Perpetration of image-based sexual abuse: Extent, nature and correlates in a multi-country sample

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Abstract

Image-based sexual abuse (IBSA) is a form of technology-facilitated abuse in which intimate (nude or sexual) images of a person are taken, distributed, or threats are made to distribute the images, without a person's consent. It is an increasingly criminalized form of sexual abuse, and yet little is known about the perpetrators of these harms including the extent, relational nature and correlates of perpetration. This article reports on the first multi-country survey study to comprehensively investigate IBSA perpetration. An online panel survey of the general community (aged 16 to 64 years) in the United Kingdom, Australia and New Zealand (n=6,109) found that self-reported IBSA perpetration was relatively common, with one in six (17.5%, n=1,070) respondents engaging in at least one form of IBSA. Logistic regression analyses identified eight characteristics that significantly increased the odds of having engaged in IBSA perpetration during their lifetime, namely: engaging in sexual self-image taking behaviors, experiencing IBSA victimization (images distributed), experiencing a combination of IBSA victimization (images distributed and image threatened), experiencing online dating behaviors, having disability/assistance needs, being male, and holding attitudes that minimize the harms and excuse the perpetrators of IBSA. Policy and prevention implications of the findings, as well as directions for future research are discussed.

Keywords**:** criminology, dating violence, internet and abuse, sexual harassment

Introduction

Image-based sexual abuse (IBSA) is an increasingly criminalized form of technology-facilitated abuse, one that includes creating, distributing, or threatening to share intimate (nude or sexual) photos or videos of someone without their consent (DeKeseredy & Schwartz, 2016; Henry et al., 2020; McGlynn & Rackley, 2017). Perpetration of IBSA-related behaviors is referred to with other distinct terminology across the literature, including 'non-consensual sexting' (Barrense-Dias et al., 2020), 'non-consensual sext dissemination' (Clancy et al., 2019), 'non-consensual image sharing' (Naezer & van Oosterhout, 2020), 'cyber sextortion' (O'Malley & Holt, 2020), and 'technology-based sexual coercion' (Thompson & Morrison, 2013). Domestic violence scholars such as Eaton et al. (2020), Dragiewicz et al. (2018) and Reed et al. (2016) have shown how forms of IBSA are often perpetrated within the context of an abusive intimate relationship, and therefore use terminology that highlights the association with coercive control and partner violence. Regardless of terminology, most studies focus squarely on the non-consensual *distribution* of intimate images, whether posting online or sending directly onto others (as we discuss further below), rather than including the three forms of IBSA perpetration that are increasingly criminalized in jurisdictions across the globe (e.g. *Abusive Behaviour and Sexual Harm (Scotland) Act 2016; Criminal Justice and Courts Act 2015 (UK); Enhancing Online Safety Act 2015* (Cth); *Harmful Digital Communications Act 2015* (NZ)). These include the *taking or creation* of intimate images (photos or videos) without consent, the *distribution* of such images without consent, and *threats* made to distribute intimate images.

Extent of IBSA Perpetration

Though there is general agreement that sexting behaviors and IBSA victimization are increasingly common, there is a dearth of literature examining perpetration rates in particular, especially among adult populations. Across the existing empirical literature for this form of abuse, inconsistent operational definitions, measures and timeframes, and different sampling strategies and methods have resulted in varied perpetration data. Most research on IBSA perpetration has been conducted in Australia (e.g., Clancy et al., 2019; Powell et al., 2019), the UK (e.g., Pina et al., 2017; Walker et al., 2019), Europe (e.g., Barrense-Dias et al., 2020; Naezer & van Oosterhout, 2020), Canada and the United States (US) (e.g., Clancy et al., 2020; Ruvalcaba & Eaton, 2020). In many instances, IBSA perpetration has been included as part of a broader study on sexting, dating violence, cyberbullying or online harassment focused on the *distribution* of sexual images (e.g., Garcia et al., 2016; Hudson et al., 2014; Morelli et al., 2016; Reed et al., 2016) with many studies lacking specificity as to whether these images were *non-consensually* distributed. Also characteristic of this wider IBSA perpetration literature is that many studies draw on samples with young people (e.g., Madigan et al., 2018; Patchin & Hinduja, 2020), making it difficult to ascertain patterns of perpetration among adults. Nonetheless, a recent systematic review and meta-analysis explored rates of IBSA perpetration and found an average pooled estimate of 12.1% for sharing sexual images beyond the original recipient (Patel & Roesch, 2020). The authors note, however, that only five of the eight studies included in the meta-analysis used the concept of non 'consent' to measure dissemination, while the remaining three used more neutral language (Patel & Roesch, 2020).

Further studies have variously reported IBSA *sharing or distribution* prevalence of: 5.1% (n=3,044) in the United States (US, Ruvalcaba & Eaton, 2020); 6.4%

(n=4,053) in Australia (Powell et al., 2019); 12.6% (n=1,334) in Italy (Morelli et al. 2016); 15.1% (n=5,175) in Switzerland (Barrense-Dias et al., 2020); 17.4% (n=691) in Australia, Canada, the US and the UK (Clancy et al., 2020); 22.9% (n=5805) in the US (Garcia et al., 2016); and up to 35.2% (n=671) also in the US (Hudson et al., 2014). Meanwhile in the UK, Walker et al. (2019) used separate measures to capture sharing of 'sexy pictures' and 'sexy videos' and more explicit language around the consent of the original sender. Overall, 16.4% (n=391) of university students aged 18 to 25 years reported having ever shared such pictures without consent, and 3.8% reported non-consensual sharing of videos (Walker et al., 2019). However, very few studies have explored perpetration rates among adults for the other dimensions of IBSA: the non-consensual *taking and creation* of images, and/or *threats* to share images. Indeed one of these few studies is the Australian study discussed above, in which Powell et al. (2019) found that 8.7% of participants had disclosed ever having taken or created sexual images of someone without their consent, and 4.9% had ever threatened to share someone's sexual images without their consent.

