self-identified as victims of online harassment but 75.4% of participants endorsed having experienced various harassment behaviours as measured by a standardised questionnaire. As expected, the study found that frequency of victimisation was associated with greater psychological harms. Furthermore, the four different categories of victimisation were seen to contribute to an individual's scores of psychological harms at varying levels. Lastly, frequency of technology use was not predictive of victimisation, whilst patterns of technology use (i.e. risky behaviour and online impression management) were associated with an increase in likelihood of victimisation. Overall, these results were largely consistent with previous findings in the area, and support was found for all hypotheses.

There was significant variance in experiences of victimisation when measured by a self-report measure compared to responses to a standardised questionnaire. Whilst this is consistent

with Vitak et al.'s (2017) finding that victims may underreport their experiences of harassment on self-report measures, the discrepancy in the present study was far greater than the discrepancy of 14.6% reported by Vitak et al. There are several possible explanations for this variance in reported victimisation rates. It is possible that the Cyberbullying Experiences Survey was a particularly sensitive measure of harassment. However, as levels of psychological distress were neither statistically or clinically significantly different between the two victim groups, it is likely that these two groups are comparable in terms of victimisation experience. It is still possible that a difference exists between the two groups, as psychological distress is not a direct measure of the harms associated with online harassment. An alternative explanation may be that reported rates of harassment are influenced by the perceived impact it has on an individual. It is likely that participants who viewed their harassment to have little or no psychological impact were less likely to conceptualise their experiences as "harassment", and therefore not fall into the category of "victim", despite having experienced negative online behaviours. This result suggests that the way in which questions about harassment and cyberbullying are phrased is likely to affect reported victimisation rates. Consequently, the way a researcher chooses to define online harassment will influence the prevalence of victimisation within their research. Irrespective of how victimisation was measured, non-victims were shown to have statistically significantly lower levels of psychological distress than victims. This difference was also considered to be clinically significant, as the median score for non-victims fell into the "little to no psychological distress" category and both victim groups fell into the "moderate psychological distress" category. This provides evidence to support the hypothesis that victims of online harassment experience greater psychological distress than non-victims.

Another noteworthy finding of the present study was the relationship between different victimisation types and psychological harms. Malice had the strongest correlation with psychological harms and explained the most unique variance in the regression model predicting

psychological harms. Although Public Humiliation and Unwanted Contact were significantly correlated to psychological harms, they did not significantly predict psychological harms when controlling for the contribution of other variables (i.e. frequency of victimisation) in the multiple regression analysis. These results indicate that individuals who experience incidents of malice, followed by deception have increased negative mental health outcomes compared to those who experience incidents of unwanted contact and public humiliation.

Whilst it was predicted that different types of harassment may contribute separately to mental health outcomes, little is known regarding the impact of different types of victimisation and specifically the four categories used in this study. Given Menesini et al.'s (2011) assertion that forms of unwanted contact were considered "less severe" forms of harassment, it is perhaps unsurprising that unwanted contact did not significantly predict psychological harms. It was however, unexpected that public humiliation was insignificant as a predictor of psychological harms. As Torres and Bergner (2012) describe in a series of case studies, the lasting impacts of extreme public humiliation can be severe, including damages to identify and self-worth, hopelessness, anger, and suicidal ideation. This study provides preliminary evidence that some forms of harassment, specifically Malice, may be more consequential than others. However, based on previous research of traditional bullying and cyberbullying among adolescents (e.g. Smith et al., 2008; Slonje & Smith, 2008; Menesini et al., 2011) it would be expected that verbal forms of harassment such as malice would have less severe outcomes than other (i.e. visual) types of harassment. One possible explanation for this may be related to the specific items in the CES endorsed by participants; where more extreme incidents of public humiliation (i.e. posting a nude photo of the victim) were not endorsed by participants, the more extreme incidents of malice (i.e. someone is mean to or curses at the victim) were frequently endorsed by participants.

