

# Intimidatory Assertive Self-presentation in Selfie Posting is Greater in Females than Males

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The current study examined whether assertive self-presentation strategies, demonstrated in 'real-world' situations, were related to selfie and non-selfie postings on social media. It examined whether such relationships were associated with differential reward motivations, and whether these relationships were the same for females and males. 118 participants (17-66 years), took part using an online survey. Assertive self-presentational strategies were associated with selfie, but not non-selfie, posting for females, but not males. Females high in intimidation as a self-presentation strategy were most likely to post selfies on social media sites.

For males, there was a negative relationship between selfie posting and punishment avoidance. Self-presentational strategies did not predict posting of non-selfies. This suggests that aggressive personality factors, such as anti-social personality or narcissism, both of which have been associated with selfie posting, may drive some selfie-posting behaviour for females, a suggestion that relates to recent studies of selfie behaviour in young females.

*Keywords: selfie posting; social media; assertive self-presentation; reward sensitivity; intimidation behaviour; female aggression*

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**S**ocial media networks are online websites and/or applications allowing the sharing and creation of content, as well as offering users the opportunity to communicate with others. Increasingly, these sites are integrated into people's lives, influencing how they communicate and express themselves. One form of such expression is the posting of images to these sites, notably selfies (Diefenbach & Christoforakos, 2017; Wang et al., 2017). The drivers of social media use, including posting images both of the self (selfies) and others or objects (nonselfies), may relate to a wide range of factors. Personality has been shown to impact this behaviour (Balakrishnan & Griffiths, 2018; Fox & Rooney, 2015; Moon et al., 2016; Reed et al., 2018; Sorokowski et al., 2016). However, social goals including the generation of a self-image have received less investigation than personality, in this context (Balakrishnan & Griffiths, 2018; Zhao

et al., 2008), as has the possible influence of gender (Chua & Chang, 2016; Reed & Saunders, 2020). In particular, the potential impact of gender on associations between social goals and social media use has received little or no study, which is the foci of the current investigation.

Social media has altered the ways in which it is possible to construct a self-identity (Bozkurt & Tu, 2016; Zhao et al., 2008). It is no longer difficult for individuals to invent differences from who they are in reality, because this construction is no longer entirely dependent on impression management by physical surroundings, and the actual person, themselves. Social media can help to create a desired self-image that cannot be established in 'real world' interactions, and which may be different from, or an exaggeration of, the actual self (Zhao et al., 2008). It has been suggested that such online behaviour may be particularly important for females, as it may allow them to express roles and manage impressions of the self in ways that may deviate from societally-conditioned views of gender-specific behaviours (Park et al., 2016; Reed & Saunders, 2020).

Impression management is the controlling of others' impressions of one's self, and is a broad form of self-presentation, as it can include the controlling of one's own image by a third party (Leary & Kowalski, 1990). It is closely related to concepts of identity as something created as a product of social interactions, rather than something which is innate, of which there are many variants (e.g., Butler, 1997a; 1997b; Goffman, 1959). Goffman (1959) proposed that individuals establish a social identity, and those people around them help to uphold this image. This view suggests that self-presentation is a communication mechanism through which individuals can establish such a social identity. Butler's (1997a; 1997b) performative identity views are focused on the creation of gender, and hypothesise that there is no 'foundational identity' comprising physical or biological sex from which social gender is developed, but that gender identity is generated through a person's interactions with a social world and its assumptions. It is not the aim, here, to distinguish between these views, but to highlight that creative identity views may be important in understanding the way self-presentation may differ in the real world and digital worlds.

Self-presentation impacts what others perceive of that individual, and serves to manipulate the impressions that others have of the self. Self-presentation tactics are the

specific techniques or methods used to construct these impressions or identities (Kassin et al., 2008; Lee et al., 1999). In particular, strategies can be assertive or defensive (Lee et al., 1999): assertive strategies are linked to the positive control of self-image, as might occur on social media (Chua & Chang, 2016; Zhao et al., 2008); whereas defensive strategies occur when the desired identity is threatened, and serve to prevent this threat (Lee et al., 1999). Such self-presentational tactics in ‘real world’ situations have been measured (Lee et al., 1999), and related to numerous behaviours (Fletcher & Spencer, 1984; Laghi et al., 2015), but self-presentational tactics have not been explored in detail for social media uses, like selfie posting. Social media provides an ideal domain for the expression of such tactics, especially assertive tactics, as it allows the presentation of oneself to an audience that is reliant on how or what one posts (Chua & Chang, 2016; Fox & Rooney, 2015).