Nature and Correlates of IBSA Perpetration

Fewer studies have presented analyses of a range of demographic and other correlates for IBSA perpetration. However, in terms of gender differences, some studies have established relatively similar perpetration rates between men and women, or no significant differences (e.g., Clancy et al., 2019, 2020; Reed et al., 2016; Walker et al., 2019), with participants identifying as a gender minority often excluded from published analyses due to small cell sizes. Other studies, however, have reported significantly higher rates of perpetration among men respondents compared with women: 21.1% and 8.9% respectively (Barrense-Dias et al., 2020); 25.3% and 19.6% respectively (Garcia

et al., 2016); 13.7% and 7.4% respectively (Powell et al., 2019); and 7.3% and 3.3% respectively (Ruvalcaba & Eaton, 2020,). Very few studies report on different experiences of IBSA by sexual orientation, however available data suggests higher rates of both perpetration and victimization among non-heterosexual populations (e.g., Barrense-Dias et al., 2020; Garcia et al., 2016; Powell et al., 2019; Ruvalcaba & Eaton, 2020). Some research with adolescents and young adults suggests that sexting and IBSA is more common among adults rather than adolescents within this cohort (e.g., Clancy et al., 2020; Ruvalcaba & Eaton, 2020).

Given the inconsistent approaches to measuring IBSA discussed above, there are mixed findings as to the characteristics of perpetrators and relational patterns of perpetration. Some research that addresses both IBSA perpetration and victimization has demonstrated a strong relationship between the two experiences, with participants who self-report perpetration more likely to also report any victimization in their lifetime (e.g., Clancy et al., 2019, 2020; Powell et al., 2019; Walker et al., 2019). Several studies have further found that images were most commonly shared with close friends or other friends (e.g., Barrense-Dias et al., 2020; Walker et al., 2019). However, these findings possibly reflect that these studies were with younger adolescent populations and focused on broader sexting-related behaviors, rather than the experiences of adults. Other research has further examined the nature of the perpetrator-victim relationship. For example, in the Swiss study by Barrense-Dias et al. (2020), one third said they did not know the person in the image, while in the US, Ruvalcaba and Eaton's (2020) study found that around two thirds of perpetrators reported that their victim was a current or ex-partner. As illustrated here, the inconsistency in measuring IBSA perpetration extends to whether and how the context, nature and characteristics of incidents are captured.

Perpetration research is beginning to explore the relationship between IBSA and psychological, attitudinal or related factors. For example, Clancy et al. (2019, 2020) report varying associations between disseminating sexts and certain traits such as psychopathy, Machiavellianism and narcissism, with higher prevalence of these traits among men in the samples (see also Pina et al., 2017). More broadly, Thompson and Morrison (2013) identified that rape-supportive beliefs, peer approval of forced sex, a higher number of sexual partners and pornography consumption were predictive of young men's perpetration of technology-based sexual coercion. While not examining rates of perpetration, other studies have explored attitudes towards IBSA such as by using vignettes with hypothetical scenarios with different perpetrator, victim and relationship contexts (e.g., Bothamley & Tully, 2018; Gavin & Scott, 2019; Pina et al., 2017; Zhong et al., 2020), demonstrating that perceptions of IBSA tend to reflect gendered patterns of victim-blaming that are similarly common in attitudinal research on sexual violence more broadly (e.g., Bond & Tyrrell, 2018; Maddocks, 2018; Pacheco et al., 2019; Zvi & Shechory-Bitton, 2020; [Removed for Review]).

In summary, while IBSA is a growing field of research, there remains limited data that establishes the extent and patterns of perpetration, particularly for the non-consensual creation of images and threats to share images without permission. To date, the limited data available does indicate a potential role of gender, but does not examine many other predictors of IBSA perpetration. The role of other factors such as personal attitudes, other sexting-related behaviors, and wider experiences also remains unclear in predicting IBSA perpetration. In short, there is a gap in current research into the nature, context and correlates of IBSA perpetration, in particular, examining all three forms of IBSA; the *taking or creation* of intimate images without consent, the *distribution* of intimate images without consent, and *threats* made to distribute intimate images.

The Current Study

This article reports on key findings from a larger multi-country study which sought to comprehensively investigate the extent, nature and correlates of all three forms of IBSA. Drawing on original analyses from an online panel survey of the general community (aged 16 to 64 years) in the UK, Australia and New Zealand (NZ), here we focus on respondents' self-reported perpetration of IBSA. In light of prior studies highlighting the salience of gender for victimization of IBSA, as well as the dearth of studies on IBSA perpetration, our analyses address three exploratory research questions. First, what is the extent of IBSA perpetration among the community sampled, including whether there are any between country and gender differences? Second, what is the relational nature of IBSA perpetration, and does this differ by respondent gender? In other words, are IBSA perpetrators (males and females) most likely to engage in behaviors towards current or former intimate partners rather than other known persons or strangers? And third, what demographic, attitudinal and experiential characteristics of individuals are correlated with IBSA perpetration?

