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Nonconsensual sharing of private sexually explicit media among university students

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**Title:** Non-consensual sharing of private sexually explicit media amongst  
university students

**Running Title:** Non-consensual sharing sexually-explicit media

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### **Abstract**

This research was the first in the U.K. to examine the prevalence and nature of non-consensual sharing of sexually explicit messages, pictures, and videos and to examine if this varies according to gender and by role (i.e. perpetrator, victim or as dual role of perpetrator/victim). In a sample of 391 young adults (aged 18-25 years) questionnaire data on subjective norms, consensual and non-consensual sharing, and their motivations for these behaviors were collected. Perpetration of and victimization through non-consensual sharing was experienced by a substantial number of individuals. There was an association between reporting perpetration of non-consensual sharing and experiencing victimization. An association was also found between reporting being pressured (i.e., coerced) to send sexually explicit material and experiencing victimization of non-consensual sharing, which suggests that these behaviours may form part of a continuum of violence and abuse, potentially within intimate relationships. No association was found between gender and (i) perpetration or (ii) victimization. However, from a gendered perspective, females perceived there was greater social pressure to post messages, pictures and videos, compared with males. Motivations for non-consensual sharing were commonly explained as for fun/a joke, and generally not thought of as problematic, although some victims perceived motivations to be more negative and/or related to revenge/causing distress. Given that this research examined non-consensual sharing across messages, pictures and videos for both victimization and perpetration and found it was both perpetrated and experienced by females and males, this does not support the common perception that this is a male perpetrated behaviour against women. This has implications for education, policy, intervention and prevention, with approaches needing to be inclusive of both males and females when addressing perpetration and victimization.

*Keywords:* Revenge pornography; image-based sexual abuse; sexting; technology-facilitated sexual violence; consent.

## **Non-consensual sharing of private sexually explicit material amongst university students**

Developments in mobile and internet technologies mean that individuals, particularly young adults, use a range of devices (e.g., phones, computers, tablets) to engage in diverse behaviors that involve sexual content, topics, and stimuli, that has collectively been named online sexual activity (OSA; Shaughnessy, Fudge, & Byers, 2017). OSA is commonly used within interpersonal relationships to maintain intimacy, but also as a means of self-expression, self-definition, and self-representation (Attwood, 2009). This behavior can form part of healthy relationships, for fun and flirtation (e.g., Albury & Crawford, 2012; Burkett, 2015; Drouin, Vogel, Surbey, & Stills, 2013), to initiate sexual relationships and activity (Drouin et al., 2013; Henderson & Morgan, 2011), as a means of maintaining intimacy when distance separates relationships (Drouin et al., 2013; Walker, Sanci, & Temple-Smith, 2013), and for intimacy, sexual arousal and pleasure (Burkett, 2015; Yeung, Horyniak, Vella, Hellard, & Lim, 2014).

However, at times, this behavior may not be healthy, and may become problematic (Burkett, 2015; Drouin & Tobin, 2014; Drouin, Ross, & Tobin, 2015; Ross, Drouin, & Coupe, 2016; Walker et al., 2013). For example, Drouin et al. (2015) found in their sample of college students, that a fifth had experienced being coerced and pressured into sending sexually explicit images or messages, and that these individuals experienced higher rates of sexual coercion and intimate partner violence. Likewise, Ross et al. (2016) found in their sample of 885 undergraduates ( $M_{age} = 20.43$  years) that 8% had been coerced into sending sexually explicit messages or pictures, and this was related to negative mental health problems, sexual issues, and attachment dysfunction. In addition, this behavior is also unhealthy, when sharing with others occurs without the consent of those depicted (see Authors, 2017), and it is specifically this non-consensual sharing of private sexually explicit material in young adults, that is the focus of the current paper.

In England and Wales, the Criminal Justice and Crime Act (2015) criminalizes components of this behavior, whereby it is an offence to share without consent, and with the intention of causing distress “photographs or films which show people engaged in sexual activity, or depicted in a sexual way, or with their genitals exposed, where what is shown would not usually be seen in public” (CJCA 2015 s33 (1); The National Archives 2015). Likewise, in certain states within the U.S. and also countries such as Japan (Dawkins, 2015; Matsui, 2015), similar legislation has also been introduced, underlining the

harmful impact that this behavior can have for some individuals. However, as noted by Eaton, Jacobs, and Ruvalcaba (2017) there is very little research that has established the impact of non-consensual sharing (described as non-consensual pornography in their study). They found that in a U.S. general population study that individuals who had experienced non-consensual sharing of their photos reported significantly worse mental health outcomes and higher levels of physiological problems than individuals who had not experienced these behaviours. Therefore, we need to develop a more in-depth understanding of this behavior, particularly if people are engaging in this behavior without understanding the potentially criminal nature of their actions.