Motivation for impression management has been suggested to stem from the motivation for reward (Herman et al., 2015; Leary & Kowalski, 1990). As such, approach-motivation and reward-seeking has been proposed to underpin social goals (Foster et al., 2009), as well as social media behaviours (Foster & Trimm, 2008). Individuals are thought to be either high on behavioural approach (BAS), or on behavioural inhibition (BIS), tendencies. Those who are high on approach (BAS) will be motivated to seek out reward, while those high on inhibition (BIS) are motivated by the avoidance of punishment (Carver & White, 1994). It might be that those posting selfies are actively (assertively) developing an online identity (Chua & Chang, 2016; Fox & Rooney, 2015), as they search for social approval and reward (or vice versa), and may, thus, be motivated by the BAS system, as well as exhibiting lower levels of BIS. Therefore, this study aims to explore whether the potential reason for selfie posting is a behavioural approach motivation, and if higher levels of BAS may potentially relate to assertive self-presentation strategies.

Finally, an additional area that has not received strong attention in this context are gender differences in social media behaviour in relation to self-presentation, and its potential relationship to reward motivations. Both self-presentation (Lee et al., 1999), and reward sensitivities in terms of BAS and BIS (Carver & White, 1994), have been noted to show gender differences, so this aspect of the participants’ characteristics would seem

sensible to assess. However, given that social media allows aspects of personality to be developed that are not usually seen in ‘real world’ interactions (Zhao et al., 2008), it may be that ‘real world’ gender differences are not repeated in virtual contexts. In fact, several studies have suggested that selfie posting is sometimes an aggressive/assertive behaviour in females (Chua & Chang, 2016), and sometimes related to less aggressive and more defensive aspects of personality in males (Sorokowski et al., 2016). This may be a prediction that would derive from performative theories of identity, that suggest such relationships between behaviours and gender are not set, but will vary according to context (Butler, 1997a; Goffman, 1959).

Given the above, the current study examined whether assertive self-presentation strategies, demonstrated in ‘real world’ situations, showed any relationship with selfie and non-selfie postings on social media. It also examined whether any such relationship would be associated with differential reward motivations, as measured by BAS and BIS, and also whether these relationships would be the same for females and males.

## **METHODS**

### **Participants**

One hundred and fifty participants volunteered (86 females, 64 males; mean age = 27.45 years,  $SD = \pm 12.73$ ). Participants were recruited via advertisements on social media and e-mail. The advertisement read: “*We are conducting research into the relationships between social media behaviour and personality. You will be asked to complete an online questionnaire. Additionally, we will ask for some background information including your age and gender. If you would like to receive further information, please contact THE RESEARCHER.*”. If people responded they were sent a full information sheet and consent form, and were then sent the link to the online survey if they consented. They were asked to complete an online questionnaire, and received no payment or credit for their participation. Ethical approval for the study was given through the Ethics Committee of the University Psychology Department.

Participants were asked how many hours they spent online during an average day: 38% reported that they spent 1-3 hours; 37% spent 4-7 hours/day, and 24% spent over 7 hours/day. Participants were asked what they primarily used the internet for: 44%

reported social media; 22% reported entertainment; 14% education; 10% shopping/banking; 8% gaming; and 2% pornography.