Method

Participants and Procedure

An online panel provider, *Qualtrics Panels,* was contracted to recruit general community members in the UK, Australia and NZ. A total of 64,241 invitations were sent and 6,109 community members responded, representing a response rate of 9.5%. The final sample comprised 3,181 women (52.1%) and 2,928 men[1] (47.9%), with a mean age of 39.02 years (SD=13.47, range 16 to 64). A majority of respondents

[1] A total of 53 respondents identified as either transgender (n=26) or non-binary gender identity (n=27). Unfortunately, the number in this category was insufficient for comparative data analysis and so these respondents have been excluded for the purposes of analyses here.

identified as heterosexual (88.9%, n=5,430), while 11.1% (n= 679) identified as sexuality diverse including lesbian, gay or bisexual (LGB+[2]), and most identified as White, European or Pākehā[3] (73.6%, n=4,498), while 26.4% (n=1,611) identified as racially and ethnically diverse, including Indigenous and Black, Asian and Minority Ethnic (BAME). Finally, 22.2% (n=1,359) of respondents disclosed requiring assistance with daily body movement activities and/or communication activities. The research was approved by an institutional ethics committee, following guidelines as prescribed by the *Australian National Statement on Ethical Conduct in Human Researc*h. All respondents were informed that the purpose of the research was to examine attitudes and experiences of sex, technology, and relationships, including their own experiences or engagement in unwanted and/or harmful behavior.

Measures

The survey utilized for this study drew on an existing measure developed by [Removed for Review] that had been previously administered in an [Removed for Review] community sample. The survey comprised a range of items including those pertaining to: (1) demographic characteristics; (2) sexual image-based abuse myth acceptance; (3) online dating behaviors; (4) sexual self-image behaviors; (5) IBSA victimization; (6) IBSA perpetration; and (7) the nature of the 'most recent' incident of IBSA perpetration. Further details of the measures used for the purpose of the current study are described below.

Demographics. The following demographic characteristics were included in the survey instrument: gender (female, male, transgender, non-binary gender identity), age

[2] Small sample sizes prevented reliable separate analyses for some sexuality identities, and as such, lesbian, gay, bisexual and remaining preferred descriptors have been analysed as one (LGB+) group.
[3] Pākehā is a Maori term referring to New Zealanders who are primarily of White European descent.

(in years), sexuality (heterosexual, LGB+), racial/ethnic identity (White/European/Pākehā, Indigenous and/or BAME), and disability (requiring assistance with daily body movement and/or communication activities, not requiring assistance).

Sexual Image-based Abuse Myth Acceptance (SIAMA) scale. Attitudes towards IBSA were measured using the sexual image-based abuse myth acceptance (SIAMA) scale ([Removed for Review]), which contains 18 items pertaining to attitudes that minimize/excuse the harms and blame the victims of IBSA. The items were rated on a 7-point Likert scale where 1 = 'strongly disagree' and 7 = 'strongly agree' (no labels were provided for points 2, 3, 4, 5, and 6 on the scale). The SIAMA scale has been found to have two components: the 'minimize/excuse' component contains 12 items (M =2.50, SD=1.25, range 1–7, α=.93) and the 'blame' component contains six items (M=3.79, SD=1.60, range 1–7, α=.87). The higher the score, the greater the respondents' adherence to attitudes that minimize/excuse the harms of IBSA and blame the victims.

Online dating behaviors. Nine different online dating behavior items were included (see [Removed for Review]). Each of these were rated on a 5-point Likert scale where 0 = 'never,' 1 = 'rarely,' 2 = 'sometimes,' 3 = 'often,' and 4 = 'frequently.' An average composite variable was first created for the nine items (M=4.05, SD=3.44, range 0 to 9). This average composite variable was then used to create a dichotomous 'online dating behaviors' variable for the purpose of data analysis (no, never; yes, one or more).

Sexual self-image behaviors. Ten different sexual self-image behaviors were included (see [Removed for Review]). Once again, these items were rated on a 5-point Likert scale where 0 = 'never,' 1 = 'rarely,' 2 = 'sometimes,' 3 = 'often,' and

4 = ‘frequently.’ An average composite variable was first created for the 10 items (M=3.03, SD=3.64, range 0 to 10). This average composite variable was then used to create a dichotomous ‘sexual self-image behaviors’ variable for the purpose of data analysis (no, never; yes, one or more).

IBSA victimization. Respondents answered ten items about experiences of intimate (nude or sexual) images of themselves being taken, distributed, and/or threats to distribute them, without their consent; using a dichotomous (yes, no) question format (see [Removed for Review]). Three total composite variables were created by summing the number of ‘yes’ responses to the nine content items in each of the three contexts (IBSA victimization [taken]: M=1.40, SD=2.45 , range 0 to 10; IBSA victimization [distributed]: M=0.98, SD=2.37, range 0 to 10; and IBSA victimization [threatened]: M=0.94, SD=2.37, range 0 to 10). These composite variables were then used to create three dichotomous variables: ‘IBSA victimization (taken)’; ‘IBSA victimization (distributed)’; and ‘IBSA victimization (threatened)’ for the purpose of data analysis.