A recent review by Authors (2017) determined that there was no clear consensus on the definition of non-consensual sharing, meaning that it is difficult to get an accurate picture of the prevalence and nature of this behavior. For example, in relation to victimization, Borrajo, Gámez-Guadix, and Calvete (2015), identified that of their 433 participants, 5.1% had been victims, based on whether anyone had disseminated their intimate information or compromising images (on instant messages, social media, or email) in the last six months. Conversely, Dir and Cyders (2015) found victimization rates of 12%, based on an open question about any negative experience of sexting ever, asking if participants '*Had sent a sext to someone, who later spread the sext around to other people.*', but this rate was higher at 42% when they were asked if they had a friend who had experienced this. In relation to perpetration, prevalence rates of 0.7% (males) and 1.1% (females) have been found in a sample of 321, 17-22 years old based on asking if they had within the last 12 months, '*Shared a sexually suggestive image of your partner without permission*' (Reed, Tolman, & Ward, 2016). However, a higher rate of 26% was found in a similar aged sample, when asked if they had ever '*Forwarded or shared a sext with good friend*' (Strohmaier, Murphy, & DeMatteo, 2014). Based on this review of the literature, the Authors (2017) defined non-consensual sharing as "the sharing of sexually explicit images (including photographs) and/or videos, without the consent of those depicted" (p.10). This definition was adopted for the current study; however, importantly this study has broadened the focus to also investigate the non-consensual sharing of electronic messages. As no U.K. research, thus far, has examined prevalence of non-consensual sharing of messages, pictures, and videos within a young adult sample, this paper will be the first to address this gap in knowledge.

Furthermore, only one study published to date (Reed et al., 2016) has examined gender differences in the perpetration of non-consensual sharing, with the authors finding that in their sample of 365 undergraduate students (57% female), aged 17-22 years, there were no significant differences in relation to the sharing of sexually suggestive images without permission. Four studies have examined gender difference in relation to victimization (Borrajó et al., 2015; Gámez-Guadix, Almendros, Borrajó, & Calvete, 2015; Priebe & Svedin, 2012; Reed et al., 2016), with only Borrajó et al. (2015) finding a gender difference in their sample of 433 participants (160 males, 260 females, 13 unknown), aged 18-30 years, with males reporting significantly higher levels of victimization in relation to non-consensual sharing of intimate information or compromising images. This is despite a general perception that experiencing the non-consensual sharing of private sexually explicit material is exclusively a female issue, particularly in light of media influence and reporting, and the fact that high profile cases (of general public and celebrities) tend to involve female victims (e.g., *The Guardian*, 2013). This study will therefore be unique in examining gender differences in both perpetration and victimization across non-consensual sharing of multiple types of private sexually explicit material, i.e., messages, pictures, and videos. This is important given the misperceptions that may exist in this topic area and adds clarity to context of how non-consensual sharing manifests.

A second component to the current study relates to subjective norms and attitudes about non-consensual sharing. Given that the Theory of Reasoned Action (Ajzen & Fishbein, 1980) pertains that behavior can be predicted by a person's attitudes and subjective norms, it is important to also examine whether norms and/or attitudes about non-consensual sharing predict perpetration of non-consensual sharing across the three types of electronic material: messages, pictures, and videos. Attitudes have been defined as an individual's perception of the positive or negative consequences associated with a certain behavior and the importance placed by the individual on such consequences (Ajzen, 1988). Subjective norms, however, reflect the attitudes of influential people (friends, family, partner) towards the behavior (Ajzen & Fishbein, 1980). Hudson and colleagues (Hudson, Fetro, & Ogletree, 2014; Hudson & Fetro, 2015) found that sexting attitudes and subjective norms (i.e., sending, posting sexually suggestive electronic material) were related to sexting behaviors. However, no prior research has examined whether attitudes and/or norms predict the perpetration of non-consensual sharing across isolated material types

(i.e., messages, pictures, videos), which will be tested in this current study. As such, this will develop our theoretical understanding of how associated attitudes and/or norms relate to the perpetration of non-consensual sharing. This will provide a test of the Theory of Reasoned Action within a new arena, thus extending the body of literature that has applied this model to our understanding of behaviour.

