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Item Type	Journal article
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Citation	Bhogal, M., Galbraith, N., Guy, A., Rhead, C. & Lalli, G. (2025) Unpacking the role of multidimensional romantic jealousy in the perpetration of cyber dating abuse: The mediating role of self-esteem, <i>Violence and Victims</i> , 40 (3), pp.376-392 DOI: 10.1891/VV-2024-0139
DOI	10.1891/VV-2024-0139
Publisher	Springer Nature
Journal	<i>Violence and Victims</i>
Download date	2026-06-16 12:01:40
License	https://creativecommons.org/licenses/by-nc-nd/4.0/
Link to Item	http://hdl.handle.net/2436/625795

Unpacking the role of multidimensional romantic jealousy in the perpetration of cyber dating abuse: The mediating role of self-esteem

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Funding Statement: This research was funded by the Lord Paul Fellowship, University of
Wolverhampton, UK.

The Author(s) declare that there is no conflict of interest

Data availability statement: Data are available upon request

Ethical approval and informed consent statements: Ethical approval was granted by the
psychology department ethics committee at the host university. All participants provided
informed consent online prior to taking part in the study.

Abstract

Previous research has explored the potential role of romantic jealousy in the use of technology to facilitate cyber dating abuse against romantic partners. In this study, we examine the multidimensional nature of romantic jealousy and the mediating role of self-esteem in the perpetration of cyber dating abuse. While much of the existing literature treats cyber dating abuse as a single construct, we propose a more nuanced understanding by distinguishing between psychological abuse and relational cyber dating abuse. We collected data via an online survey with participants ($N=496$). Our findings indicate that both cognitive and behavioral jealousy are significant predictors of psychological and relational cyber dating abuse. Notably, cognitive jealousy moderates the relationship between behavioral jealousy and the perpetration of cyber dating abuse. Furthermore, low self-esteem mediates the relationship between high cognitive jealousy and psychological cyber dating abuse. These findings contribute to the existing literature by highlighting the role of multidimensional romantic jealousy in the context of psychological and relational cyber dating abuse. The findings have practical implications for policy development, therapeutic interventions, and strategies aimed at understanding and mitigating the perpetration of cyber dating abuse among young adults.

Keywords; digital dating abuse; cyber dating abuse; romantic jealousy; perpetration

Unpacking the role of multidimensional romantic jealousy in the perpetration of cyber dating abuse: The mediating role of self-esteem

This paper investigates the role of individual differences, specifically self-esteem and romantic jealousy in the perpetration of psychological and relational cyber dating abuse. While prior research has established a correlation between jealousy and cyber dating abuse, there remains a significant gap in understanding how various dimensions of jealousy distinctly predict abusive behaviors in online contexts. By disentangling these specific influences, this study provides a more nuanced perspective on the psychological mechanisms underlying the perpetration of cyber dating abuse.

Cyber dating abuse, an emerging form of intimate partner violence, encompasses behaviors designed to digitally control, harass, and monitor a partner through electronic communication technologies (Zweig et al., 2013). The detrimental effects of cyber dating abuse are well-documented, including substance misuse, suicidal ideation, and various mental health challenges, highlighting the necessity of researching this phenomenon (Lu et al., 2018). A recent meta-analysis indicates that the prevalence of cyber dating abuse among emerging adults ranges from 43.4% to 44.6%, highlighting the critical need to understand the factors that drive this behavior (Li et al., 2023; Vizoso-Gomez & Fernandez-Gutierrez, 2022).

Although empirical research is beginning to examine cyber dating abuse from various theoretical perspectives, including social learning theory (Van Ouystal et al., 2020) and evolutionary theory (Bhagal & Howman, 2019; Bhagal & Taylor, 2024; Bhagal & Wallace, 2022; Bhagal et al., 2019, 2022), the prevalence of the harmful behaviors that constitute cyber dating abuse continues to escalate (Stonard, 2019). Furthermore, extreme forms of cyber dating abuse, such as the non-consensual sharing of videos and photos, can result in prolonged victimization due to data being saved on servers and digital devices. This

persistence makes cyber dating abuse a particularly challenging area of research compared to traditional forms of intimate partner violence (Lara, 2020).

