



## Online self-presentation: Psychological predictors and outcomes

Claire Wilson<sup>a,\*</sup>, Catherine V. Talbot<sup>b</sup>, Graham G. Scott<sup>a</sup>

<sup>a</sup> The University of the West of Scotland, School of Education and Social Sciences, UWS Paisley Campus, High Street, Paisley, Scotland PA1 2BE, United Kingdom

<sup>b</sup> Bournemouth University, Faculty of Science & Technology, Fern Barrow, Poole, Dorset, England BH12 5BB, United Kingdom

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### ABSTRACT

Internet technology has changed the way we interact, and online communication has become increasingly common. There is a need to know more about how individuals present and behave online. The study examined relationships between perfectionism (self-oriented, socially prescribed, other-oriented), online self-presentation types (idealised self, multiple selves and consistent self), cyberbullying experiences (victimisation and perpetration) and psychological outcomes (rumination and depressive symptoms). An online questionnaire measuring these variables was completed by 139 general population adults (91.2 % from the UK, 73 % female; age range 17–70 years; Mean = 33.32 SD = 13.76). Regression analysis showed a role of self-oriented and socially prescribed perfectionism in idealised self and multiple selves online presentation. Further, self-presentation was related to individuals' likelihood to engage in cyberbullying as a perpetrator. Finally, self-presentation and cyberbullying perpetration were predictive of rumination and depressive symptoms. The findings provide insight into adults' online behaviour and related outcomes thus contributing to our understanding of the psychology within online interactions.

Developments in technology over the past two decades have evolved the ways in which we interact and communicate. Portable devices such as mobile phones, tablets, and laptops coupled with web 2.0 technologies and wireless internet access allow us to now communicate with others 24 h a day from almost any location [1,2]. Instant messaging services and social media have reshaped the nature of our communications (e.g., [3]). The affordances offered by such platforms have empowered users with a degree of control over their self-presentation in the online environment that is not possible offline [4]. Research suggests some personality factors such as perfectionism may drive maladaptive patterns of behaviour relating to online self-presentation, which could in turn lead to negative behavioural and mental health outcomes [5]. In this study we investigate the link between perfectionism and online self-presentation strategies, and a specific category of negative behaviours, cyberbullying, the prevalence of which among an adult population is increasing [6,7] and which has previously been linked to online presentation strategies (e.g., Meter et al. [8]). We also investigate how these are related to mental health outcomes. Such a study is needed in order to raise awareness of the link between personality, online behaviours and mental health allowing individuals to be informed on healthy internet practices.

### Online self-presentation

Self-presentation refers to the way we control and manage how we are perceived by other individuals [9,10]. To create a positive image of the self, individuals may be selective in the information they provide about themselves and modify this based on feedback they receive from others [11–13]. The hyperpersonal model of online communication outlines four features of the online environment which can aid self-presentation [3,14]. First is greater control: users can select and edit content relating to the self before uploading it [15]. Secondly, given the asynchronous nature of some online communication: users may have more time to formulate replies than when offline [16]. Third is physical distance from communication partners, meaning users can hide undesirable communication cues. Fourthly, users can focus more attention on self-presentation as they have fewer environmental cues to attend to, and less need to self-monitor [3,14].

The online environment allows users to experiment with different presentations of the self [17]. Fullwood et al. [17] established four factors of online self-presentation: ideal self, multiple selves, consistent self, online presentation preference. Ideal Self relates to whether the individual presents an idealised version of their self. Multiple Selves concerns the extent to which the individual uses different versions of

\* Corresponding author.

E-mail address: [claire.wilson@uws.ac.uk](mailto:claire.wilson@uws.ac.uk) (C. Wilson).

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their self. Consistent Self relates to the extent to which an individual's online and offline self-presentation are similar. Online Presentation Preference concerns whether individuals prefer presenting themselves online rather than offline (e.g., [18,19]).

### Predictors of online self-presentation

The way individuals present online is impacted by numerous variables such as self-esteem [20], self-concept [17] loneliness [21] and the need to belong [22]. Personality traits including extraversion, neuroticism, agreeableness, conscientiousness, and narcissism have also been associated with individuals' online self-presentation [23–27]. This may be a result of wanting to compensate for a perceived weakness or to gain a particular reputation [17]. Thus, certain individuals appear to be predisposed to experiment more with online self-presentation.

A personality trait which has received limited attention in the context of online self-presentation is perfectionism. Hewitt and Flett [28] defined perfectionism as multi-dimensional, comprising self-oriented perfectionism (SOP: having unrealistically high expectations for oneself), other-oriented perfectionism (OOP: holding very high standards for others) and socially prescribed perfectionism (SPP: a belief that others expect them to be perfect). Evidence has supported a relationship between perfectionism and offline self-presentation. For example, during face-to-face interactions, an individual's perfectionism may impact upon self-presentation because the individual aims to promote their perfection while masking imperfections [29,30]. Such findings suggest that perfectionism will play a role in online self-presentation. It has been argued that individuals who score high in perfectionism prefer online interactions, possibly because of the options this environment affords them to accentuate their qualities and minimize their faults [31,32]. More research which examines the link between perfectionism and online self-presentation, or the (potentially harmful) outcomes associated with this, is needed.