In addition to this, in developing our understanding of non-consensual sharing, an important factor to consider is the motivation and reason for engaging in this behavior. A type of non-consensual sharing that is gaining attention from researchers, the media, and policy makers is termed as ‘revenge pornography’. Bates (2017) interviewed 18 female survivors who had experienced a range of incidents in which images were shared with the specific motivation of revenge. Negative mental health impacts included: trust issues; PTSD, anxiety and depression; and destroyed self-esteem and confidence and loss of control. ‘Revenge pornography’ is a term that has been generated by the media and it has been suggested that this label is a misnomer (Franks, 2015), based on the fact that not all perpetrators are motivated by revenge and not all images serve a purpose of pornography (Henry & Powell, 2016). As such, given the nature of this behavior and its impact, it has been suggested that more fitting labels for the phenomenon include ‘non-consensual pornography’ (Citron & Franks, 2014; Franks, 2015) ‘image-based sexual exploitation’ (Henry & Powell, 2016) or the term gaining most momentum in the literature, ‘image-based sexual abuse’ (McGlynn, Rackley, & Houghton, 2017). This recognises that non-consensual sharing may be undertaken simply as ‘a joke’ or for ‘humor’ (Burkett, 2015; Goggin & Crawford, 2011). Burkett (2015) highlighted that individuals see non-consensual sharing as a ‘joke between us girls’ and that in the context of friendships such behaviors were ‘funny’ and ‘light hearted’ and shouldn’t be seen as ‘offensive’ or ‘sexual’ (p. 846). Others (e.g., Ringrose, Gill, Livingstone, & Harvey, 2012; Ringrose & Harvey, 2015; Yeung et al., 2014) have suggested that this behavior is a method of bonding with friends and boasting, showing off and to gain popularity among peers. Indeed, Ringrose and Harvey (2015) suggested that boys, in particular, shared images with other boys and girls on their phones as a way of showing off. Likewise, Yeung et al. (2014) through focus group discussions with 39 participants aged 16 to 25 years, found that sexually explicit pictures or text messages were seen as ‘trophies’ that could be shared non-consensually, in order for individuals to demonstrate sexual success to others (p. 335).

One particularly disturbing motivation behind non-consensual sharing of sexually explicit material is when this behavior is initiated and used within the context of intimate partner violence and abuse (IPVA). Drouin et al. (2015) suggest that experiencing coercion to send sexually explicit material needs to be considered as part of the IPVA construct. A recent study by Morelli, Bianchi, Baiocco, Pezzuti, and Chirumbolo (2016), of 715 participants aged 13- 30 years ( $M_{age}=22.01$ ) found that the sharing of sexts about a partner without his/her consent predicted dating violence perpetration (also moderated through benevolent and hostile sexism). The authors concluded that while non-consensual sharing is often conceived as a joke by young people, it can actually have dramatic consequences as the behavior becomes part of a continuum of violence towards a partner. Similarly, Henry and Powell (2015), note that while non-consensual sharing is often done in the context of relationship breakdown to humiliate an ex-partner or friend, it is also the case that perpetrators of IPVA are increasingly using sexual imagery as a device to threaten, harass and control, both current and previous partners.

It remains the case, however, that in the UK we still have little understanding of non-consensual sharing of private sexually explicit material in young adults including accurate prevalence levels, the relevance of attitudes and/or norms about this behavior, nor an understanding of the motivations behind this behavior (including revenge pornography). Research to date has primarily been conducted in the U.S. and furthermore, no cross-national examinations of these behaviors exists, so it is currently unknown if non-consensual sharing prevalence, attitudes and motivations are fundamentally different across countries and cultures. In addition, young adults are of particular interest, because emerging adulthood (18–25 years) is a period that is characterized by exploration in the areas of sexuality, romantic relationships, identity, and values, as well increased participation in risk behaviors (Arnett, 2006). This gap in our understanding means that it is challenging to develop appropriately targeted policy that can shape responses to perpetration and victimization. This is particularly important given that there may be a gendered nature to this behavior and also with respect to potential links with intimate partner violence.

The prior literature has used a range of qualitative and quantitative research methods to provide some background to this topic area. Based on the objectives of the research, using a combination of these methods was the best approach to enable the researchers to address these questions; therefore, this



study used a within stage mixed model design as advocated by Johnson and Onwuegbuzie (2004). For the current study, the data were gathered concurrently with an emphasis on quantitative methods that is then complemented by qualitative approaches. The following objectives were examined within the analysis of the data:

1. Determine the nature and prevalence of consensual and non-consensual sharing of sexually explicit material (messages, pictures, and videos) among U.K. young adults;
2. Identify the reasons given for engaging in non-consensual sharing of sexually explicit material.