## Materials

*Assertive Self-Presentation Tactics Scale* (ASPT; Lee et al., 1999) consists of 38-items measuring self-presentation in real-life interactions (i.e., offline). Participants respond on a 9-point scale (1 = very infrequently; 9 = very frequently). The tactics measured are: ingratiation (actions performed to get others to like the actor in order to gain advantage); intimidation (actions with an intent to project a powerful and dangerous personality to induce fear); supplication (projection of weak and dependent traits to solicit help); entitlement (claims of responsibility/credit for actions/achievements); enhancement (persuading others that outcomes of behaviour are more positive than originally believed); basking (associating the self with others who are perceived positively); blasting (intended to produce negative evaluations of others); exemplification (presenting the actor as morally worthy and/or having integrity). The ASPT subscale has an internal reliability in this sample of (Cronbach  $\alpha$ ) 0.91.

*Behavioral Inhibition System/Behavioral Activation System scale* (BIS/BAS; Carver & White, 1994) measures approach (sensitivity to reward) and avoidance (sensitivity to punishment) behaviors. It is a 24-item measure, including 7 BIS items, 13 BAS items, and 4 filler items, that participants respond how true each statement is based on a four-point scale (i.e., from 1 = *very true of me* to 4 = *very false for me*). The BIS had an internal reliability (Cronbach  $\alpha$ ) of .74, and the BAS had internal reliability of  $\alpha = .82$ , for this sample.

*Social media selfie posting:* participants were asked how many selfies they had posted on social media in the previous month.

## Procedure

Participants were recruited either via an advertisement on social media or e-mail, and followed a web link to complete the questionnaires, as well as indicate age and gender, online via Qualtrics.

## RESULTS

The mean number of selfies posted by the sample during the last month was 3.41 ( $\pm$  6.18; range: 0 – 40), and the mean number of non-selfies posted during the last month was 8.43 ( $\pm$  12.99; range: 0 – 100).

Table1

*Means (standard deviations) for assertive self-presentation, BAS, BIS, and their Pearson correlation coefficients with the numbers of selfies and non-selfies posted during the last month.*

		BAS	BIS	Selfies	Non-selfies
Assertive	137.19 $\pm$ 43.90	.215**	.145	.304***	.223**
BAS	40.47 $\pm$ 5.00		-.110	.030	.146
BIS	22.13 $\pm$ 3.97			-.085	-.130

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Table1 shows the means and standard deviations for assertive self-presentation, BAS and BIS measures, and their Pearson correlation coefficients with the numbers of selfies and non-selfies posted during the last month. Assertive self-presentation correlated positively with the number of selfies and non-selfies posted, as well as with BAS.

To explore the relationship between the potential predictors (assertive self-presentation, BAS, and BIS) and number of selfies posted in the past month, a multiple regression was conducted. This revealed a significant model,  $R^2 = .10$ ,  $F(3,146) = 5.16$ ,  $p = .002$ , with a significant positive relationship between assertive self-presentation and selfie posting ( $\beta = .043$ ,  $t = 3.77$ ,  $p < .001$ ), but neither BAS ( $\beta = -.051$ ,  $t < 1$ ,  $p > .60$ ), or BIS ( $\beta = -.070$ ,  $t < 1$ ,  $p > .50$ ), predicted selfie posting, both  $ps > .30$ . The regression model using the same predictor variables and non-selfie posting as the outcome was also significant,  $R^2 = .07$ ,  $F(3,146) = 3.55$ ,  $p = .016$ , with a significant positive relationship between assertive self-presentation and selfie posting ( $\beta = .056$ ,  $t = 2.29$ ,  $p = .023$ ), but neither BAS ( $\beta = .247$ ,  $t = 1.16$ ,  $p = .248$ ), or BIS ( $\beta = -.303$ ,  $t = 1.14$ ,  $p = .256$ ), predicted non-selfie posting.

Table 2

*Means (standard deviations) for number of selfies and non-selfies posted in last month, assertive presentation, BAS, and BIS scores for females and males, along with the t-test results and effect sizes*

	Female	Male	t(116)	p	d
Selfies	4.62±7.29	1.78±3.72	2.84	.005	.56
Non-selfies	10.20±15.21	6.06±8.80	1.95	.054	.51
Assertive	138.79±48.68	136.56±37.46	.307	.760	.05
BAS	39.85±5.18	41.31±4.73	1.79	.148	.31
BIS	23.59±3.35	20.16±3.97	5.79	.001	.94

Table 2 shows the means and standard deviations for number of selfies and non-selfies posted in the last month, assertive presentation, BAS, and BIS scores for female and male participants, as well as the t-test results and effect sizes. Female participants posted higher numbers of selfies and non-selfies on social media than males. Female participants scored higher on BIS than male participants. Although male participants scored higher for BAS than female participants, this difference was not statistically significant, and there was no difference for assertive self-presentation.