It should also be recognised that since Doane et al., (2013) did not provide any explanation of the mechanisms underlying the four factors of victimisation, it is possible that these four subtypes of victimisation unintentionally share conceptual basis with other models of harassment, such as Olweus' (1994) notion of direct and indirect forms of bullying. In this case, items of Malice and Unwanted Contact may be considered direct forms of victimisation as they involve direct interaction between victim and perpetrator, whereas public humiliation and deception do not. Whilst the label public humiliation implies an extreme form of harassment, some items that constitutes public humiliation in Doane et al.'s survey (i.e. "*Has someone posted an embarrassing picture of you electronically where other people could see it?*") may be relatively minor incidents of harassment. Another perspective which may contribute to the high association between malice and psychological harms is the level of subjectivity of each categorisation. Malice appears to be the only subtype of victimisation involving any subjective interpretation of the incidents of harassment. Where the other three subtypes rely predominantly on objective experiences (i.e. "*has someone pretended to be someone else whilst talking to you electronically*") the Malice category is reliant on the victims categorisation of the incidents as "mean" and "nasty" (i.e. "*has someone been mean to you electronically*"). As this is a novel area of enquiry within the literature on adults' experiences of online harassment, it will be necessary for further research to explore not only the relationship between these different types of harassment and negative mental health outcomes, but also the conceptual underpinnings of these subtypes of victimisation.

Another important finding within this study was the association between frequency of victimisation and the level of psychological harms. Consistent with the only other enquiry into this relationship (Na et al., 2015) frequency of victimisation was strongly associated with psychological harms. This is also consistent with Doane et al.'s (2013) supposition that frequent or ongoing harassment has more potential than singular incidents of harassment to



cause severe and long-term negative outcomes. At the present time, there is no clear consensus regarding the importance of the repetition of harassment in defining cyberbullying (Corcoran et al., 2015). Accordingly, previous studies (i.e. Vitak et al. 2017) have examined harassment that occurs as singular incidents, finding that one-off incidents of victimisation also resulted in negative psychosocial outcomes. Despite the assertion that an essential feature of cyberbullying is the repeated nature of the harassment, it may be valuable for future studies to reconsider victimisation to include singular incidents of harassment. Frequency of victimisation may be reconceptualised as a mediating factor for psychosocial outcomes rather than a defining feature which allows for the categorisation of victimisation as a dichotomous variable.

Based on previous enquiry into vulnerability factors for victimisation, it was not expected that individual differences would be significant predictors of the likelihood of online harassment victimisation. However, it was found that both gender and relationship status had a bearing on an individual's likelihood of victimisation, with women being 73% more likely to experience victimisation than males, and those who were single to be 89% more likely to be victims of online harassment than those in relationships. Due to the lack of prevalence studies of adult victims of online harassment, further investigation is required before any conclusive deductions could be made regarding the influence of individual characteristics (i.e. age, gender, relationships status, ethnicity) on vulnerability to victimisation. It was predicted that technology use would contribute to an individual's likelihood of victimisation. Contrary to previous findings, frequency of technology use (i.e., hours spent on social-networking-sites, number of active social-networking accounts, and number of devices) was not significantly associated with victimisation. Conversely, consistent with previous studies (Peluchette et al., 2015; Lee, 2017; Vitak et al., 2017) engagement in risky behaviours and online impression management behaviours were both associated with an increase in likelihood of victimisation. Previous studies which have found an association between frequency of technology use and

victimisation have not specifically looked at social-networking sites as a medium for harassment. This may suggest that the way an individual engages with technology (i.e. their behaviours on social media) is more consequential than actual time spent actively using technology. Evidently, further study is needed to understand the complexities of technology use and its role in online victimisation.

#### **4.1 Limitations of the present study**

There are a number of limitations in this study. Whilst this study chose to focus specifically on social-networking sites as a medium for harassment, these sites were examined broadly. The significant variation in the features of different social networks was not considered in the analysis. Consequently, some questions regarding technology use may have been more or less applicable to particular social-networking sites over others. Another limitation of this study was the lack of context given to the experiences of harassment. Whilst a strength of the sample was its inclusion of not only university students, but also working professionals, there was no information gathered regarding where the harassment occurred and the relationship between the victim and perpetrator. It may have been valuable to map experiences of harassment to specific social-networking sites and understand whether the harassment occurred at the workplace, in a university setting, or in a private setting. Lastly, it is important to consider the length of the timeframe (12 months) applied to the questionnaires in the study. It is possible that using a 12-month timeframe may be problematic in capturing immediate effects of harassment. Furthermore, a 12-month timeframe allows for the comparison of individuals for whom significant time may have elapsed since their harassment and those who have experienced harassment more recently and consequently, are likely to be experiencing varying levels of psychosocial impacts.