### Outcomes of online self-presentation

Understanding online self-presentation types and their antecedents is important. Even though at first glance it may seem like the features of the online environment highlighted in the hyperpersonal model [3,14] would be beneficial to individuals who value the ability to manage their online personas, self-presentation style has been linked to negative psychological outcomes [33]. Those who present a consistent online self have more positive wellbeing [20,34] and are more likely to have higher levels of positive affect and lower levels of negative affect [35]. Non-honest presentation has been found to relate to higher depressive symptoms [36]. Grieve and Watkinson [37] reported that those who presented as their consistent self online showed lower levels of stress and better social connectedness, though Kim and Lee [38] found that happiness was positively related to presenting an ideal self online. They argued that in presenting this way, people reflect on the positive aspects of themselves and thus engage in self-enhancement, which has psychological benefits. Given this inconsistent finding, more research is needed which considers the relationship between online self-presentation and psychological outcomes.

It is plausible that self-presentation styles associated with high levels of perfectionism may result in negative outcomes for users as perfectionism has been associated with other maladaptive online behaviours [39], and problematic Facebook and Instagram use [40]. Perfectionism in female adolescents is associated with appearance-focused upwards physical comparison on social media, as well as depressive symptoms and lower body appreciation [41]. In a sample of mothers, SOP and SPP were associated with social comparison on social media and symptoms of anxiety and depression [42].

The manner in which an individual presents themselves online also has consequences for how others will react to and interact with them which is common on social media in the form of reactions, comments,

and shares. Others' reactions to individuals' online self-presentation, such as harsh or negative feedback, can lead to cyberbullying [5]. The Victim Precipitation Model [43] argues that a victim's behaviour may (intentionally or unintentionally) elicit a reaction from a perpetrator resulting in victimisation. This perspective does not blame the victim but instead aims to identify behavioural factors that are associated with an increased risk of victimisation.

### Online self-presentation and cyberbullying

Cyberbullying is defined as bullying behaviour that occurs through online communication platforms and involves sending or posting harmful content about another or engaging in online social aggression [44,45]. Some of the features of the online environment which allow users greater control over their self-presentation also create a situation which can encourage abuse and bullying (e.g., distance from victims, the ability to remain anonymous: e.g., [46,47]). With an increase in digital technology use there has been a corresponding increase in online abuse and bullying [48,49]. Although prevalence studies have tended to focus on children and adolescents, Wang et al. [7] recently reported a prevalence rate of 15 % among a sample of 20,000 adults suggesting that the behaviour merits investigation in an adult sample. Jenaro et al. [6] argued that cyberbullying in adults is understudied which is problematic given its consequences for adults may be as severe as they are for adolescents, impacting upon psychological health and job satisfaction.

Online bullying has been associated with rumination and depression, loneliness, self-harm, and suicide [50–54]. The almost ubiquitous accessibility of online spaces mean that victims cannot physically leave the bullying situation in the same way they would be able to with offline bullying [55,56]. Given that individuals can re-repeatedly re-read negative/harmful messages, this can cause the individual to ruminate over the victimisation and lead to feelings of helplessness [57,58].

Cyberbullying victimization and perpetration have both been linked to both online self-presentation style. Perpetrators often do not present their authentic/true selves online [50,59,60]. A strategy of cyberbullies is to use multiple fake online identities [8] lowering their inhibitions and making them more likely to say/do things online that they would not do offline [45]. Individuals who appear extroverted online, by posting a large amount of content, are more likely to be cyberbullied and less likely to receive support [61]. The posting of negative content on social media by an individual increases not only the likelihood that they would experience cyberbullying victimisation [62] but that they will also be victim blamed [63,64].

Individuals high in perfectionism may employ bullying as a strategy to gain resources, attract positive social judgments, and achieve social status [65]. This suggests that perfectionism may be associated with bullying perpetration. In addition, perfectionism has been linked to adolescent bullying victimisation [66,67] and perfectionistic self-presentation and SPP is associated with bullying victimisation in adolescents [30]. By trying to please peers and achieve unrealistic perceived expectations individuals may leave make themselves easy targets for bullies and become vulnerable (Social disconnection model: Hewitt et al. [68]). To our knowledge no study has investigated the role perfectionism plays in specifically online bullying (perpetration and victimisation). It is unclear whether the same motivations that drive some individuals to harm others offline, and exposes others to potential harm offline, exist in online environments. It stands to reason that if an individual was motivated by perfectionism to exploit the features of the online environment to maximize their own self-presentation, they may also be motivated to exhibit maladaptive patterns of behaviour towards other to further increase their online standing. Given the rapid increases in cyberbullying and online abuse [69], this area requires further investigation.