Correlations between assertive self-presentation, BIS, and BAS, were calculated for female and male participants, separately. For females, there was no correlation between assertive self-presentation and BAS,  $r = .174$ ,  $p = .110$ ; whereas for males, there was a significant positive correlation between assertive self-presentation and BAS,  $r = .318$ ,  $p = .010$ ; this difference was not significant,  $z = .91$ ,  $p = .181$ . For females, there was no correlation between assertive self-presentation and BIS,  $r = -.035$ ,  $p = .749$ ; whereas for males, there was a significant negative between assertive self-presentation and  $r = -.394$ ,  $p = .001$ ; this difference was significant,  $z = 2.26$ ,  $p = .023$ . For females, there was no correlation between BAS and BIS,  $r = .174$ ,  $p = .110$ ; and for males there was no correlation between BAS and BIS,  $r = .005$ ,  $p = .968$ ; this difference was not significant,  $z = .26$ ,  $p > .30$ .

As there were differences between females and males in these scores, and also for the relationships between these scores, it was thought important to analyse the nature of these associations for the two genders, separately, in order to explore any gender

differences. To this end, separate regressions were conducted for female and male participants to explore the relationships between the potential predictors (i.e., assertive self-presentation, BAS and BIS) and the numbers of selfie and non-selfie postings in the last month. For female participants, a significant regression model was observed for selfie postings in the past month,  $R^2 = .11$ ,  $F(3,82) = 3.44$ ,  $p = .02$ . A significant positive relationship was found between assertive self-presentation and selfie posting ( $\beta = .046$ ,  $t = 2.91$ ,  $p = .005$ ), but neither BAS, nor BIS, predicted selfie posting (both  $ps > .20$ ). In contrast, these same three variables did not predict non-selfie posting in the last month for female participants,  $R^2 = .06$ ,  $F(3,82) = 1.65$ ,  $p = .19$ .

For male participants, assertive self-presentation, BAS and BIS predicted selfie posting in the past month,  $R^2 = .28$ ,  $F(3,60) = 7.83$ ,  $p < .001$ , with a significant negative relationship found between BIS and selfie posting ( $\beta = -.349$ ,  $t = 3.03$ ,  $p = .004$ ), and BAS and selfie-posting ( $\beta = .220$ ,  $t = 2.35$ ,  $p = .022$ ), but assertive self-presentation was not related to selfie posting ( $p > .30$ ). These same three variables also predicted non-selfie posting in male participants,  $R^2 = .324$ ,  $F(3,60) = 9.56$ ,  $p < .001$ . A significant negative relationship was found for BIS and non-selfie posting ( $\beta = -1.051$ ,  $t = 3.99$ ,  $p < .001$ ), and a positive relationship with BAS and non-selfie posting ( $\beta = .569$ ,  $t = 2.65$ ,  $p = .010$ ), but not between assertive self-presentation and non-selfie posting,  $p > .80$ .

Figure 1 shows the mean numbers of selfies and non-selfies posted during the last month as a function of low (i.e., one *SD* below the sample  $M$ ), average (i.e., the sample  $M$ ), and high (i.e., one *SD* above the sample  $M$ ), scores on assertive self-presentation, BAS, and BIS, for female and male participants.