In addition, the following hypotheses tested in this study were

1. There will be an association between gender and experiences of perpetration and victimization of non-consensual sharing of sexually explicit material (messages, pictures, and videos);
2. There will be an association between perpetration of and experiencing victimization of non-consensual sharing;
3. There will be an association between coerced sending and victimization of non-consensual sharing of sexually explicit material (messages, pictures, and videos);
4. Subjective norms and attitudes about sending and sharing sexually explicit material (messages and pictures) will predict the perpetration of non-consensual sharing of such material;
5. There will be gender differences in the endorsement of subjective norms and attitudes about consensual and non-consensual sharing of sexually explicit material

## **Method**

### **Design**

A between-subjects within stage mixed model survey design was employed. Following Johnson and Onwuegbuzie's (2004) approach to mixed methods, we gathered quantitative and qualitative data concurrently. Binary categorical data was gathered with regards to gender of participant, experiences of victimisation, engagement in perpetration, experiencing coercion in the sharing of sexually explicit material. Scale variables that were gathered included subjective norms and attitudes in relation to non-consensual sharing. . Finally, qualitative data were gathered regarding motivations for engaging in perpetration of non-consensual sharing and perceived motivations in cases of experiences of victimisation. The data were gathered concurrently, but with a dominant focus on quantitative data. As

suggested by Johnson and Onwuegbuzie (2004) the findings from the quantitative and qualitative data will be integrated to complement and contribute to our understanding of non-consensual sharing.

### **Participants**

Undergraduate students enrolled at one of three universities in England studying either Psychology and/or Criminology were recruited to take part in the study. Using G\*Power, with an alpha of .05, a power of 0.80, and with an  $f$  value of 0.15, a reported a sample size of 352 was required, which is achieved with the current sample. The total sample of participants consisted of 391 participants ( $n = 321$  females,  $n = 70$  males) with a mean age of 20.44 years (range 18-25 years,  $S.D. = 1.59$ ). In relation to ethnicity, 53.70% identified as being from a White background, 19.17% identified as being from an Asian background, 14.32% identified as being from a Black background, and 12.81% identified as being from Mixed/Other backgrounds. Statistics from England and Wales shows the population broadly comprises 86% White, 7.5% Asian, 3.3% Black, and 3.2% from Mixed/Other backgrounds (Office for National Statistics, 2012). This means that this sample is over-represented of minority populations compared to the general population.

For use of technology, it was identified that 94.88% have/use a laptop, 96.42% have/use a mobile phone/smartphone, and 47.57% have/use a tablet. Regarding their online presence, 96.68% have a profile on a social networking site, 95.65% view others' profiles and/or pictures on social networking sites, and 21.48% have a profile on a dating site or application. When communicating with others using technology, 96.93% send/receive text messages, 97.95% send/receive instant messages, 95.65% use their mobile phone to send/receive pictures or videos, 88.75% post photos online, 15.53% post videos online, and 86.96% use video chat.

### **Materials**

An adapted version of the questionnaire used within the Sex and Tech: Results from a survey of teens and young adults survey (National Campaign to Prevent Teen and Unplanned Pregnancy, 2008) was implemented in the current study. The questionnaire comprised mainly of original items as found in the Sex and Tech, but some were adapted to refer to non-consensual sharing e.g., "Have you ever shared sexy messages with other individual(s) without the consent of the sender?" If so, who have you shared them with?". The Sex and Tech has been used in a number of studies previously (Crimmins &

Seigfried-Spellar, 2014; Hudson & Fetro, 2015); however, to our knowledge, no validity testing of this scale has been carried out. Hudson et al. (2015) reported a Cronbach alpha of .81 for the original scale, demonstrating an excellent level of reliability. The adapted version began by gathering demographic data from the participant (gender, age, and ethnicity), followed by a section that asked subjective norms and attitudes about the consensual and non-consensual sharing of sexually explicit material (described as sexy messages, sexy pictures, and sexy videos). Within the survey, 'sexy messages' were defined as sexually suggestive written electronic personal texts, emails, instant messages etc., not including messages received as spam. 'Sexy pictures' were defined as electronically (e.g., on a mobile phone or digital camera) captured sexually suggestive, semi-nude, or nude personal pictures taken of oneself (alone or by a friend), and not those found on the internet, received from a stranger (such as spam). The definition of 'sexy videos' was the same as the definition of pictures (with the word video substituted where appropriate).