IBSA perpetration. Respondents answered nine items regarding their own experiences of ever engaging in non-consensual intimate image taking/creation, distribution or threats to distribute; using a dichotomous (yes, no) question format (see [Removed for Review]). Three total composite variables were first created by summing the number of ‘yes’ responses to the eight content items in each of the three contexts (IBSA perpetration [taken]: M=0.65, SD=1.82, range 0 to 9; IBSA perpetration [distributed]: M=0.48, SD=1.61, range 0 to 9; and IBSA perpetration [threatened]: M=0.42, SD=1.52, range 0 to 9). These total composite variables were used to create five dichotomous IBSA perpetration variables for the purpose of analysis: ‘IBSA perpetration (taken)’; ‘IBSA perpetration (distributed)’; ‘IBSA perpetration (threatened)’; ‘*Any* IBSA perpetration’ (whereby respondents had engaged in one or

more IBSA behaviors); and '*All* IBSA perpetration' (whereby respondents had engaged in IBSA from all three forms).

Relational nature of IBSA perpetration. Respondents who disclosed ever engaging in the taking, distributing, and/or threats to distribute a nude or sexual image of someone without consent were asked to complete additional items regarding their most recent IBSA perpetration incident. These items included victim gender (ie: female, male, females and males/don't know), and perpetrator-victim relationship (ie: intimate partner, ex-intimate partner, friend, other known person, stranger/don't know).

Data Analytic Plan

IBM SPSS Statistics Version 27 was utilized to analyse the unweighted sample in three stages. First, descriptive and chi-square analyses, with phi or Cramer's V as a measure of effect size, were performed to examine the extent of self-disclosed IBSA perpetration. Chi-square analyses were performed to determine whether or not there were differences in IBSA perpetration (taken, distributed, threatened, any, all) according to respondent country and respondent gender. Second, descriptive and chi-square analyses, with phi or Cramer's V as measures of effect size, were performed to examine the relational nature of self-reported IBSA perpetration. Chi-square analyses were performed to determine whether or not there were differences in victim gender and perpetrator-victim relationship according to respondent gender.

Third and finally, logistic regression analyses were performed to examine additional potential correlates of self-disclosed IBSA perpetration. Hosmer, Lemeshow, and Studivant's (2013) seven step 'purposeful selection' model building process was used to examine the relationship between 13 respondent characteristics and the dichotomous IBSA perpetration variable (see also [Removed for Review]). The 13

respondent characteristics comprised six demographic characteristics (respondent country, respondent gender, respondent sexuality, respondent age, respondent racial/ethnic identity, and respondent disability/assistance needs), two attitudinal characteristics (minimize/excuse and blame), and five experiential characteristics (online dating behaviors, sexual self-image behaviors, IBSA victimization [taken], IBSA victimization [distributed], and IBSA victimization [threatened]). Assumption testing was performed prior to assessment of the initial and final models to ensure no violations had an undue influence on the models.

Results

Extent and Gendered Nature of IBSA Perpetration

Overall, 17.5% (n=1,070) of respondents disclosed engaging in *any* (one or more) of the IBSA perpetration behaviors during their lifetime. Behaviors involving the non-consensual *taking or creation* of a nude or sexual image (15.8%, n=967) were the most common, followed by the non-consensual *distribution* of a nude or sexual image (10.6%, n=648), and *threat*s to distribute a nude or sexual image (8.8%, n=536). Furthermore, 7.8% (n=479) self-reported ever having engaged in *all* three forms of IBSA. Table 1 presents the lifetime prevalence of IBSA perpetration for each of the respondent countries.

[Insert Table 1 about here]

A series of chi-square analyses were performed to examine whether or not there were significant differences in the lifetime extent of IBSA perpetration by respondent country, revealing no significant differences between Australia (16.2%, n=332) and the

UK (16.5%, n=335). NZ (19.9%, n=403) respondents, however, were significantly more likely to disclose any IBSA perpetration overall (χ^2(2, n=6109)= 11.85, p=.003, φ_c=.04), though notably the effect size was small. Likewise, for engaging in all three IBSA perpetration behaviors, Australian (6.6%, n=135) and UK (7.1%, n=144) respondents were similar, whilst NZ (9.9%, n=200) respondents' perpetration was significantly higher (χ^2[2, n=6109] = 17.62, p<.001, φ_c=0.05). This NZ trend continued across each of images *taken or created* (χ^2[2, n=6109]= 11.31, p=.003, φ_c=.04), *distributed* (χ2[2, n=6109]= 16.64, p<.001, φ_c=.05), and *threatened* (χ^2[2, n=6109]= 11.92, p=.003, φ_c=.04). Though again, notably the effect sizes for between country differences were small (below .07 for 2df that would indicate a small effect).

In light of the previous literature regarding the potential gendered nature of IBSA perpetration, a further series of chi-square analyses were performed to examine gender differences in the total lifetime extent of IBSA perpetration across the sample. These analyses revealed that male respondents (22.3%, n=653) were significantly more likely than females (13.1%, n=417) to report engaging in any IBSA perpetration (χ^2[1, n=6109] = 89.18, p<.001, φ=.12). Furthermore, male respondents (10.8%, n=316) were significantly more likely than females (5.1%, n=163) to report engaging in all three forms of IBSA perpetration (χ^2[1, n=6109] = 67.79, p<.001, φ=.11). This trend in gender differences continued for each of images taken or created (χ^2[1, n=6109] = 97.21, p<.001, φ=.13), distributed (χ^2[1, n =6109]= 79.82, p<.001, φ=.11), or threatened (χ^2[1, n=6109] =74.11, p<.001, φ=.11), with additional frequencies reported in Table 2.