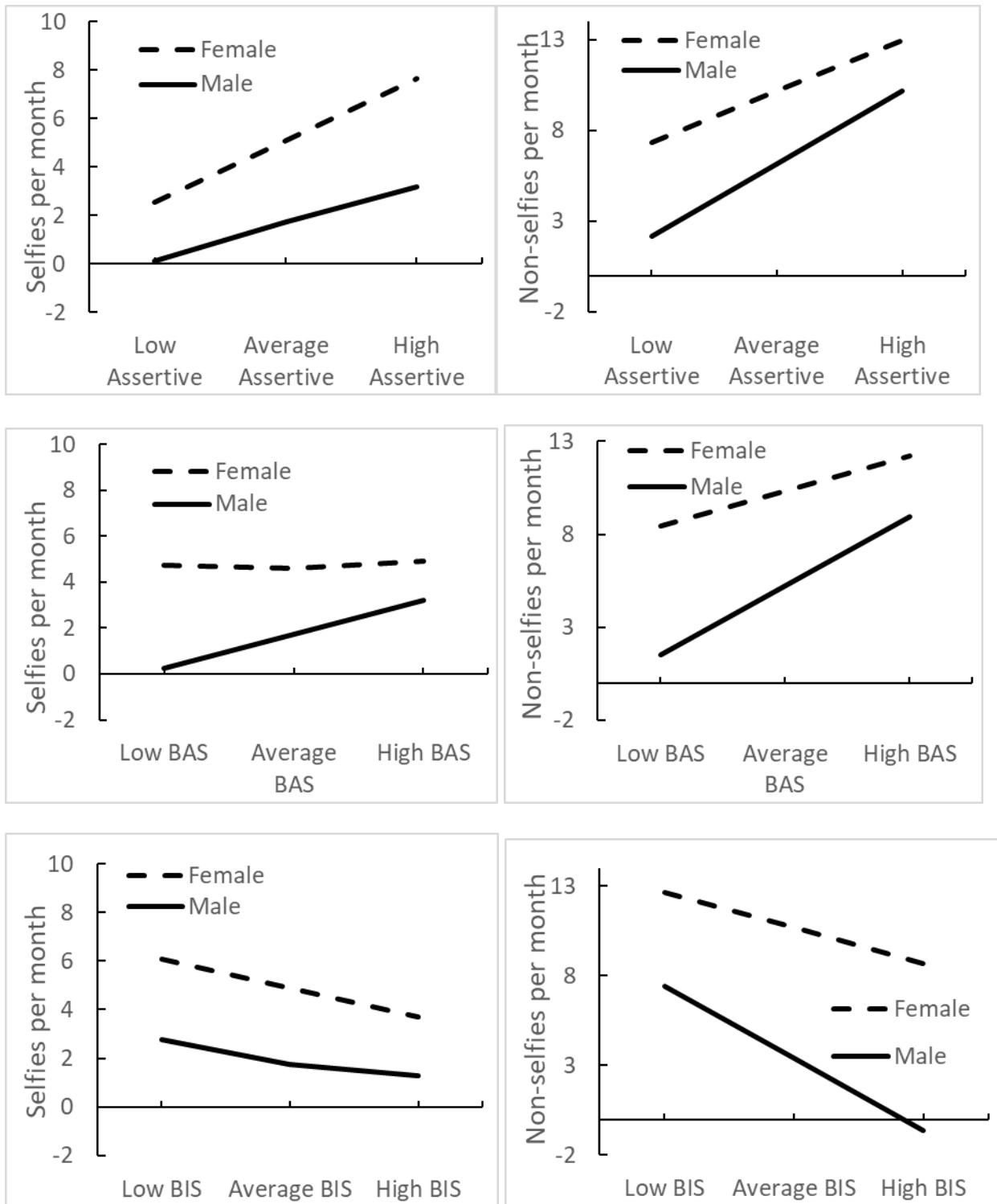


Figure 1: Mean selfies (left column) and non-selfies (right column) as a function of low (one standard deviation below the sample mean), average (sample mean), and high (one standard deviation above the sample mean) scores on assertive self-presentation (top row), BAS (middle row), and BIS (bottom row), for females and males.

As a significant relationship was found for female participants between assertive self-presentation and selfie posting over the last month, the assertive self-presentation measure was explored in further detail (i.e., assertive self-presentation sub-scales: ingratiation, intimidation, supplication, entitlement, enhancement, blasting, and exemplification) via multiple regression with selfie posting as the outcome variable and the sub-subscales as predictors. This revealed a significant model for female participants,  $R^2 = .18$ ,  $F(7,78) = 2.52$ ,  $p = .02$ , and a significant positive relationship between selfie posting and intimidation ( $\beta = .43$ ,  $t = 2.92$ ,  $p = .01$ ). None of the other assertive self-presentation sub-scales predicted selfie posting (all  $ps > .30$ ).