## The current study

The current study examined associations between general population adults' perfectionism (SOP, SPP, OOP) and online self-presentation (idealised self, multiple selves and consistent self). This is based on findings that perfectionism is related to offline self-presentation: individuals high in SOP have unrealistic standards for themselves while those high in SPP believe others have high standards for them [30]. We therefore predict:

**H1.** *Individuals higher in SOP and SPP will be more likely to use an idealised online self-presentation style.*

Online self-presentation style has also been linked indirectly linked to cyberbullying behaviours. Using an ingenuine online self-presentation style is known to correlate with cyberbullying behaviours, and cyberbullies are known to use multiple online personas as a bullying strategy [8]. Individuals who try to present an ideal version of themselves to meet perceived peer expectations may place themselves in a vulnerable position and attract bullying due to a desire to perceived peer expectations [68]. We predict:

**H2a.** *Individuals using ideal or multiple self-presentation will be more like to be a perpetrator of cyberbullying.*

**H2b.** *Individuals using ideal self-presentation will be more like to be a victim of cyberbullying.*

We also aimed to examine the relationships between these two factors: cyberbullying experiences (victimisation and perpetration) and undesirable psychological outcomes (rumination and depressive symptoms). A relationship between cyberbullying behaviour and negative mental health outcomes such as depression and rumination has been established (e.g., [52]) we therefore also predict:

**H3.** *Individuals using ideal or multiple self-presentation, and those involved in cyberbullying (as a victim or perpetrator), will have higher levels of depression and rumination.*

## Methods

### Design

The study was cross-sectional and correlational. Self-report questionnaires measured demographics, online self-presentation (ideal self, multiple selves and consistent self), involvement in cyberbullying (as a victim or perpetrator), perfectionism (self-oriented, socially prescribed and other-oriented) and mental health variables (rumination and depressive symptoms).

### Participants

Participants were recruited opportunistically using social media platforms. This form of convenience sampling is useful when research participation is voluntary, the researchers require participants to opt in or random sampling is not possible [70]. Other research in the field has used these sampling methods [19,71] and there is an increasing body of support for this recruitment technique [72]. General population adults ( $n = 139$ ) were recruited for the study which was deemed an appropriate sample size prior to the commencement of data collection based on previous research in the field (e.g. [52,62,73]). However, it should be noted that research that is conducted on convenience samples can only be generalized to the population that was conveniently accessible, from which the sample was drawn [74]. We discuss this further within the limitations section.

In our sample, 73 % of participants were female and age ranged from 17 to 70 years (Mean = 33.32 SD = 13.76). 91.2 % of the sample were from the UK; 5.1 % of the sample were living in other countries such as

Ireland and Poland; 3.6 % did not provide this information. Participants were asked to state the social media platform they used most frequently; 51.1 % of participants reported Facebook, 25.5 % reported Instagram, 10.9 % reported Twitter, 5.8 % reported Snapchat, 2.2 % reported WhatsApp, and 1.5 % reported TikTok as their most commonly used form of social media.

### Measures

#### Online self-presentation

The Presentation of Online Self Scale (POSS; [17]) was used to assess how an individual presents themselves in online environments. This is a widely used scale in the measurement of online self-presentation. The reliability and validity of POSS has been previously supported (e.g. [71, 73,75]). The 22-item measures the Ideal Self, Multiple Selves, Consistent Self and Online Presentation Preference. An example item from the Ideal Self Scale ( $\alpha = 0.83$ ) is; 'The way I present myself online differs significantly from real life'. An example from the 'Multiple Selves' subscale is ( $\alpha = 0.85$ ); 'I regularly use different personas online'. The 'Consistent Self' sub-scale comprises items such as ( $\alpha = 0.69$ ); 'I am always my true self online'. An example from the 'Online Presentation Preference' subscale is; 'I find it easier to communicate in face-to-face contexts'. It should be noted though that we did not find high reliability of this sub-scale ( $\alpha = 0.57$ ) and therefore excluded it from analysis. Responses are measured on a 5-point Likert scale (1 = *Strongly disagree*; 2 = *Disagree*; 3 = *Neither Agree nor Disagree*; 4 = *Agree*; 5 = *Strongly Agree*). Mean scores were calculated for the Ideal Self, the Multiple Selves and the Consistent Self sub-scales. Higher scores indicated higher levels of online self-presentation style.