Jealousy, defined as an emotional response to real or perceived threats to a romantic relationship, is a primary motivator for individuals who engage in digital surveillance of their partners in the context of cyber dating abuse (Reed et al., 2021). Jealousy often serves as a significant source of conflict within romantic relationships and consequently drives abusive behaviors (del Ángel & Barraza, 2015). Social media platforms create an environment where individuals can observe and interact with their partner's digital activities, leading to interpretations of seemingly harmless cues such as likes and comments as indicators of infidelity or relationship dissolution. These attributions, whether accurate or not, can exacerbate romantic jealousy and prompt electronic surveillance of partners (Martinez-Leon et al., 2017; Van Ouystal et al., 2019). Jealousy manifests as a response to actual or perceived threats to a romantic relationship (Branson & March, 2021). For instance, Quiroz et al. (2024) found that individuals experience heightened feelings of jealousy and subsequently engage in cyber dating abuse behaviors when their partner likes an Instagram post from someone of the same sex. This finding suggests that social media can act as a catalyst for jealousy, fostering the perception of a romantic rival or "mate poacher" (someone perceived as threatening to one's relationship).

Jealousy can be understood as a multifaceted emotion, often categorized into three dimensions: (1) cognitive jealousy, which involves jealous thoughts; (2) emotional jealousy, which pertains to feelings of jealousy; and (3) behavioral jealousy, which encompasses actions taken to uncover cues of infidelity (Pfeiffer & Wong, 1989). Branson and March (2021) investigated the role of jealousy in the perpetration of cyber dating abuse, finding that jealousy is a strong predictor of such behaviors. Cognitive jealousy emerges as a significant

driver of cyber dating abuse, possibly due to its association with uncertainty regarding the romantic relationship, which can subsequently lead to behavioral jealousy (Ramirez-Carrasco et al., 2023). Cognitive jealousy is characterized by thoughts of mistrust and suspicion towards a romantic partner, potentially giving rise to intimate partner violence (Dokkedahl & Elklit, 2019). Furthermore, the perpetration of cyber dating abuse is closely linked to romantic jealousy (Toplu-Demirtas et al., 2022), with prior research indicating that behavioral jealousy also predicts such abusive behaviors (Deans & Bhogal, 2019).

The findings discussed highlight the importance of examining the role of multidimensional jealousy in the perpetration of cyber dating abuse, particularly given that jealousy is frequently cited as a justification for offline intimate partner violence (Pence & Paymar, 1993). An alternative explanation for the strong consensus in the literature regarding jealousy as a driver of cyber dating abuse is the prevalence of romantic myths that equate jealousy with love. In this context, cyber dating abuse may be perceived as a form of expressing love within a romantic relationship (Caridade et al., 2020).

A further factor that remains underexplored in relation to cyber dating abuse is self-esteem. Self-esteem refers to an individual's feelings and attitudes toward themselves, which can be influenced by various factors (Gregg, 2003; Rosenberg, 1965). Self-esteem is a strong predictor of happiness as well as an individual's coping mechanisms and strategies (Dumont et al., 1999; Izcic et al., 2004). In the context of intimate partner violence, distorted expectations regarding relationships and past experiences of dating violence including control and abuse may shape individuals' self-perception and, consequently, their self-esteem (Liu et al., 2014; Rill et al., 2009). Moreover, self-esteem can influence the perpetration of cyber dating abuse, as it is often affected by one's perceived value within a romantic relationship (Hancock et al., 2017; Leary et al., 1998).

Research indicates that low self-esteem is associated with the perpetration of both offline intimate partner violence (Lewis et al., 2002) and cyberbullying (Patchin & Hinduja, 2010; Taquette & Monteiro, 2019). Furthermore, individuals with low self-esteem are more likely to engage in partner derogation compared to those with higher self-esteem (Murray et al., 2002). This association highlights the need for further research to explore the mechanisms underlying the relationship between self-esteem and abusive behaviors, including cyber dating abuse perpetration (Smith et al., 2018). Individuals with lower self-esteem may resort to abusive behaviors in romantic relationships as a means of asserting control and power, which in turn may serve to enhance their self-esteem (Ostrowsky, 2010). Additionally, low self-esteem has been found to increase jealousy in romantic relationships (DeSteno et al., 2006), highlighting the complex interplay between emotions and the perpetration of cyber dating abuse.

Previous researchers have emphasized the importance of conceptualizing self-esteem as a multifaceted construct rather than a singular entity, particularly when examining the role of self-esteem in romantic relationships (Holden et al., 2018). A key distinction between these two measures lies in their focus: relationship-contingent self-esteem specifically pertains to self-esteem derived from the relationship itself, whereas general self-esteem reflects an individual's overall feelings or perceptions about themselves.

Previous research specifically examining the relationship between self-esteem and cyber dating abuse has found that self-esteem does not directly predict the perpetration of such abuse (Bhogal et al., 2019). Additionally, Bhogal et al. (2022) investigated the role of relationship-contingent self-esteem, again finding no significant support for a direct link. However, these studies did not incorporate self-esteem within a model that includes romantic jealousy. Moreover, no moderation or mediation analyses have been conducted to explore the

potential mediating role of self-esteem in the relationship between romantic jealousy and cyber dating abuse, which is a key objective of the present research paper.