## DISCUSSION

The novel finding to emerge was that assertive self-presentational strategies were associated with selfie, but not non-selfie, posting, and that this relationship was noted for females, rather than males. In particular, females high in intimidation as a self-presentation strategy were most likely to post selfies on social media sites. For males, there was a stronger negative relationship between selfie posting with punishment avoidance (BIS). Self-presentational strategies did not predict posting of non-selfies.

These results suggest that female selfie posting may be viewed as a form of assertive self-presentation. This contrasts with findings from previous studies conducted in 'real world' situations, where females do not display associations between this characteristic and their behaviours, as strongly as do males (Fletcher & Spencer, 1984; Laghi et al., 2015). When the usual direct, and more-immediate, social constraints that may operate in the 'real world' are removed, it may facilitate the expression of this facet of female personality (see Eagly & Wood, 1999; Janson, 2017; Zhao et al., 2008). However, the key aspect of assertive self-presentation that emerged as a predictor for females was intimidation – which is regarded as a more aggressive and negative aspect of assertive self-presentation than some of the other aspects (Lee et al., 1999).

As reward sensitivity (either reward approach, BAS, or punishment avoidance, BIS) did not play a major role in predicting selfie posting for females, it suggests that they may be less motivated with attempting to curry favour with social groups that are engaged in social media. In contrast, females may be more motivated by imposing dominance on these

groups (Chua & Chang, 2016); a behaviour previously attributed largely to males (Fox & Rooney, 2015). Speculatively, this suggests that personality factors, such as anti-social personality or narcissism, both of which have been recently associated with selfie posting (Fox & Rooney, 2015; Moon et al., 2016), may be driving this behaviour for females. Conversely, the current study found that male participants failed to demonstrate such a relationship between assertive self-presentation and selfie posting. Male participants were more likely to show a relationship between selfie posting and reward sensitivity – a positive relationship for BAS, and a negative relationship for BIS – and this suggests that male users may perceive the digital environment as more akin to the ‘real world’ than female users. Males may even be using social media to achieve social support (Sorokowski et al., 2016), rather than primarily in an explicitly aggressive manner, although this suggestion will require further investigation.

These findings seem to stand in some contrast to views of personality that suggest some aspects are innate – for example, males will be more aggressive in all contexts. Rather, as quite different behavioural patterns emerged on social media, the data suggest that the interactions and assumptions in that world allow different aspects self-identity to be developed (Zhao et al., 2008). This set of findings does follow from several performative theories of identity (Butler, 1997a; Goffman, 1959). Other studies have also noted differences akin to the current findings. For example, Chua and Chang (2016) noted that selfie posting was an aggressive/assertive behaviour in females; whereas, Sorokowski et al. (2016) noted selfie posting is related to less aggressive, but more defensive behaviours for males. These real world versus digital world differences may be a useful testbed in which to explore identity theories.

It should be noted that it is possible the findings may be limited to the current sample. However, internet usage figures suggests that the current sample is representative of typical social media users and similar to other samples (Reed et al., 2018). Moreover, the scores on the assertive self-presentation scale, and the BAS and BIS scales, are also similar to previous samples as is the difference between female and male participants on these variables (Carver & White, 1994; Lee et al., 1999). These results suggest that the current sample, which was composed of students and non-students, with a range of ages, may be representative of the general population. Other issues that should

be noted with the current study, that could be explored in future work, involve the use of defensive self-presentation strategies, and their relationship with social media postings, and reward sensitivity. The current study also relied on self-report of postings, and the use of actual posting data would be a useful addition to future studies within this area. It may be that examination of the function of social media use for participants (Balakrishnan & Griffiths, 2018) would help to shed further light on these relationships.

In summary, the current study noted some differences between females and males in the drivers of selfie postings, with this behaviour in females being much more related to intimidatory self-presentation strategies, than to their sensitivity to the reward experienced from these postings.

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