[Insert Table 2 about here]

Relational Context of IBSA Perpetration

Descriptives and chi-squares further examined the lifetime prevalence of IBSA perpetration type with respect to respondent gender and victim gender (data not shown). Overall, of the respondents who disclosed engaging in non-consensual nude or sexual image *taking or creation*, 47.7% (n=456) said that their most recent victim was female, while 44.0% (n=421) said the victim was male. Furthermore, of those who disclosed engaging in the non-consensual *distribution* of a nude or sexual image, 46.8% (n=302) said that their most recent victim was female, while 46.0% (n=297) said the victim was male. Similarly, of those who disclosed engaging in *threats to distribute* a nude or sexual image of someone, 47.4% (n=253) said that their most recent victim was female, while 45.7% (n=244) said that the victim was male. The remaining respondents reported that their victims included both females and males, or they 'did not know'. Again, chi-squares were conducted to ascertain whether there were significant gender differences; revealing a significant difference only for images *taken or created*, whereby male respondents were significantly more likely to report targeting a female victim, and female respondents were significantly more likely to report targeting a male victim ($\chi^2(2, n = 956) = 23.21$, $p < .001$, $\varphi = 0.16$). Otherwise, male and female respondents were similarly likely to target female and male victims.

With regard to perpetrator-victim relationship, most respondents who disclosed engaging in IBSA self-reported targeting a well-known person, such as an intimate partner, an ex-intimate partner, or a friend (data not shown). For non-consensual nude or sexual image *taking or creation*, 45.3% (n=436) of respondents targeted an intimate partner, 17.8% (n=171) targeted an ex-intimate partner, and 16.0% (n=154) targeted a friend. For the non-consensual *distribution* of a nude or sexual image, 30.4% (n=197) of respondents targeted an intimate partner, 21.6% (n=140) targeted an ex-intimate partner,

and 19.6% (n=127) targeted a friend. Finally, for *threats to distribute* a nude or sexual image of someone, 27.0% (n=144) of respondents targeted an intimate partner, 24.2% (n=129) targeted an ex-intimate partner, and 22.9% (n=122) targeted a friend. The remaining respondents targeted another known person (including a carer, work colleague or ex-work colleague, or an acquaintance), or a stranger/unknown person. A series of chi-square analyses were performed to examine whether or not there were significant differences with regard to the relational nature of IBSA victimization (i.e., perpetrator-victim relationship) by respondent gender. These analyses revealed no significant differences.

Correlates of IBSA Perpetration

Finally, logistic regression analyses were performed to examine the relationship between 13 respondent characteristics and the lifetime prevalence of IBSA perpetration. Six characteristics were demographic and included: respondent country, respondent gender, respondent sexuality, respondent age, respondent racial/ethnic identity, and respondent disability/assistance needs. Two characteristics were attitudinal: minimize/excuse and blame. The remaining five characteristics were experiential: online dating behaviors, sexual self-image behaviors, IBSA victimization (taken), IBSA victimization (distributed), and IBSA victimization (threatened).

A series of chi-square and t-test analyses were first performed to identify which of the 13 respondent characteristics to include in the initial model, and all 13 characteristics were identified: respondent country ($p=.003$), respondent gender ($p<.001$), respondent sexuality ($p<.001$), respondent age ($p<.001$), respondent racial/ethnic identity ($p<.001$), respondent disability/assistance ($p<.001$), minimize/excuse ($p<.001$), blame ($p<.001$), online dating behaviors ($p<.001$), sexual

self-image behaviors (p<.001), IBSA perpetration (taken; p<.001), IBSA perpetration (distributed; p<.001), and IBSA perpetration (threatened; p<.001). Table 3 presents frequencies and descriptives for the 13 respondent characteristics by lifetime engagement in IBSA perpetration behaviors.

[Insert Table 3 about here]

The subsequent initial logistic regression model therefore contained 13 respondent characteristics and was statistically significant, $F(14, n=6109) = 1544.25$, $p < .001$. It correctly classified 95.0% of cases (98.1% with no self-reported IBSA perpetration, 57.5% with self-reported IBSA perpetration), and explained between 22.3% (Cox & Snell R square) and 53.6% (Nagelkerke R square) of variance. Five non-contributing characteristics were removed from, and one significant interaction was added to, the final model, which was statistically significant, $F(10, n=6109) = 1763.07$, $p < .001$. It correctly classified 88.3% of cases (96.5% with no self-reported IBSA perpetration, 49.8% with self-reported IBSA perpetration), and explained between 25.1% (Cox & Snell R square) and 41.5% (Nagelkerke R square) of variance. A summary of the initial and final models is presented in Table 4.