#### **Attitudes and Subjective norms.**

Attitudes and subjective norms were measured using 18 and 11 questions respectively, asking in relation to messages, pictures and videos (based upon Hudson, Fetro, & Ogletree's [2014] use of the Sex and Tech survey items). Attitudes are defined as an individual's perception of the positive or negative consequences associated with a certain behavior and the importance placed by the individual on such consequences (Ajzen, 1988). As such, an example attitude question used is "One has to be aware that sexy pictures may end up being seen". Whereas, subjective norms reflect the attitudes of influential people (friends, family, partner) towards the behavior (Ajzen & Fishbein, 1980). As such, an example subjective norm question was "Sharing sexy pictures with people other than one(s) they were meant for". The response set for all attitudinal questions, and one of the subjective norm questions (pressure to post sexy messages/pictures/videos) was on a five-point Likert scale of "Strongly disagree" to "Strongly agree". For the three remaining questions about subjective norms, the response set was a four-point Likert scale of "Not common at all" to "Very common". In the current study Cronbach alpha for the subjective norm and attitude items was .86 and .74 respectively.

#### **Behaviours regarding consensual and non-consensual sharing.**

The final section of the questionnaire asked about consensual sharing (ever, i.e., lifetime) of the three types of sexually explicit material and then asked questions about the non-consensual sharing of such material. These latter questions asked about victimization (e.g., “Has someone else ever shared, without your consent, sexy messages that you had sent to them?”) and perpetration of non-consensual sharing (e.g., “Have you ever shared sexy pictures with other individual(s) without the consent of the sender?”). These data were binary coded so that the answer to these questions was 0 for “No”, and 1 for “Yes”. Questions in this section also determined how the sharing occurred and with whom the material was shared.

### **Motivations regarding non-consensual sharing.**

Short qualitative questions were asked in relation to both perpetration and victimization to determine the (perceived) reasons why the non-consensual sharing occurred (e.g., “Please state all reasons for why you shared these sexy pictures”; “Please state why you think they shared these sexy pictures”).

### **Procedure**

This study was approved by each of the three Universities’ Ethics Committees and followed the guidelines of the British Psychological Society. To maximise recruitment, data collection used two methods: online ( $n = 323$ ) through Bristol Online Survey and traditional paper-based ( $n = 68$ ) methods. At site 1, both of these methods were used, at sites 2 and 3 only online data collection was used. No significant differences were found across the variables measured in this study between the participants who completed the study online compared with those who completed the study in a paper-based format.

For all data collection, opportunity sampling was used as participants were invited to take part in the study through a Research Participation Scheme. Through these schemes, students take part in research studies to gain course credit. Informed consent was obtained from all participants prior to completion of the questionnaire. Participants were only identifiable by a self-selected participant number (paper-based recruitment) or by an automatically assigned number (online data collection) enabling confidential participation in the survey. They could withdraw at any stage of the survey and were informed of their right to withdraw post-survey completion up to an end date of the data collection stage. Following completion of the study, participants were fully debriefed.

## Data analysis

As the data were largely categorical in nature, chi-square analyses were run to assess associations within the sample. Equivalent comparison group sizes are not an assumption of chi-square, however it is important that in each cell size of any analysis, no expected value should be less than five (Field, 2013). This was achieved for all chi-square analyses reported below, which means all of the analyses of gender using chi-square were sufficiently powered. There is a lack of consistent sample size calculations for one-way MANOVA, so a power analysis was run for the follow-up ANOVAs. The sample size was achieved as reported in the participant section.

For the measures of attitudes and subjective norms, in order to test the measurement model, a set of CFA models were implemented in Mplus7.1. For subjective norms, four first order factors corresponding to the four behaviours assessed (i.e. sending, sharing, posting, peer pressure) were defined. Each first order factor was defined by its own indicators, corresponding to the different media used (i.e. message, picture, video). A second order factor was then posited. Since subjective norm items related to sending, sharing, and posting were assessed on a 4-point Likert scale, data were defined as categorical and WLSMV (Weighted Least Square Mean and Variance Adjusted) estimator was used.

The initial fit was critical, with only CFI supporting the goodness of the model:  $\chi^2 = 258.549$ ,  $df=40$ ,  $p<.001$ ; RMSEA = .118 (C.I. = .105 - .132),  $p<.001$ ; CFI = .983. The main problem was related to the three items referring to peer pressure that seem unrelated to the others. Therefore, the factorial model was redefined including an independent Peer Pressure factor correlating with the General Subjective Norm second order factor. Considering the structure of the measure, the error terms of the items referring to the same medium (i.e. message, picture and video respectively) were allowed to correlate among each other. Although the fit improved, it was still critical:  $\chi^2 = 136.562$ ,  $df=33$ ,  $p<.001$ ; RMSEA = .090 (C.I. = .074 - .105),  $p<.001$ ; CFI = .992. In order to keep the model more parsimonious, it was then redefined fixing to 0 the correlation between error terms of items referring to the same medium that

resulted not significant. In addition, after exploring modification indices, the error terms for items Q7a and Q7c were allowed to correlate. The final fit was very good:  $\chi^2 = 110.102$ ,  $df=35$ ,  $p<.001$ ; RMSEA = .074 (C.I. = .059 - .090),  $p=.006$ ; CFI = .994.