To our knowledge, no research to date has explored the role of multidimensional romantic jealousy in the perpetration of both psychological and relational cyber dating abuse. Psychological cyber dating abuse encompasses controlling and manipulative behaviors conducted through technology, while relational cyber dating abuse involves controlling a partner's social and personal relationships. Given that cyber dating abuse encompasses a wide range of behaviors, we, along with other scholars, assert the importance of examining it as a multifaceted phenomenon (Brown & Hegarty, 2018).

This study aimed to explore potential mediators in the relationship among multidimensional jealousy, self-esteem, and psychological and relational cyber dating abuse. Specifically, we sought to unravel the roles that cognitive, emotional, and behavioral jealousy play in the perpetration of these forms of cyber dating abuse while considering the influence of self-esteem. Supporting this approach, Rodriguez-de Arriba et al. (2023) emphasize the importance of examining individual differences in the context of cyber dating abuse.

Given the limited literature addressing the roles of multidimensional jealousy, cyber dating abuse, and various demographic and lifestyle factors, this study also examined variables such as age, relationship length, and time spent online. Specifically, we investigated whether the amount of time spent on the internet is related to the perpetration of cyber dating abuse, as previous research indicates a positive association between the use of social networking sites and online abuse (Monteiro et al., 2023; Van Ouystel et al., 2017a). This connection may arise from online technologies facilitating closer interactions between romantic partners through instant messaging and social media (Van Ouystel, 2017a).

Method

Participants & Design

The sample comprised of 496 18–25-year-olds (215 men, 281 women, $M_{age}=22.82$ years, $SD=2.84$) in the UK who were either currently in a romantic relationship or had been in a romantic relationship within the past 12 months ($M_{relationship\ length}=12.06$ months, $SD=7.72$). Participants reported a weekly average of 31.54 hours ($SD = 52.80$) spent using the internet. To be eligible for the study, participants were required to be aged 18 to 25 and either currently involved in a romantic relationship or have been in one within the past 12 months. Participants were recruited using Qualtrics, an online survey platform. The survey link was disseminated through various social media sites (e.g., X, Facebook) and was also promoted via the departmental research participation scheme, SONA.

A multiple regression model was employed, with predictor variables including age, gender, relationship length, weekly internet use, self-esteem, relationship-specific self-esteem, cognitive jealousy, emotional jealousy, and behavioral jealousy. The outcome variables consisted of the perpetration of (1) psychological and (2) relational cyber dating abuse. All analyses were conducted using SPSS software and the PROCESS macro (Hayes, 2013).

Materials & Procedure

After reviewing the information sheet, participants provided informed consent online. Participants were asked to report their age (in years), sex, relationship length (in months), and weekly use of technology measured in total hours (Consistent with Reed et al., 2016). In addition, participants completed the following measures/scales (scales were presented in the order they are outlined below):

Internet use: Consistent with Reed et al. (2015), participants' use of the internet (specifically social media use/instant messaging) was measured by asking participants to report how many hours they use the internet for social media browsing/instant messaging on a typical weekday and weekend. Responses from the weekday hours were multiplied by five and added to the weekend hours to calculate participants' weekly hours spent using the internet.

Participants completed Pfeiffer and Wong's (1987) multidimensional jealousy scale, which consists of three subscales measuring behavioral, cognitive, and emotional jealousy. Cognitive and behavioral subscales range from 1 (never) to 7 (all the time), and emotional subscale ranges from 1 (very pleased) to 7 (very upset). The emotional subscale required participants to answer according to how they would react to certain situations. The behavioral subscale required participants to answer questions based on how often they engage in certain behaviours. Each subscale was reliable in our sample (cognitive, $\alpha=.893$, emotional, $\alpha=.819$, and behavioural, $\alpha=.906$).

The 10-item self-esteem scale (Rosenberg, 1965) was used to measure participants' self-esteem with high values reflecting high self-esteem and lower values reflecting low self-esteem. The scale includes items such as '*On the whole, I am satisfied with myself.*', measured on a 1 (Strongly agree) to 4 (Strongly disagree) Likert scale. The scale was reliable in our sample ($\alpha=.794$).

The 11-item relationship contingent self-esteem scale (Knee et al., 2008) measures relationship specific self-esteem. Items are measured on a 1 (Not at all like me) to 5 (very much like me) Likert scale. An example from this scale includes "*I feel better about myself when it seems like my partner and I are emotionally connected*". The scale was reliable in our sample ($\alpha=.728$).