#### Cyberbullying

The European Cyberbullying Intervention Project Questionnaire (ECIPQ; [76]) was used to measure involvement in cyberbullying over the last two months. Exploratory and confirmatory factor analyses supported factor structure and the scale has now been administered internationally (e.g. [77,78]). As to the reliability of the instrument, the indices obtained exhibited a suitable overall reliability and also adequate reliability for each of the two factors. The questionnaire comprises 22 questions and contains two sub-scales. One sub-scale relates to involvement in cyberbullying as the victim (11-items). Example items include 'Someone said nasty things about me to others either online or through direct messages' and 'Someone spread rumours about me on the internet'. The second sub-scale relates to cyberbullying as the perpetrator. These 11 items are the same as the cyberbullying victim items but are worded to measure involvement in bullying behaviour (e.g. 'I spread rumours about someone on the internet'). Responses were measured on a 5-point Likert scale (1 = *Never*; 2 = *Once or Twice*; 3 = *Once a Month*; 4 = *Once a Week*; 5 = *Everyday*). Mean scores were calculated for involvement in cyber-victimisation ( $\alpha = 0.81$ ) and cyber-aggression ( $\alpha = 0.68$ ). Higher scores represented more involvement in cyber-victimisation and/or cyber-aggression.

#### Perfectionism

Perfectionism was measured using the Multidimensional Perfectionism Scale [28]. This is a 45-item questionnaire which contains three sub-scales (self-oriented perfectionism, socially prescribed perfectionism and other-oriented perfectionism). This scale was selected as it has a unique focus on other-oriented perfectionism and socially prescribed perfectionism which may be important in online self-presentation. Evidence supports the reliability and validity of the measure [79,67].

Self-oriented perfectionism is measured using items such as 'One of my goals is to be perfect in everything I do'. Socially prescribed perfectionism is assessed with items such as 'The people around me expect me to succeed at everything I do'. Other-oriented perfectionism is measured with items such as 'I can't be bothered with people who won't

strive to better themselves'. Scores are measured on 7-point Likert scale ranging from 1 = *Strongly Disagree* to 7 = *Strongly Agree*. Mean scores were calculated for each type of perfectionism with higher scores suggesting higher levels of perfectionism. All scales showed good reliability (self-oriented  $\alpha = 0.88$ ; socially prescribed  $\alpha = 0.82$ ; other-oriented  $\alpha = 0.69$ ).

**Rumination**

Ruminative tendencies were assessed using the Response Style Questionnaire [80]. The measure comprises 22 items asking participants to reflect on how often they think negatively. Example items include 'Think about a recent situation, wishing it had gone better' and 'think about how sad you feel'. Responses are measured on a 4-point Likert scale (1 = *Almost Never*; 2 = *Sometimes*; 3 = *Often*; 4 = *Almost Always*) and a mean score was calculated for each participant. Higher scores reflected more rumination. Evidence has supported psychometric properties of the scale (e.g. [81,82]) and we also found good reliability ( $\alpha = 0.96$ ).

**Depressive symptoms**

The Centre for Epidemiologic Studies Depression Scale (CES-D: [83]) was used to measure depressive symptoms given. This is a well-established and frequently used scale [84,85]. The scale involves 22-items which ask participants to reflect on depressive symptoms over the past week. For example, 'I could not get going' and 'I felt that I could not shake off the blues even with help from my family or friends'. Participants were asked to respond on a 4-point Likert scale where 1 = *Rarely or none of the time (less than 1 day)*; 2 = *Some or a little of the time (1–2 days)*; 3 = *Occasionally or a moderate amount of time (3–4 days)*; 4 = *Most or all of the time (5–7 days)*. A mean score was calculated for each participant. Higher scores represented a higher level of depressive symptoms. Cronbach's alpha suggested good reliability of the scale ( $\alpha = 0.93$ ).

**Procedure**

Ethical approval was obtained before the commencement of data collection. Data was collected using an online questionnaire hosted in Questionpro. The study was promoted on social media platforms (e.g., Twitter; Facebook). This recruitment strategy has been found to be time and resource efficient [86,87]. Participants were also asked to share study information with friends and family to facilitate a snowballing recruitment technique [88]. The questionnaire took approximately 10–15 min to complete. Upon completion of the questionnaire, all participants received a debrief sheet with further information about the study and researchers' contact details.

**Data analysis**

Correlational analysis was conducted to explore relationships between study variables. Hierarchical multiple regression analysis was then carried out in order to examine predictive validity of 1) perfectionism on online self-presentation styles; 2) online self-presentation styles on cyberbullying behaviour (as victim or perpetrator) and 3) online self-presentation styles, cyberbullying and psychological outcomes. All assumptions of regression were met.

**Results**

**Descriptive statistics**

Means, standard deviations and bivariate correlation coefficients for the scales used in the study are presented in Table 1. SOP was positively correlated with idealised online self-presentation and multiple selves online self-presentation. Whereas SPP was positively correlated with consistent online self-presentation but negatively correlated with both idealised online self-presentation and multiple selves' online presentation. Correlations also suggested that idealised online self-presentation and multiple selves' online presentation were negatively related to rumination and depressive symptoms. However, cyberbullying victimisation and perpetration were both positively related to rumination and depressive symptoms. Interestingly, higher scores in idealised online self-presentation and multiple selves' online presentation were related to lower scores in cyberbullying victimisation and perpetration. However, higher scores in consistent online self-presentation were related to higher scores in cyberbullying victimisation.