For attitudes, a CFA model was set up defining six I order dimensions and a II order factor. Since attitudes items were assessed on a 5-point Likert scale and were substantially normally distributed, data ML (Maximum Likelihood) estimator was used. In addition, in this case initial fit indices were quite critical:  $\chi^2 = 459.648$ ,  $df=129$ ,  $p<.001$ ; RMSEA = .081 (C.I. = .073 - .089),  $p<.001$ ; CFI = .870. The main problem was related to the three items referring to “not being a big deal” that seem unrelated to the others. Hence, the factorial model was redefined including an independent factor NBD factor to the General Attitude second order factor. Furthermore, consistently with the model posited for Subjective Norms, the error terms of items referring to the same medium (i.e. message, picture and video respectively) were allowed to correlate. The associated fit was very good:  $\chi^2 = 178.402$ ,  $df=99$ ,  $p<.001$ ; RMSEA = .045 (C.I. = .035 - .056),  $p=.749$ ; CFI = .969. The final model the correlations between error terms that were not significant ( $p>.001$ ) were fixed to 0 for parsimony. The corresponding fit indices was still very good:  $\chi^2 = 259.749$ ,  $df=119$ ,  $p<.001$ ; RMSEA = .055 (C.I. = .046 - .064),  $p=.168$ ; CFI = .944.

For the qualitative questions posed within the study, the responses in relation to perpetration and victimization of non-consensual sharing were very brief and therefore a formal analytical method was not used. However, Braun and Clarke's (2006) thematic analysis method was applied to ensure a structured analysis of the data was completed using both an inductive and deductive approach. This process of analysis includes an initial phase of familiarisation in which the researcher ensures that they are familiar with the breadth and depth of the content of the responses. The second phase involves generating initial codes, which identify the features of the data, following by searching for themes in which initial codes are then categorised into broader themes. In the final stages of analysis, these initial

themes were then reviewed, refined and categorised into motivations for non-consensual sharing. For further details about the descriptive data regarding these qualitative responses, please see Table 1.

INSERT TABLE 1 ABOUT HERE

## Results

### **Determine the nature and prevalence of consensual and non-consensual sharing of private sexually explicit material (messages, pictures, and videos) among U.K. young adults**

In relation to the first objective, *consensual* sharing, in the whole sample, 71.10% had sent and 78.26% had received sexually explicit messages, 57.03% had sent and 59.08% had received sexually explicit pictures, and 27.62% had sent and 29.92% had received sexually explicit videos. The descriptive data in relation to whom this material was sent and received from and why it was sent is reported in Table 2. In relation to *non-consensual* sharing of sexually explicit material, the descriptive data for perpetration and victimization in the whole sample are reported in Table 3. The subsequent percentages relate to the subsamples of those identified as perpetrators or victims. As the samples were so small for perpetration and victimization of non-consensual sharing of sexually explicit videos, the data relating to whom and how this material was shared are not reported. As would be expected, it can be seen in Table 3 that the prevalence of both perpetration and victimization in relation to non-consensual sharing is much lower than consensual sharing e.g., 16.37% of the sample have perpetrated non-consensual sharing of pictures and 21.51% have experienced victimization of non-consensual sharing of messages. For both victimization and perpetration, these materials were most frequently shared with a close friend and were most frequently non-consensually shared by physically showing the other individual the material, or by forwarding the material through a messaging app or service.

INSERT TABLES 2 & 3 ABOUT HERE

### **Identify reasons and motivations for perpetration of and victimization of non-consensual sharing of sexually explicit material**

In relation to the second objective, open-ended questions were asked to ascertain the motivations of the perpetrators of non-consensual sharing of sexy messages, pictures and videos. These provided short text responses from the participants, with some participants identifying multiple reasons. Of those who responded to the question regarding perpetration of non-consensual sharing of messages, they reported

that their main motivations included: To discuss and seek advice ( $n = 29, 27.10\%$ ); for fun/as a joke ( $n = 29, 27.10\%$ ); to discuss but chat/ gossip about ( $n = 11, 10.28\%$ ); because they always share things like this with friend ( $n = 7, 6.54\%$ ); and to show off ( $n = 4, 3.74\%$ ). Of the participants who responded to the question regarding perpetration of non-consensual sharing of pictures, the main motivations included: For fun/as a joke ( $n = 13, 22.03\%$ ); to ask for advice, seek an opinion, or discuss ( $n = 11, 18.64\%$ ); because they always share things like this with friend ( $n = 5, 8.47\%$ ); to show-off ( $n = 3, 5.08\%$ ); to get attention ( $n = 3, 5.08\%$ ); to prove that they had received them ( $n = 3, 5.08\%$ ); and because they were asked to do so ( $n = 3, 5.08\%$ ). Finally, of the participants who responded to the question regarding perpetration of non-consensual sharing of videos, the main reason for sharing was for fun/as a joke ( $n = 7, 38.89\%$ ) or to feel sexy ( $n = 3, 16.67\%$ ).