Cyber dating abuse perpetration was measured via the 11-item cyber dating abuse scale by Morelli et al. (2017). This scale measures both relational cyber dating abuse (i.e., controlling a partner's relationships with others) and psychological cyber dating abuse (i.e., controlling and monitoring behaviour towards a partner). Items are measured on a 4-point Likert scale with (0=never to 3=6 times or more). An example from the psychological perpetration sub-scale is *“I insulted him/her with put downs via social media/instant messaging.”* An example from the relational perpetration sub-scale is *“I said things to his/her friends about him/her via social media/instant messaging to turn them against him/her”*. Previous research has examined cyber dating abuse as one construct, however, as per guidelines from previous researchers (e.g., Brown & Hegarty, 2018; Morelli et al., 2017), we utilised a scale which breaks down cyber dating abuse into distinct categories. This method allowed us to delve further into the different facets that form cyber dating abuse (namely relational and psychological cyber dating abuse). Both sub-scales were reliable in our sample (Perpetration of psychological cyber dating abuse, $\alpha=.858$; perpetration of relational cyber dating abuse, $\alpha=.915$). The study was approved by the host university's departmental ethics committee.

Results

Predicting perpetration: hierarchical regressions

Two hierarchical multiple regressions were computed, one for each of the outcome variables: 1) perpetrating psychological cyber-dating abuse, and 2) perpetrating relational cyber-dating abuse. For both hierarchical regressions, the first block of predictors contained age, gender, relationship length, weekly internet use, self-esteem, and relationship-specific self-esteem. The second block contained the predictors: cognitive jealousy, emotional jealousy, and

behavioural jealousy. Partial correlations between predictors and outcomes are shown in Table 1, together with means and standard deviations.

Perpetrating psychological cyber-dating abuse

The independence of errors assumption was met: Durbin-Watson statistic=1.95. There were no Cook's values exceeding 1.0 (≤ 0.28) thus no influential cases. There was no evidence of multicollinearity, with variance inflation factors relatively close to 1 (≤ 1.22). There was evidence of non-normally distributed residuals (K-S=.19, $p < .001$). Homoscedasticity was assumed based on the linearity of the loess line. In block one, age, gender, relationship length, weekly internet use, personal self-esteem and relationship-specific self-esteem explained a small but significant amount of variance in the perpetration of psychological cyber-dating abuse (adj $R^2 = .076$). The second block of predictors significantly improved the model ($p < .001$), explaining 31.0% of the variance in perpetration (adj $R^2 = .310$, $F(9, 430) = 22.87$, $p < .001$). As can be seen from Table 1, the strongest predictors of psychological cyber dating abuse were behavioural jealousy, cognitive jealousy, and age (negatively).

Perpetrating relational cyber-dating abuse

There was independence of errors: Durbin-Watson statistic=1.90. Cook's values did not exceed 1.0 (≤ 0.54) hence no influential cases. Variance inflation factors were as above (no multicollinearity). There was again evidence of non-normally distributed residuals (K-S=.27, $p < .001$). Block one accounted for a small but significant proportion of variance in the perpetration of relational cyber-dating abuse (adj $R^2 = .047$). The predictors in the second block significantly improved the model ($p < .001$) and explained 15.8% of the variance in perpetration (adj $R^2 = .158$, $F(9, 430) = 10.17$, $p < .001$). As shown in Table 1, behavioural jealousy was notably the strongest predictor of perpetration. Cognitive jealousy and

relationship-specific self-esteem (negatively) were significant but weak predictors of perpetrating relational cyber-dating abuse.

The interaction between behavioural and cognitive jealousy

Behavioural and cognitive jealousy emerged as the strongest predictors of the perpetration of cyber dating abuse. To better understand the role of these jealousy types, follow-up analyses were conducted to test the hypothesis that the relation between jealous actions (behavioural jealousy) and cyber dating abuse, depends upon the strength of negative jealous thinking (cognitive jealousy). Hence, moderation analyses were conducted to test whether cognitive jealousy (W) moderated the relationship between behavioural jealousy (X) and perpetration (Y) (age, gender, relationship length, weekly internet use, personal self-esteem and relationship-specific self-esteem were all included as covariates).

Firstly, cognitive jealousy significantly moderated the relationship between behavioural jealousy and perpetrating psychological cyber-dating abuse ($b=0.02$; $t=4.46$; $p<0.001$; 95% CI, 0.01 to 0.03). Secondly, cognitive jealousy significantly moderated the relationship between behavioural jealousy and perpetrating relational cyber-dating abuse ($b=0.01$; $t=3.67$; $p<0.001$; 95% CI, 0.01 to 0.02); As shown in Figure 1, the relationship between behavioural jealousy and psychological/perpetration/relational perpetration grows stronger as cognitive jealousy increases in magnitude.

Can self-esteem explain the link between cognitive jealousy and cyber dating abuse?