**Perfectionism as a predictor of online self-presentation styles**

Hierarchical multiple regression was used to examine the predictive role of perfectionism (SOP, SPP, OOP) on online self-presentation styles (idealised self, multiple selves and consistent self). Three regressions were conducted to examine each online self-presentation style. For each regression, age and gender were added at Step 1 to control for these variables. SOP, SPP and OOP were then added at Step 2. Results are presented in Table 2.

**Idealised self-presentation**

At Step 1, the model accounted for a 16 % of the variance ( $p < 0.001$ ). At this Step, age ( $\beta = 0.41 p < 0.001$ ) was an independent predictor of idealised self-presentation. The addition of perfectionism variables resulted in an increase of the variance explained to 27 % ( $R^2_{\text{Change}} = 0.10 p < 0.001$ ). At this Step, age ( $\beta = 0.38 p < 0.001$ ), SOP ( $\beta = 0.33 p < 0.001$ ) and SPP ( $\beta = -0.23 p = 0.009$ ) were significant

**Table 1**  
Means and standard deviations, bivariate correlations of measured variables.

	Gender	Age	IdealS	MultiS	ConstS	CyberV	CyberP	SOP	SPP	OOP	Rum	Dep	Mean	SD
Gender		0.19*	0.01	-0.05	-0.05	-0.04	0.08	-0.06	-0.16	0.07	-0.08	-0.14		
Age			0.40**	0.29**	-0.07	-0.43**	-0.36**	-0.03	-0.18*	-0.02	-0.52**	-0.43**	33.32	13.76
IdealS				0.67**	0.03	-0.28**	-0.37**	0.18*	-0.21*	-0.04	-0.39**	-0.30**	3.21	0.71
MultiS					-0.16	-0.33**	-0.41**	0.23*	-0.21*	-0.06	-0.28**	-0.25**	4.07	0.79
ConstS						0.20*	0.04	0.08	0.20*	0.05	0.10	0.13	2.59	0.73
CyberV							0.47**	0.06	0.25**	0.001	0.36**	0.31**	1.47	0.38
CyberP								-0.17*	0.10	-0.02	0.43**	0.36**	1.18	0.19
SOP									0.37**	0.43**	0.05	-0.06	4.54	1.08
SPP										0.37**	0.26**	0.18*	3.67	0.90
OOP											-0.001	-0.08	3.49	0.73
Rum												0.63**	2.12	0.67
Dep													2.02	0.62

\*\* $p < 0.001$ , \* $p < 0.05$ . IdealS = Online ideal self-presentation; MultiS = Online multiple self-presentation; ConstS = Online consistent self-presentation; CyberV = Cyberbullying victim; CyberP = Cyberbullying perpetrator; SOP = Self oriented perfectionism; SPP = Socially prescribed perfectionism; OOP = Other oriented perfectionism; Rum = Rumination; Dep = Depressive symptoms.

**Table 2**  
Perfectionism traits as predictors of online self-presentation.

	Idealised self-presentation		Multiple selves presentation		Consistent self-presentation	
	$\beta$	<i>p</i>	$\beta$	<i>p</i>	$\beta$	<i>p</i>
<b>Step 1</b>						
Age	0.41	<0.001	0.31	<0.001	-0.06	0.47
Gender	-0.07	0.41	-0.11	0.19	-0.04	0.66
<b>Step 2</b>						
Age	0.38	<0.001	0.27	<0.001	-0.03	0.72
Gender	0.07	0.39	-0.12	0.14	-0.01	0.91
SOP	0.33	<0.001	0.39	<0.001	0.01	0.90
SPP	-0.23	0.01	-0.28	0.002	0.20	0.05
OOP	0.08	0.14	-0.11	0.20	-0.03	0.76

SOP = Self oriented perfectionism; SPP = Socially prescribed perfectionism; OOP = Other oriented perfectionism.

predictors of idealised online self-presentation style. Older participants and those higher on SOP were more likely to use an idealised online self-presentation style while those high on SPP were less likely to use this style.

*Multiple selves presentation*

The model explained 9 % of the variance at Step 1 (*p* = 0.001) with age being the only significant predictor ( $\beta$  = 0.31 *p* < 0.001). At Step 2, the accounted variance increased to 24 % (*p* < 0.001). At this Step, age ( $\beta$  = 0.26 *p* < 0.001), SOP ( $\beta$  = 0.39 *p* < 0.001) and SPP ( $\beta$  = -0.28 *p* = 0.002) were predictors of multiple selves online presentation. Similar to idealised online self-presentation, older age and higher levels of SOP increased the likelihood of using a multiple selves presentation style while higher levels of SPP made it less likely an individual would present in this way.

*Consistent self-presentation*

The model did not account for a significant proportion of the variance at either Step. There were no independent predictors of consistent online self-presentation. Perfectionism variables were therefore not predictive of individuals use of this type of online self-presentation.