Open-ended questions were also asked to ascertain the reasons victims thought that messages, pictures and videos of themselves were non-consensually shared (note these are therefore their perceptions of the motivations for their own victimization). Of the participants who responded to the question regarding experiencing victimization of non-consensual sharing of messages, the main perceived motivations included: to show off ( $n = 29, 35.37\%$ ); for fun/as a joke ( $n = 7, 8.54\%$ ); to get attention ( $n = 6, 7.32\%$ ); and for advice ( $n = 6, 7.32\%$ ); and for a range of negative reasons such as revenge ( $n = 2, 2.43\%$ ), jealousy, to shame or hurt the individual, anger, blackmail, insecurity and immaturity ( $n = 9, 10.97\%$ ). Of the participants who responded to the question regarding experiencing victimization of non-consensual sharing of pictures, the main perceived motivations included: to show off ( $n = 27, 55.10\%$ ); for revenge/cause distress ( $n = 7, 14.29\%$ ); and for fun/as a joke ( $n = 6, 12.24\%$ ). Finally of the participants who responded to the question regarding experiencing victimization of non-consensual sharing of videos, the main perceived motivation was for fun/as a joke ( $n = 4, 20.00\%$ ); to show off ( $n = 3, 15.00\%$ ).

**There will be an association between gender and experiences of perpetration and victimization of non-consensual sharing of sexually explicit material (messages, pictures, and videos)**

Three Chi-square tests were computed to examine whether there was an association between participant gender and perpetration of non-consensual sharing of sexually explicit messages, pictures, or videos. None of these three tests were significant ( $p > .05$ ), demonstrating that there is no association



between gender of participant and perpetration. Furthermore, three chi-square tests were run to assess whether there was any association between gender of participant and experiencing victimization through non-consensual sharing of sexually explicit messages, pictures or videos. None of these three tests were significant ( $p > .05$ ), demonstrating that there is no association between gender of participant and victimization. Therefore, hypothesis one is rejected.

**There will be an association between perpetration of and experiencing victimization of non-consensual sharing** Two chi-square tests were computed to assess whether there was any association between perpetration and victimization of non-consensual sharing of messages and pictures (this was not analyzed for videos due to the small sample size). There were significant associations between perpetration and victimization for both material types, meaning hypothesis two is supported. For messages,  $\chi^2(1) = 36.44, p < .001$ , based on the odds ratio, if participants had perpetrated non-consensual sharing of messages, then they were 6.83 times more likely to experience victimization. For pictures,  $\chi^2(1) = 19.33, p < .001$ , based on the odds ratio, if participants had perpetrated non-consensual sharing of pictures, then they were 5.32 times more likely to experience victimization.

There will be an association between coerced sending and victimization of non-consensual sharing of sexually explicit material (messages, pictures, and videos) Two chi-squares tested associations between being pressured to send (i) messages and (ii) pictures and victimization of non-consensual sharing of that same material. Both of these tests were significant, therefore hypotheses three is supported; for messages  $\chi^2(1) = 13.82, p = .001$  and for pictures  $\chi^2(1) = 40.37, p < .001$ . The odds ratio showed that if a participant reported being pressurized to send sexually explicit messages, then they were 4.19 times more likely to experience victimization. The odds ratio showed that if a participant reported being pressurized to send sexually explicit pictures, then they were 10.08 times more likely to experience victimization.

Subjective norms and attitudes about sending and sharing sexually explicit material (messages and pictures) will predict the perpetration of non-consensual sharing of such material The data were analyzed to determine whether subjective norms and attitudes predicted the perpetration of non-consensual sharing across both messages and pictures. The continuous predictor variables and binary outcome variable (0 = has not perpetrated non-consensual sharing, 1 = perpetrated non-consensual sharing) meant

that binary logistic regression was suitable for these analyses. Multicollinearity diagnostics were run and all VIF and Tolerance values were in the acceptable range, therefore no issues with multicollinearity were identified within this data set for these analyses. Two binary logistic regressions were run to examine whether three subjective norms predicted perpetration of non-consensual sharing of (i) messages and (ii) pictures. These norms were: (i) how common it is to send sexy messages/sexy pictures to someone else, (ii) how common it is to share sexy messages/sexy pictures with people other than the one(s) they were meant for, and (iii) that there is pressure among people my age to post sexy messages/sexy pictures in their networking site profiles. Neither of the models were significant.