The moderation analyses helped to show that cognitive jealousy affects the link between jealous behaviours and cyber dating abuse. A remaining question was why cognitive jealousy is so psychologically potent to affect this pathway to abuse. To answer this question, further mediation analyses were conducted to examine whether either personal or relationship-

specific self-esteem could explain the pathway between cognitive jealousy and cyber dating abuse. Specifically, two further mediation analyses were performed, one for each of the two types of perpetration (Y). Cognitive jealousy was the predictor (X). In each case, the mediators (M) were self-esteem and relationship specific self-esteem (age, gender, relationship length and weekly internet use were all included as covariates). The bootstrapping statistics for all indirect effects are in Table 2.

Mediation of the relationship between cognitive jealousy and psychological cyber-dating abuse.

The total effect of cognitive jealousy upon psychological cyber-dating abuse perpetration was significant ($b=0.05$, $t=8.71$ $p<0.001$, 95% CI, 0.04 to 0.06). The full model, including the predictor and all mediators, was significant ($F(7, 432)=16.47$, $R^2=0.211$, $p<.001$) and in this model, the direct effect of cognitive jealousy remained significant ($b=0.05$ $t=8.17$, $p<.001$, 95% CI, 0.03 to 0.06). There was also a significant indirect effect (partial mediation) of cognitive jealousy upon psychological perpetration via self-esteem ($b=0.002$, 95% CI, 0.0002 to 0.005; see also Figure 2). Those higher in cognitive jealousy are more likely to perpetrate psychological cyber dating abuse, but this is partly explained by lower self-esteem. Relationship specific self-esteem was not a significant mediator ($b<0.0001$, 95% CI, -0.0006 to 0.0007).

Mediation of the relationship between cognitive jealousy and relational cyber-dating abuse

The total effect of cognitive jealousy upon perpetrating relational cyber-dating abuse was significant ($b=0.02$, $t=4.61$, $p<0.001$, 95% CI, 0.01 to 0.03). The full model, including the predictor and all mediators, was significant ($F(7, 432)=6.73$, $R^2=0.098$, $p<0.001$) and in this model, the direct effect of cognitive jealousy remained significant ($b=0.02$, $t=4.29$, $p<.001$,

95% CI, 0.01 to 0.03). The relationship between cognitive jealousy and relational perpetration was not significantly mediated by either self-esteem ($b=0.001$, 95% CI, -0.0003 to 0.004) or relationship-specific self-esteem ($b=-0.0002$, 95% CI, -0.001 to 0.0008) (see Figure 3).

Further mediations

The above mediation analyses were also run with behavioural jealousy substituted for cognitive jealousy. The relationship between behavioural jealousy and psychological perpetration was significantly mediated by self-esteem only ($b=0.01$, 95% CI, 0.0006 to 0.0219). The relation between behavioural jealousy and relational perpetration was not mediated by either self-esteem or relational self-esteem.

Summary of Results

Behavioural and cognitive jealousy were the strongest predictors of psychological and relational cyber dating abuse. The relationship between behavioural jealousy and abuse tends to be stronger when cognitive jealousy is also stronger. Regarding psychological (but not relational) cyber-dating abuse, its relationship with cognitive jealousy is partly explained by lower self-esteem.

Table 1. Partial correlations between predictors and all four outcome variables, plus means and standard deviations (SD).

Predictor	Mean	SD	Psych perp.	Rel Perp.
Age	23y,	2y,9m	-.17	-.09
Gender	/	/	.06	.02
Rel. length (months)	12	8	.07	-.07
Internet use (hours p/w)	31.33	51.01	.04	.02
Cog J	13.84	5.83	.27	.11
Em J	5.24	0.86	-.01	-.08
Beh J	1.87	1.08	.38	.29
SE	23.48	3.12	-.08	-.06
Rel. SE	3.92	0.55	-.01	-.10

Note: partial correlations controlling for all other predictors. Psych perp. = psychological cyber abuse perpetration, Rel perp. = relational cyber abuse perpetration, Cog J = cognitive jealousy, Em J = emotional jealousy, Beh J = behavioural jealousy, SE = self-esteem, Rel. SE = relationship specific self-esteem.

Table 2. The bootstrapped indirect effects with 95% CIs for all four outcome variables

Mediator	<i>b</i>	SE	Bootstrapped LLCI	Bootstrapped ULCI	Outcome
Self-esteem	.0023	.0013	.0002	.0052	Psychological perpetration
Rel. self-esteem	<.0001	.0003	-.0006	.0007	
Self-esteem	.0013	.0010	-.0003	.0035	Relational perpetration
Rel. self-esteem	-.0002	.0005	-.0145	.0088	

Note: the significant indirect effect is in bold font

Figure 1. The relationship between behavioural jealousy and psychological/relational cyber dating abuse is moderated by cognitive jealousy.