*Online self-presentation as a predictor of cyberbullying*

Again, we conducted hierarchical multiple regression to determine the predictive validity of online self-presentation types on experiences of cyberbullying. Analyses were conducted to examine cyberbullying experiences as a victim and as the perpetrator. In both models, age and gender were added at Step 1 to control for these variables. Online self-presentation types were then added at Step 2. See Table 3 for results.

**Table 3**  
Online self-presentation types as predictors of cyberbullying.

	Cyberbullying victim		Cyberbullying perpetrator	
	$\beta$	<i>p</i>	$\beta$	<i>p</i>
<b>Step 1</b>				
Age	-0.22	0.01	-0.16	0.07
Gender	-0.03	0.69	0.09	0.32
<b>Step 2</b>				
Age	-0.17	0.03	-0.11	0.16
Gender	-0.04	0.65	0.07	0.37
IdealS	-0.12	0.26	-0.16	0.15
MultiS	-21	0.07	-0.29	0.01
ConstS	0.15	0.06	-0.01	0.92

IdealS = Online ideal self-presentation; MultiS = Online multiple self-presentation; ConstS = Online consistent self-presentation.

*Cyberbullying victim*

The model accounted for a small but significant proportion of the variance at Step 1 ( $R^2$  = 0.05 *p* = 0.035). Only age was an independent predictor ( $\beta$  = -0.22 *p* = 0.010). At Step 2, the explained variance increased to 17 % ( $R^2_{\text{Change}}$  = 0.12 *p* < 0.001). However, again at this Step, only age was a significant predictor ( $\beta$  = -0.17 *p* = 0.030). Younger participants were more likely to report cyberbullying victimisation. Online self-presentation types were not related to these experiences.

*Cyberbullying perpetrator*

At Step 1, the model was not significant ( $R^2$  = 0.03 *p* = 0.122). However, at Step 2, a significant proportion of the variance was explained ( $R^2$  = 0.19  $R^2_{\text{Change}}$  = 0.17 *p* < 0.001). Multiple selves online presentation was the only significant predictor ( $\beta$  = -0.29 *p* = 0.010). Participants who were less likely to present a multiple selves presentation online, were more likely to report experiences of cyberbullying perpetration.

*Online self-presentation, cyberbullying, and psychological outcomes*

Hierarchical multiple regression was conducted to determine whether online self-presentation types and cyberbullying experiences were predictive of rumination and/or depressive symptoms. As per the previous analysis, age and gender were added at Step 1 to control for these variables. At Step 2, online self-presentation types were added (idealised self, multiple selves and consistent self). At Step 3, cyberbullying experiences (as victim and perpetrator) were added. Results are shown in Table 4.

*Rumination*

The model accounted for a significant proportion of the variance at Step 1 ( $R^2$  = 0.27 *p* < 0.001). Only age was an independent predictor ( $\beta$  = -0.52 *p* < 0.001). The addition of self-presentation variables resulted in an increase of the variance explained to 31 % ( $R^2_{\text{Change}}$  = 0.05 *p* = 0.030). At this Step, age ( $\beta$  = -0.42 *p* < 0.001) and idealised online self-presentation ( $\beta$  = -0.23 *p* = 0.030). When cyberbullying variables were added at Step 3, the accounted variance increased to 36 %

**Table 4**  
Online self-presentation types and cyberbullying as predictors of psychological outcomes.

	Rumination		Depressive symptoms	
	$\beta$	<i>p</i>	$\beta$	<i>p</i>
<b>Step 1</b>				
Age	-0.52	<0.001	-0.42	<0.001
Gender	0.01	0.89	-0.05	0.48
<b>Step 2</b>				
Age	-0.42	<0.001	-0.35	<0.001
Gender	0.101	0.99	-0.07	0.42
IdealS	-0.23	0.03	-0.13	0.26
MultiS	0.004	0.97	-0.06	0.61
ConstS	.08	0.28	0.09	0.25
<b>Step 3</b>				
Age	-0.33	<0.001	-0.27	0.003
Gender	-0.03	0.68	-0.09	0.24
IdealS	-0.21	0.04	-0.11	0.31
MultiS	0.08	0.43	0.01	0.90
ConstS	0.08	0.29	0.09	0.26
CyberV	0.06	0.49	0.05	0.59
CyberP	0.23	0.01	0.21	0.02

IdealS = Online ideal self-presentation; MultiS = Online multiple self-presentation; ConstS = Online consistent self-presentation; CyberV = Cyberbullying victim; CyberP = Cyberbullying perpetrator.

( $R^2_{\text{Change}} = 0.05$   $p = 0.007$ ). The model showed that age ( $\beta = -0.33$   $p < 0.001$ ), idealised online self-presentation ( $\beta = -0.21$   $p = 0.040$ ) and cyberbullying perpetrator ( $\beta = 0.23$   $p = 0.010$ ) were predictor of rumination. Thus, younger participants and those who scored high on experience as a cyberbullying perpetrator were more likely to also score highly on rumination. However, those who presented an idealised online self-presentation were less likely to report rumination.