## 4.2 Implications

Overall, the present study contributes to the understanding online harassment among adults, producing a variety of significant conceptual and practical implications. Theoretically, this study has findings regarding the conceptualisation of definitions of cyberbullying and online harassment. It is clear that rates of reported victimisation are dependent upon the phrasing of items in assessment tools. Furthermore, the present study provides some preliminary evidence that both frequency of harassment and type of harassment endured by victims may significantly influence their mental health.

In terms of practical implications, the corroborating evidence in the present study that online harassment does indeed occur among adults, and descriptions of the types of harassment that occurs is beneficial in informing presentations that may appear in clinical practice. Furthermore, the present study has practical implications to the prevention and management of online harassment; research among children and adolescents has led to the discussion and implementation of preventative and intervention strategies from a public health perspective at an individual, class, organisational, and community level (Kiriakidis & Kavoura, 2010). In particular, the present study shows online harassment to be an issue among not only individuals in university settings, but also those in the workforce. Whilst further context is needed regarding the relationship between perpetrator and victim in these cases, it may be worthwhile for both professional and academic organisations to develop an increased awareness of the negative mental health outcomes associated with online harassment. Organisations may consider reviewing how incidents of online harassment are currently managed and update relevant policies to reflect that anti-bullying policies extend to incidents of online harassment. For example, as online harassment can occur at any time and in any place, it is important that anti-harassment policies cover colleague interactions that are not directly tied to the physical workplace. Lastly, as this is evidently a pervasive phenomenon, it has been suggested that

social network providers (e.g. Facebook, Instagram) make efforts to clearly communicate the risks associated with use of social-networking sites (Tow, Dell, & Venable, 2010).

#### **4.3 Directions for future research**

The findings of the present study were valuable in developing the current understanding of online harassment in an adult sample. It is clear that there is a need for further examination of the definition and conceptualisation of cyberbullying and online harassment. In particular researchers should carefully consider the phrasing of assessment tools used to measure rates of victimisation, and also the practice of categorising victims based on frequency of harassment experiences. The inconsistent findings in predictors of victimisation highlights the importance of future prevalence and longitudinal studies in order to establish the baseline of rates of harassment and delineate the nature of psychological outcomes and predictors of online harassment over time.

Future research should also seek to replicate and improve upon the current study to assess the nature of online harassment among adults. This may involve investigation into the researcher's suggestion that rate of victimisation varies greatly dependent upon the way in which it is measured. Furthermore, as well as examining mental health outcomes of adults, it is likely to be valuable to investigate other areas of functioning (i.e. health and social domains). Further cross-sectional research which examines psychosocial outcomes of online victimisation will be necessary to further elucidate the findings of the present study that different types of harassment may have varying impacts on mental health outcomes. Lastly, future research would be strengthened by examining more contextual features of online harassment, such as where harassment occurs, how harassment differs across different social-networking-sites, and the relationship between perpetrators and victims.

#### **4.4 Conclusion**

The findings of the present study have suggested that: (1) Rates of victimisation vary significantly dependent upon the measurement tool employed to categorise victims and non-victims: (2) Adults endure experiences of online harassment and report negative mental health outcomes as a result: (3) The severity of negative mental health outcomes is associated with the type of harassment that the victim endures: (4) More frequent experiences of victimisation are associated with worse mental health outcomes: And (5) individual differences (i.e. gender and relationship status) and patterns of technology use (i.e. risky behaviours and online impression management behaviours) increase an individual's likelihood of harassment. It remains unclear whether the current conceptualisation of online harassment or "cyberbullying" is the most appropriate representation of what constitutes harassment that is perpetrated online. Further research examining outcomes associated with the frequency of and type of harassment with reference to specific contexts is necessary to further the understanding of this new but pervasive phenomena.

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