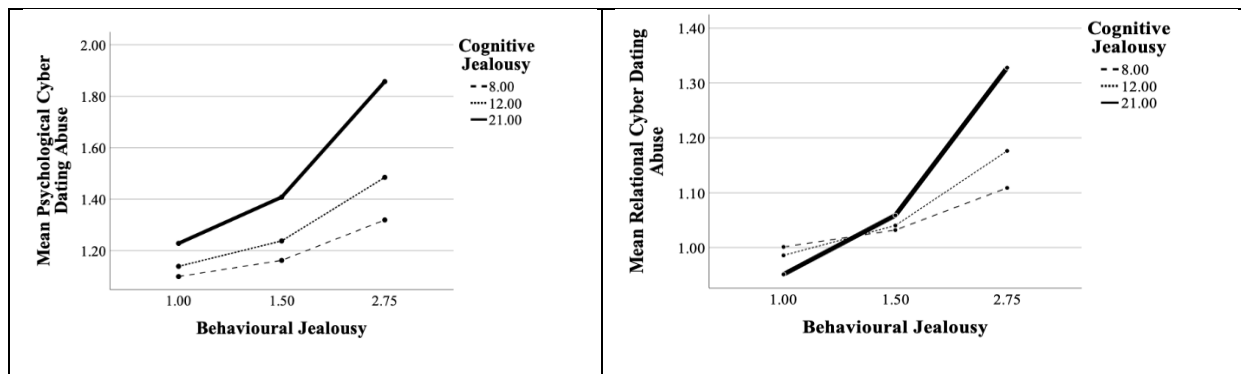
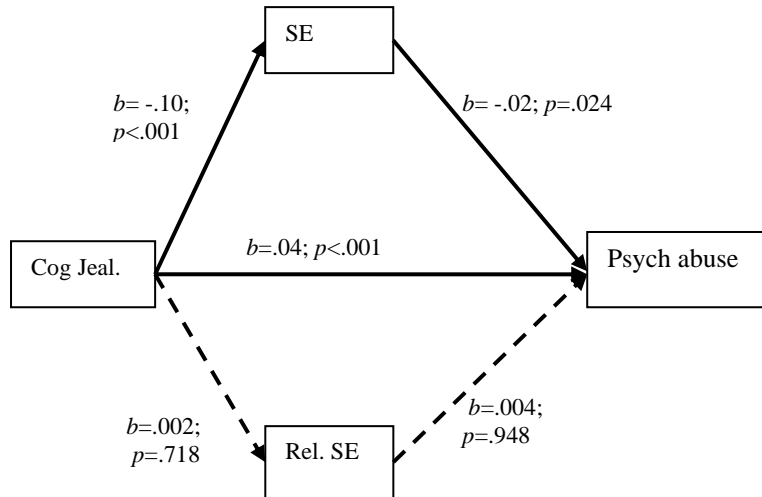
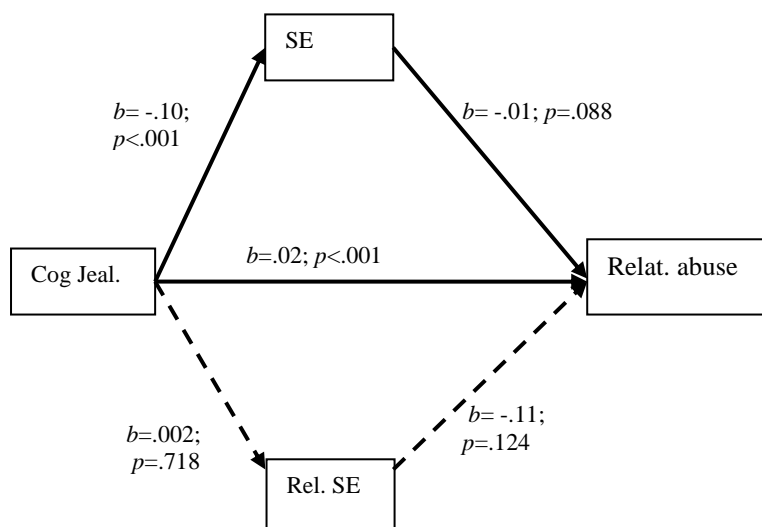


Figure 2. The pathways showing cognitive jealousy as a predictor of psychological cyber abuse perpetration mediated by self-esteem, with unstandardised b weights and p values for each pathway.



Note: SE = self-esteem, Psych perp. = psychological cyber abuse perpetration, Cog. Jeal = cognitive jealousy, Rel. SE = Relationship-specific self-esteem

Figure 3. The pathways showing cognitive jealousy as a predictor of relational 688cyber-abuse perpetration mediated by self-esteem, with unstandardised b weights and p values for each pathway.