### Depressive symptoms

At Step 1, the model accounted for 19 % of the variance ( $p < 0.001$ ) with age being the only predictor ( $\beta = -0.42$   $p < 0.001$ ). Although the accounted variance raised to 22 % at Step 2, this was not significant ( $R^2_{\text{Change}} = 0.03$   $p = 0.144$ ). At this Step, only age was significant predictor ( $\beta = -0.35$   $p < 0.001$ ). The model at Step 3, was significant accounting for 26 % of the variance ( $R^2_{\text{Change}} = 0.04$   $p = 0.030$ ). Here, age was a significant predictor ( $\beta = -0.35$   $p < 0.001$ ) as well as cyberbullying perpetration ( $\beta = 0.21$   $p < 0.020$ ). Younger participants and those who report higher levels of cyberbullying perpetration were more likely to have reported depressive symptoms. Online self-presentation types were not related to depressive symptoms.

### Discussion

The study investigated associations between adults' perfectionism, online self-presentation, cyberbullying experiences, and psychological outcomes. Age and SOP were positive predictors of using an idealised and a multiple selves online presentation. However, SPP negatively predicted both these presentation types. Perfectionism was unrelated to consistent online self-presentation. The findings therefore partially support H<sub>1</sub>. We found that multiple selves, but not ideal selves, online presentation was a predictor of cyberbullying perpetration, partially supporting H<sub>2a</sub>. Online self-presentation types did not predict cyberbullying victimisation, meaning H<sub>2b</sub> was not supported. Finally, H<sub>3</sub> was partially supported given that cyberbullying perpetration was predictive of rumination and depressive symptoms. Further, idealised self-presentation was negatively related to rumination. No other relationship was significant here.

#### Perfectionism and online self-presentation

The study results showed that participants with higher levels of SOP were more likely to use idealised self-presentation and multiple selves presentation. Individuals high in SOP set unrealistic standards and expectations for themselves [28]. Previous research has found that in face-to-face interactions, perfectionists aim to self-present as perfect [29,30]. Our study extends this finding to an online context and identifies the specific perfectionism dimension related to the behaviour. Similar to offline interactions, individuals high in SOP aim to use the features of the online environment to their advantage to present as perfect and mask their own imperfections.

This perfectionism trait also predicted the use of multiple selves online presentation. It may be that having high standards for oneself encourages the individual to experiment with different identities online in order to develop a persona that they deem 'perfect', or that they wish to present different 'idealized' versions of themselves to different distinct audiences online. Further, using different versions of oneself may help the individual overcome any negative feelings associated with lack of perfection as they can easily switch identities or reassure themselves by thinking of the other identities they can present. Thus, presenting multiple selves online may not be an act of deception but instead a way to explore the self and try out different personas [34].

It should be noted that we also found SPP to be a negative predictor of both idealised self-presentation and multiple selves' presentation. Participants who believed that others had exceptionally high standards

for them [28] were less likely to use these presentation types. It may be that as those high in SPP desire the praise/reassurance of others [89], they do not want to use a false version of themselves online as they would then not be able to ascribe others' positive feedback to their authentic self. Another explanation may relate to the lack of confidence in being able to successfully present each version of the self to the standards that they believe others hold for them. Indeed, those high in SPP have been found to have low confidence [90]. Such a finding would suggest that such individuals were more likely to use a consistent online self-presentation however, no relationships between this and perfectionism traits were found.

Older participants were more likely to use both idealised and multiple selves online self-presentation. This suggests that older adults felt more of a need to present differently online or to present different versions of themselves. This is a novel finding and area for future research. This finding is also important given that online self-presentation research tends to focus on adolescents or young adults (e.g., [17,18,21,24]). Our study supports the need to examine the behaviour in adult samples.

Importantly, our findings support and extend research that has suggested that personal characteristics impact upon online self-presentation (e.g., [23–27]) and has identified the need to consider perfectionism in online self-presentation. They also expand related research into the hyperpersonal model of online communication [3,14] by highlighting the role of user perfectionism in the utilization of features of the online environment which allow individuals the greatest control over how others perceive them. There is a need for future research to further examine the role of SPP in online self-presentation, as well as the behavioural and psychological consequences in engaging in different self-presentation strategies.

#### Self-presentation and cyberbullying

In contrast to research which has suggested a relationship between online self-presentation types and cyberbullying [5], we found that online presentation was not a predictor of cyberbullying victimisation. Our findings refute the Victim Precipitation Model [43] which argues that an individual's behaviour may elicit a reaction from a perpetrator resulting in victimisation. We have found that this is not the case in an online context and when considering self-presentation type. Even individuals who attempt to accurately self-present online are more likely to share positive than negative content [91] so it may be the case that to observers (and potential bullies), individuals who try to present themselves in an ideal light are not as distinguishable online as they are offline.