[Insert Table 4 about here]

In the final model, three demographic characteristics were significant predictors of engagement in IBSA perpetration behaviors. Respondents in Australia were 22% less likely to self-report engaging in IBSA perpetration behavior than those in NZ (OR=0.82, CI=0.67, 1.00); whilst respondents in the UK were 33% less likely to do so

compared with NZ respondents (OR=0.75, CI=0.61 to 0.91), controlling for other characteristics in the model. Gender meanwhile was a significant predictor with male respondents 59% more likely than females to self-report engaging in IBSA perpetration (OR=1.59, CI=1.34 to 1.88). Finally, respondents with disability/assistance needs had a 101% greater odds than respondents without disability/assistance needs of self-reporting engaging in IBA perpetration (OR=2.01, 95% CI=1.67 to 2.41). One of the attitudinal characteristics was also significant, with a one-point increase in respondents' minimize/excuse scores (attitudes that minimize and harms or excuse the perpetrators of IBSA) associated with 36% greater odds of having engaged in IBSA (OR=1.36, CI=1.27, 1.46), controlling for other characteristics in the model.

Four of the experiential characteristics were significant predictors of self-reported engagement in IBSA perpetration behavior. Respondents who had engaged in or experienced online dating behaviors had 120% greater odds of IBSA perpetration than those who had not (OR=2.20, CI=1.59, 3.05); whilst those who had engaged in sexual self-image behaviors had 159% greater odds than those who had not (OR=2.59, CI=2.03, 3.94), controlling for other respondent characteristics in the model. Meanwhile, respondents who had experienced IBSA victimization (distributed) were 151% more likely to self-report engaging in IBSA perpetration behaviors than those who had not experienced this form of victimization (OR=2.51, CI=1.92, 3.29). Finally, an interaction effect was observed for respondents who had experienced both IBSA victimization (distributed) and IBSA victimization (threatened), who were 30% more likely to self-report engaging in IBSA perpetration than those who had not experienced these two forms of victimizations (OR=2.30, CI=1.41, 3.75), controlling for other respondent characteristics in the model.

Discussion

This article reports on original analyses from the first multi-country study comprehensively examining all three forms of IBSA perpetration. The study contributes to a knowledge gap regarding the extent, relational nature and correlates of IBSA perpetration across the UK, Australia and NZ. Overall, we found that one in three respondents surveyed self-reported that they had engaged in at least one form of IBSA perpetration, some significant differences between countries, specifically that NZ respondents were more likely to self-report perpetration. We further found that among this IBSA perpetration engagement, taking or creating intimate images of a person without consent was the most common form, with one in six respondents reporting doing so. This was followed by one in ten distributing intimate images without consent, and a similar proportion threatening to distribute an intimate image of someone. Approximately one in thirteen respondents self-reported that they had engaged in all three forms of IBSA. The relatively commonplace engagement in each form of IBSA perpetration, as well as the overlap between multiple forms of IBSA perpetration, suggest that though much research focuses on the *distribution* of intimate images without consent, there is cause to further investigate and seek to address these other related forms of IBSA.

With regard to the gendered nature of IBSA perpetration, we found that male respondents were more likely than female respondents to report engaging in any IBSA perpetration and in all three forms of IBSA perpetration (both separately and collectively). Indeed, one in five male respondents, compared to one in eight females, self-reported engaging in any IBSA perpetration behaviors in their lifetime. Meanwhile one in 10 male respondents, compared to one in 20 females, self-reported having

engaged in all three forms of IBSA perpetration behavior (images taken, distributed, and threatened).

Male and female respondents were similarly likely to target both female and male victims, with the exception of images *taken or created*, whereby both male and female respondents were more likely to target females and males respectively. This finding further highlights what an increasing number of exploratory studies have been finding; that whilst there are gendered patterns to IBSA perpetration (in this case, males almost twice as likely as females to self-report perpetrating), victimization may be similarly directed towards both females and males. It is also a finding reported here, that both male and female perpetrators are similarly likely to engage in those perpetration behaviors towards known people, and in particular, towards intimate or ex-intimate partners. Accordingly, the relational nature of IBSA is apparent, but it is not in and of itself gendered in nature. However, the current study did not examine whether IBSA perpetrators self-report engaging in additional forms of abuse towards their victims. This is an important avenue for future research, as our own comparable research with victims of ISBA suggests that there are gender differences with respect to co-occurring forms of abuse, and with the impacts of that abuse in terms of a range of outcomes including fear for one's safety ([Removed for Review]).

With regard to the correlates of IBSA perpetration, we found eight significant predictors, with the greatest odds for self-reporting engaging in IBSA perpetration being among those who: engaged in sexual self-image taking behaviors, had themselves experienced IBSA victimization (images distributed), had experienced a combination of IBSA victimization (images distributed and image threatened), and had experienced online dating behaviors. These characteristics are suggestive of IBSA perpetration being more common among individuals who are highly engaged in digital forms of intimacy

generally, as well as individuals who have experienced threatened or actual distribution of their own intimate images without consent. Demographic (gender and disability/assistance needs) and attitudinal variables (those that minimize the harms and excuse the perpetrators of IBSA) were also significant, but less strongly associated with perpetration than the experiential characteristics. However, being male, having disability/assistance needs, and holding harm-minimizing/perpetrator-excusing attitudes are nonetheless important predictors of perpetration, and more readily amenable to targeting legal education and prevention approaches to specific sub-population groups. Contrary to some previous research that has found an overrepresentation of sexuality minorities as engaging in IBSA perpetration (e.g. Henry et al., 2020; Powell et al., 2019), the current study found that once other factors (such as gender, online dating and sexual selfie behavior) are accounted for, sexuality was not a significant explanatory predictor of IBSA perpetration.