Note: SE = self-esteem, Relat. abuse = relational cyber-abuse perpetration, Cog. Jeal. = cognitive jealousy, Rel. SE = Relationship-specific self-esteem

Discussion

This study aimed to unpack the role of multidimensional romantic jealousy, self-esteem, relationship contingent self-esteem and other demographic variables in the perpetration of both psychological and relational cyber dating abuse. Our findings show that the role of romantic jealousy is more nuanced than previously thought in research that explores these associations.

Overview of Findings

When examining psychological cyber dating abuse, we found that behavioral jealousy and cognitive jealousy positively predicted the perpetration of cyber dating abuse, meaning those reporting higher levels of cognitive jealousy and behavioral jealousy, perpetrated higher levels of psychological cyber dating abuse. Age was a negative predictor, suggesting older participants were less like to perpetrate psychological cyber dating abuse than younger participants. This finding may be attributed to the tendency for younger individuals to engage in mate-guarding behaviors than older adults (Bhokal et al., 2022).

Moderation analyses show that the strength of the relationship between behavioral jealousy and psychological/relational cyber dating abuse is influenced by cognitive jealousy: acting out jealousy is related to cyber dating abuse, dependent on how strong one's jealous thoughts are. Furthermore, jealous thoughts are related to both types of cyber dating abuse, but in psychological abuse, low self-esteem partly explains this relationship.

Our findings are consistent with the literature showing a strong association between romantic jealousy and the perpetration of cyber dating abuse (Branson & March, 2021; Deans & Bhokal, 2019; Rodrigues-deArriba et al., 2023). Previous research has shown behavioral

jealousy predicts the perpetration of cyber dating abuse (Deans & Bhogal, 2019). However, our research expands on this by showing that cognitive jealousy moderates this relationship. This finding strongly suggests that having jealous thoughts about a romantic partner plays a part in people engaging in acts of jealousy towards their partner as well as abusive acts that constitute control, dominance, and manipulation. This finding raises further questions about how jealous thoughts translate into behavior: partners who have elevated levels of cognitive jealousy may be prone to interpret situations as threats, leading to heightened behavioral jealousy, thus driving them to engage in surveillance behaviors that constitute cyber dating abuse.

The role of self-esteem as a mediator

To further explore why jealous thoughts impact cyber dating abuse, mediation analysis revealed that jealous thoughts predict lower self-esteem; low self-esteem in turn predicts psychological cyber dating abuse (although not relational cyber dating abuse). This suggests both an internal and external dimension to cyber dating abuse: where thoughts about a partner's infidelity overlap with insecurities about the self, psychological cyber dating abuse is more likely. Thus, suspicions relating to a partner's infidelity could be more distressing to those with low self-esteem, as those with low self-esteem may be insecure about the relationship, particularly of their partner leaving them. In addition, low self-esteem may heighten personal inadequacies and self-doubt in a relationship. Low self-esteem may act as a catalyst for intensifying cognitive jealousy and its relation to psychological dating abuse. Furthermore, self-esteem also mediated the relation between behavioural jealousy and psychological cyber dating abuse. Those with low self-esteem may lack the emotional resilience to manage their jealous thoughts and behaviors (Moksnes & Espnes, 2013), instead relying on maladaptive coping mechanisms such as cyber dating abuse and online monitoring

of their partner's digital activities to alleviate their insecurities. Future research should examine the role of fragile and secure self-esteem in the relationship between romantic jealousy and cyber dating abuse (Zeigler-Hill & Wallace, 2011).

Past experiences and expectations influence one's self-esteem (Button et al., 1996), but these variables were not explored in the current research. Participants may have had previous experience of interpersonal violence or trauma which influences their levels of self-esteem and cognitive jealousy. Furthermore, research shows that self-esteem is influenced by the attachment style of an individual, with those having insecure attachment styles perpetrating aggression in romantic relationships (Stover et al., 2018). These are pertinent research questions for subsequent studies to explore.

Limitations and Strengths

Although there are strengths to this work in that we have unpacked the role of multidimensional romantic jealousy in the perpetration of both psychological and relational cyber dating abuse, there are some limitations to state. First, we did not examine cultural diversity concerning the variables being explored. This work aimed to explore cyber dating abuse in the UK; however, the UK is multicultural and diverse. Therefore, our findings can only be applied to WEIRD samples (Western, Educated, Industrialized, Rich, and Democratic). Second, our findings are correlational, therefore cause and effect cannot be inferred. Thirdly, and consistent with Bhogal et al. (2022) our reporting of cyber dating abuse relies on retrospective, self-report data which may not be as accurate as research using journals or longitudinal designs. Fourth, our study could have benefitted from accounting for potential confounding variables such as previous experience of violence, mental illness, substance use or attachment styles into account. Fifth, as correlations reported were weak to moderate, there is unexplained variance in the model which could be due to non-linear

models, interactions, or additional relevant predictors of cyber dating abuse perpetration. Finally, our findings should be replicated with other age groups, particularly adolescents, as self-esteem can be an emerging factor during adolescence.