It is important to note though that we did find a relationship between presentation type and cyberbullying perpetration. Although we did not support previous findings that perpetrators of cyberbullying may not present their real self online [50,59,60], our results showed that participants who were more likely to report being a perpetrator of cyberbullying were less likely to present a multiple selves presentation online. Such individuals may dislike others who present in this way. They may act aggressively towards certain versions of the individual's self and condone these actions by attributing the behaviour to this type of self-presentation. Such a finding contributes to existing literature given that limited research has addressed associations between online self-presentation and cyberbullying and this research tends to focus on an adolescent sample [61,62].

#### Psychological outcomes

Our study identified a predictive role of idealised online self-presentation on decreased rumination. Although this is inconsistent with some previous work (e.g. [20,34–36]), our finding supports Kim and Lee [38] who argued that happiness was positively related to presenting an ideal self-online. Utilizing an idealised self-presentation style

may allow individuals to focus on the positive aspects of themselves, hiding their faults and increasing their feelings of self-worth.

In relation to cyberbullying, we found that those who scored high on experiences as a cyberbullying perpetrator were more likely to have higher rumination and depressive symptoms scores, lending support to previous findings that engaging in cyber-aggression has a negative impact upon psychological outcomes [57]. The features of the online environment may explain the specific association with rumination. The permanent nature of online content means that perpetrators as well as victims face continued exposure to the harmful messages they have posted about others (e.g., [58]). Being faced with constant reminders of their aggressive acts may force perpetrators to ruminate over the impact of their actions and heighten feelings of depression.

In contrast to previous research [52–54], we did not find relationships between cyberbullying victimisation, rumination, and depression. It should be noted though that most cyberbullying research has been conducted with younger samples. Although Jenaro et al. [6] argued that cyberbullying victimisation in adults may also have severe consequences, our findings suggest that this does not manifest as rumination or depressive symptoms. More research is therefore needed to further examine the impact of cyberbullying victimisation among adults.

#### Limitations and future research

There are possible limitations of the study which should be acknowledged. For example, the use of self-report questionnaires. Examining all study variables using a common method may increase the likelihood of measurement bias and socially desirable responding [92]. To minimize this, we used procedural remedies proposed by Podsakoff et al. [93]. We found that participants used the full range of the response options (some participants reported high scores on scales, while others reported low scores) which suggested validity of the results. Another possible limitation relates to the cross-sectional design of the study. Our study has identified important relationships between study variables which now merit longitudinal investigation. Finally, it should be noted that 73 % of participants were female. Research suggests that gender differences exist in relation to online self-presentation [94], cyberbullying [7], and depressive symptoms [95]. This suggests that the findings may be more generalisable within a female population.

Additionally, while the current study took a broad view of the online environment, recent research into the hyperpersonal model has suggested that the impact of some of the traditionally identified features of online environments may be more or less relevant on distinct digital platforms [96]. For example, on some platforms, users may have less control over the reactions of others which represent behavioural residue (Warranting theory: [97]) meaning impressions of users are dependent on third party content rather than self-authored content (e.g., reactions to Tweets: [98]). Platforms such as Instagram and Tik Tok are primarily photo- and video-based respectively, which potentially afford users less control than the text-only communications on which the hyperpersonal model was based [99,100]. Future research should investigate the differences in self-presentation options afforded to users on different digital platforms, and the potential consequences of these on behavioural and psychological outcomes.

It should also be noted that due to sampling techniques, the results are not generalisable out with the study sample. However, simply because a particular method does not allow for generalizing beyond the sample does not mean that the resulting data are not useful [70]. Our findings are intended to explore and lay the foundation for future research on perfectionism, online behaviours (self-presentation and cyberbullying) and mental health. This type of research acts as an exploratory study which has identified key issues that now need to be supplemented with ongoing research [101]. There is a need now for research to examine the study variables in a larger scale, longitudinal study.

## Conclusion

The study examined relationships between adults' perfectionism, online self-presentation, cyberbullying experiences, and psychological outcomes. We have extended the existing literature around the impact of personal characteristics upon online self-presentation by identifying a role of perfectionism (SOP and SPP) in idealised self and multiple selves online presentation. Further, we found that although online self-presentation type was not related to cyberbullying victimisation, multiple selves presentation type was related to cyberbullying perpetrator engagement. Finally, the study demonstrated that using an idealised self-presentation type was related to reduced rumination scores. However, cyberbullying perpetration was positively related to rumination and depressive symptoms. The findings provide insight into adults' online behaviour and outcomes of this. This contributes to the understanding of the psychology processes within online interactions.

## CRedit authorship contribution statement

**Claire Wilson:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Data curation. **Catherine V. Talbot:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Graham G. Scott:** Writing – review & editing, Writing – original draft, Conceptualization.

## Declaration of competing interest

The authors declare that they have no conflict of interest.

## Data availability

Data will be made available on request.

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