Implications for Policy and Prevention

The findings reported here hold particular relevance for informing policy and prevention addressing IBSA perpetration. Among the key findings is that engagement in IBSA perpetration behaviors is not uncommon and not confined only to younger cohorts. This suggests that efforts should be directed at broader community legal education highlighting the seriousness and increasingly criminal consequences of IBSA perpetration. In particular, our findings support those of some previous studies that have described IBSA as a gendered and relational phenomena with respect to its perpetration (see e.g. Barrense-Dias et al., 2020; Garcia et al., 2016; Powell et al., 2019; Ruvalcaba & Eaton, 2020). These results indicate that it is appropriate to include IBSA-specific education and prevention content in programs directed at male perpetrators of

interpersonal violence more broadly. Indeed, our findings further suggest that attitudes minimizing the harms and excusing the perpetrators of IBSA may be an important target for education and prevention to reduce and ultimately stop this form of technology-facilitated abuse.

This study also found that there is a strong association between IBSA perpetration and IBSA victimization, though we cannot presume a causal direction to the relationship. Nonetheless, it may be that there is an emerging trend of 'retaliatory' IBSA perpetration in response to experiencing IBSA victimization. As such, these findings suggest care should be taken when addressing IBSA perpetration to also incorporate support in relation to identifying and appropriately responding to IBSA victimization, and potentially to differentiate between primary perpetration and retaliatory perpetration, as is also the case in responding to other forms of intimate partner abuse in particular.

The overlap between the three forms of IBSA perpetration also highlights the urgent need for continuing legislative reform to comprehensively address *each* of these harms. Currently, whilst many jurisdictions have introduced criminal legislation addressing the distribution of intimate images without consent, the other forms of IBSA are less commonly included. In particular, the taking or creation of intimate images (including digitally altered images, see [Removed for Review], as well as threats of distribution of intimate images, see Flynn & Henry, 2019; Rackely et al., 2021). Indeed, the latter of these is increasingly recognised as a strategy of coercive control in intimate partner violence contexts alongside other technology-facilitated abuse (see e.g. Dragiewicz et al., 2018).

Limitations and Future Research

Despite some differences, the results presented here indicate that there is a high degree of comparability between IBSA perpetration in each of the country sites studied. This suggests that the relatively commonplace engagement in IBSA perpetration may similarly be likely to be found in other comparable jurisdictions, and this should be a focus of continuing research. Nonetheless, one of the limitations of this study is that it involved a non-representative community sample recruited via an online panel (Qualtrics Panels). As such, future research might seek to establish whether the extent and nature of IBSA perpetration reported here is similarly found not only across additional country sites, but with representative samples. Further, our findings suggest that it is important to control for a range of factors, including experiential characteristics such as online dating and sexual selfie behaviors, in determining demographic predictors of IBSA perpetration. Finally, given the overlap between IBSA perpetration and victimization, future research could further seek to investigate the directional nature of this relationship and whether there are gender and other differences between initial IBSA perpetration and 'retaliatory' IBSA perpetration.

Conclusion

The perpetration of creating or taking, distributing, or threatening to distribute intimate images of a person without consent is increasingly criminalized in numerous jurisdictions globally. The study reported here represents the first comprehensive exploration of each of these three forms of IBSA perpetration in a substantial multi-country sample. Results indicate that IBSA perpetration is relatively common. That overall, one in three respondents surveyed self-reported that they had engaged in at least one form of IBSA perpetration, whilst approximately one in thirteen respondents self-

reported that they had engaged in all three forms, is suggestive of a widespread engagement in these image-based harms. Importantly, the findings here indicate that IBSA perpetration is a significantly gendered phenomenon, and that it is highly relational in nature, with most perpetration behavior directed at intimate partners, ex-partners and friends, in similar proportions. A further vital contribution of this study is the finding that attitudes that minimize the harms and excuse the perpetrators of IBSA are strongly linked with IBSA perpetration. Future research should seek to better understand this connection, as it may be an important target for education and prevention to reduce and ultimately stop this form of technology-facilitated abuse.

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Table 1

Lifetime Prevalence of IBSA Perpetration as a function of Respondent Country

	Country			
	UK	Australia	NZ	Total
	% (*n*)	% (*n*)	% (*n*)	% (*n*)
Intimate images taken**	14.6 *(297)*$_a$	14.8 *(304)*$_b$	18.1 *(366)*$_{a,b}$	15.8 *(967)*
Intimate images distributed***	10.0 *(202)*$_a$	9.1 *(186)*$_b$	12.8 *(260)*$_{a,b}$	10.6 *(648)*
Intimate images threatened**	8.2 *(167)*$_a$	7.6 *(156)*$_b$	10.5 *(213)*$_{a,b}$	8.8. *(536)*
Any IBSA victimization**	16.5 *(335)*$_a$	16.2 *(332)*$_b$	19.9 *(403)*$_{a,b}$	17.5 *(1070)*
All three forms IBSA victimization***	7.1 *(144)*$_a$	6.6 *(135)*$_b$	9.9 *(200)*$_{a,b}$	7.8 *(479)*

Note. Column percentages sharing subscripts are significantly different. ** $p < .01$. *** $p < .001$.