Exploring jealousy and cyber dating abuse in a young adult sample is important, particularly as dating violence in young people predicts intimate partner violence in future relationships (Cui et al., 2013). Previous research into cyber dating abuse has predominantly recruited a female sample, and researchers have recognised the need to include equal samples of men and women in such studies (Bhogal et al., 2022). For this reason, we recruited a sample including a better balance of men and women, which is a key strength of our work. Furthermore, our findings show that gender did not predict cyber dating abuse, despite there being a debate in the literature regarding the role of gender in the perpetration of cyber dating abuse. Some studies show that men perpetrate a greater degree than women (Deans & Bhogal, 2019; Smith et al., 2018), some show women perpetrate more than men (Zweig et al., 2013), and some studies show men and women report similar rates of perpetration (Bhogal et al., 2019; Bhogal et al., 2022). A recent meta-analysis found that most studies in the area show that men and women perpetrate cyber dating abuse at similar rates (Martinez-Soto & Ibabe, 2024), thus challenging the importance of patriarchy in the perpetration of cyber dating abuse (Ferrer-Perez & Bosch-Fiol, 2019). As a result, and consistent with previous research, we believe cyber dating abuse should not be thought of as gender-specific (Larsen & Hamberger, 2015; Araci-Iyadin et al., 2022).

There are several ideas for future research that stem from this study and from recent research into cyber dating abuse and jealousy. Quiroz et al. (2024) suggest that studies examining the role of jealousy in cyber dating abuse should explore whether sexual orientation influences the perpetration of cyber dating abuse alongside individual differences, a factor not tested in our study. Furthermore, a recommendation from the literature is for

researchers to recruit both partners and examine their cyber dating abusive behaviors respectively and whether their behaviours relate to one another (Bhogal et al., 2022).

Implications

Quiroz et al. (2024) argue the importance of examining cyber dating abuse in young people, particularly as they differ from older people in perceiving a greater degree of integration between their online and offline worlds. Therefore, it is surprising that most interventions related to dating violence predominantly focus on offline violence often ignoring online abuse (Galende et al., 2020).

There are policy implications of this work. Interventions for dating violence have focused on providing support to women victims of cyber dating as opposed to male victims (Martinez-Soto & Ibabe, 2024). This does no favour to female perpetrators who seek interventions to support and better understand their behavior. Interventions should focus on supporting people regardless of gender in their understanding of directing abusive behaviors in romantic relationships. Furthermore, research into cyber dating abuse rarely focuses on technology-facilitated abuse and has instead tailored interventions to focus more on offline abuse (Li et al., 2023). The lack of interventions and practical solutions to preventing cyber dating abuse could add to its increased prevalence. To our knowledge, one systematic review has been conducted on the effectiveness of interventions to prevent cyber dating abuse. This review only included 4 studies, further illustrating the lack of interventions to prevent cyber dating abuse (Galende et al., 2020). There is a danger that although research into cyber dating abuse is increasing, the issue is not being addressed in policy thus leading to inaction (Ramirez-Carrasco et al. 2023).

Raising awareness is of critical importance in tackling cyber dating abuse. With the rise of technological use in adolescence, educational resources in schools could be directed to

inform adolescents on the dangerous uses of technology such as password sharing, private information, and the factors that can be related to cyber dating abuse, thus providing knowledge of the signs of dating violence (Martinez-Soto & Ibabe, 2024). Considering self-esteem was a mediator of the relationship between cognitive jealousy and cyber dating abuse, there is a need to develop interventions and tools to raise awareness of how self-esteem can impact romantic and interpersonal relationships.

Similarly, our findings could also inform therapy, with the interaction between self-esteem, jealous thoughts and jealousy-related behaviour as a potentially fruitful line of exploration when clients present with experiences of cyber dating abuse perpetration. This nexus of cognitions and behaviours could be challenged as maladaptive and re-examined in therapeutic settings, with additional work focusing on the drivers of low self-esteem in such clients.

Conclusion

The key learnings from this research are that jealousy behaviours are more likely in those who perpetrate cyber dating abuse, but particularly so in those prone to jealous thinking. Low self-esteem partly explains the presence of jealous thoughts in those more prone to psychological cyber dating abuse. Low self-esteem and younger age might be more important for perpetrating *psychological* cyber dating abuse than *relational* cyber dating abuse. There are strong implications for interventions aimed to better understanding the perpetration of cyber dating abuse in young adults.

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