Table 2

Lifetime Prevalence of IBSA Perpetration as a function of Respondent Gender

	Respondent gender		
	Female	Male	Total
	% (*n*)	% (*n*)	% (*n*)
Intimate images taken***	11.4 *(363)*	20.6 *(604)*	15.8 *(967)*
Intimate images distributed***	7.2 *(230)*	14.3 *(418)*	10.6 *(648)*
Intimate images threatened***	5.8 *(184)*	12.0 *(352)*	8.8. *(536)*
Any IBSA victimization***	13.1 *(417)*	22.3 *(653)*	17.5 *(1070)*
All three forms IBSA victimization***	5.1 *(163)*	10.8 *(316)*	7.8 *(479)*

Note. *** $p < .001$.

Table 3

Frequencies and Descriptives for the 13 Respondent Characteristics by Lifetime Prevalence of IBSA Perpetration

	Yes		No	
	%	*n*	%	*n*
Demographic characteristics				
Respondent country**				
UK	16.5	335	83.5	1693
Australia	16.2	332	83.8	1722
NZ	19.2	403	80.1	1624
Respondent gender***				
Female	13.1	417	86.9	2764
Male	22.3	653	77.7	2275
Respondent sexuality***				
Heterosexual	16.1	876	83.9	4554
LGB	28.6	194	71.4	485
Respondent racial/ethnic identity***				
White/European/Pākehā	16.0	721	84.0	3777
Indigenous & BAME	21.7	349	78.3	1262
Respodent disability/assistance needs***				
No assistance required	11.2	532	88.8	4218
Assistance required	39.6	538	60.4	821
Experiential characteristics				
Online dating behaviors***				
No	3.5	55	96.5	1517

Yes, one or more	22.4	1015	77.6	3522
Sexual self-image behaviors***				
No	4.6	123	95.4	2550
Yes, one or more	27.6	947	72.4	2489
IBSA victimization (taken)***				
No	6.2	252	93.8	3828
Yes	40.3	818	59.7	1211
IBSA victimization (distributed)***				
No	8.1	393	91.9	4438
Yes	53.0	677	47.0	601
IBSA victimization (threatened)***				
No	9.3	460	9.7	4507
Yes	53.4	610	46.6	532

	Yes		No	
	M	*SD*	*M*	*SD*
Demographic characteristics				
Age***	34.11	11.83	40.07	13.57
Attitudinal characteristics				
Minimize/excuse***	3.49	1.50	2.29	1.08
Blame***	4.20	1.43	3.70	1.62

Note. ** $p < .01$. *** $p < .001$.

Table 4

Summary of the Initial and Final Logistic Regression Models Predicting Lifetime Prevalence of IBSA Perpetration

	Initial model					Final model				
	B	*SE*	*p*	*OR*	95% CI	*B*	*SE*	*p*	*OR*	95% CI
Demographic characteristics										
Respondent country			.922					.013		
UK	0.04	.16	.689	1.07	[0.78, 1.46]	-0.29	.10	.004	0.75	[0.61, 0.91]
Australia	0.04	.16	.813	1.04	[0.76, 1.41]	-0.20	.10	.050	0.82	[0.67, 1.00]
Respondent gender	0.32	.13	.015	1.38	[1.07, 1.79]	0.46	.09	< .001	1.59	[1.34, 1.88]
Respondent sexuality	0.18	.16	.269	1.19	[0.87, 1.64]	-	-	-	-	-
Respondent age	0.01	.01	.430	1.01	[0.99,	-	-	-	-	-

					1.02]					
Respondent racial/ethnic identity	0.40	.14	.004	1.49	[1.14, 1.96]	-	-	-	-	-
Respondent disability/assistance needs	1.50	.14	< .001	4.49	[3.42, 5.91]	0.70	.09	< .001	2.01	[1.67, 2.41]
Attitudinal characteristics										
Minimize/excuse	0.56	.07	< .001	1.76	[1.53, 2.02]	0.31	.04	< .001	1.36	[1.27, 1.46]
Blame	-0.16	.07	.017	0.85	[0.74, 0.97]	-	-	-	-	-
Experiential characteristics										
Online dating behaviors	0.05	.30	.859	1.06	[0.58, 1.91]	0.79	.17	< .001	2.20	[1.59, 3.05]
Sexual self-image behaviors	0.58	.25	.023	1.78	[1.08, 2.93]	0.95	.12	< .001	2.59	[2.03, 3.94]

IBSA victimization (taken)	0.01	.23	.958	1.01	[0.65, 1.58]	-	-	-	-	-
IBSA victimization (distributed)	1.34	.22	< .001	3.83	[2.48, 5.93]	0.92	.14	< .001	2.51	[1.92, 3.29]
IBSA victimization (threatened)	1.26	.20	< .001	3.52	[2.38, 5.21]	0.15	.20	.466	1.16	[0.78, 1.73]
IBSA victimization (taken) x IBSA victimization (threatened)	-	-	-	-	-	0.83	.25	.001	2.30	[1.41, 3.75]

Note. Reference categories: respondent country = NZ, respondent gender = female, respondent sexuality = heterosexual, respondent racial/ethnic identity = White/European/Pākehā, respondent disability/assistance needs = no assistance required, online dating behaviors = no, sexual self-image behaviors = no, IBSA victimization (taken) = no, IBSA victimization (distributed) = no, IBSA victimization (threatened) = no.