To examine whether attitudes about sending and sharing sexually explicit messages/pictures predicted perpetration of non-consensual sharing of (i) messages and (ii) pictures, two binary logistic regressions were run with all predictors entered in step 1. For messages, two attitudes predicted perpetration of non-consensual sharing (see Table 4): (i) increased agreement that personal sexy messages end up being seen ( $b = .41$ , Wald  $\chi^2(1) = 6.26$ ,  $p < .01$ ) and (ii) increased agreement that sending sexy messages is not a big deal ( $b = .31$ , Wald  $\chi^2(1) = 6.74$ ,  $p < .01$ ). For pictures, the model was non-significant. The findings from these analyses meant that hypothesis four was rejected in relation to norms, but partially supported in relation to attitudes.

INSERT TABLE 4 ABOUT HERE

### **There will be gender differences in the endorsement of subjective norms and attitudes about consensual and non-consensual sharing of sexually explicit material Subjective norms.**

Gender differences were examined in relation to both subjective norms and attitudes about consensual and non-consensual sharing.

#### **Subjective norms.**

The first MANOVA determined gender differences in relation to subjective norms about sexy messages. Using Pillai's trace, this analysis was significant,  $V = 0.02$ ,  $F(3, 383) = 3.16$ ,  $p = .02$ ,  $\eta_p^2 = .03$ . Follow-up univariate ANOVAs on the dependent variables revealed that: females believed that there was significantly more pressure among their age group to post sexy messages in their social network sites ( $M = 3.26$ ,  $SD = 1.31$ ) than males ( $M = 2.85$ ,  $SD = 1.32$ ),  $F(1, 385) = 5.64$ ,  $p = .02$ ,  $\eta_p^2 =$

.01; females believed it was significantly more common for others to non-consensually share sexy messages ( $M = 2.44$ ,  $SD = 0.94$ ) than males ( $M = 2.19$ ,  $SD = 0.90$ ),  $F(1, 385) = 4.05$ ,  $p = .04$ ,  $\eta_p^2 = .01$ . However, there was no difference between males and females in relation to how common they believed the sending of sexy messages to others was.

The second MANOVA determined gender differences in relation to subjective norms about sexy pictures. Using Pillai's trace, this analysis was significant,  $V = 0.04$ ,  $F(4, 369) = 3.91$ ,  $p = .004$ ,  $\eta_p^2 = .04$ . Follow-up univariate ANOVAs on the dependent variables revealed that: females believed that there was significantly more pressure among their age group to post sexy pictures in their social network sites ( $M = 3.60$ ,  $SD = 1.28$ ) than males ( $M = 3.02$ ,  $SD = 1.40$ ),  $F(1, 372) = 10.93$ ,  $p = .001$ ,  $\eta_p^2 = .03$ ; females believed it was significantly more common posting sexy pictures of oneself online ( $M = 2.48$ ,  $SD = 1.02$ ) than males ( $M = 2.09$ ,  $SD = 0.94$ ),  $F(1, 372) = 8.25$ ,  $p = .005$ ,  $\eta_p^2 = .02$ ; females believed it was significantly more common for others to non-consensually share sexy pictures ( $M = 2.39$ ,  $SD = 0.95$ ) than males ( $M = 2.09$ ,  $SD = 0.89$ ),  $F(1, 372) = 5.57$ ,  $p = .02$ ,  $\eta_p^2 = .01$ . However, there was no difference between males and females in relation to how common they believed the sending of sexy pictures to others was.

The third MANOVA determined gender differences in relation to subjective norms about sexy videos. Using Pillai's trace, this analysis was significant,  $V = 0.04$ ,  $F(4, 369) = 3.91$ ,  $p = .004$ ,  $\eta_p^2 = .04$ . Follow-up univariate ANOVAs on the dependent variables revealed that: females believed that there was significantly more pressure among their age group to post sexy videos in their social network sites ( $M = 2.78$ ,  $SD = 1.32$ ) than males ( $M = 2.26$ ,  $SD = 1.34$ ),  $F(1, 364) = 14.41$ ,  $p = .004$ ,  $\eta_p^2 = .02$ ; females believed it was significantly more common for others to non-consensually share sexy videos ( $M = 2.06$ ,  $SD = 0.91$ ) than males ( $M = 1.81$ ,  $SD = 0.86$ ),  $F(1, 364) = 3.28$ ,  $p = .04$ ,  $\eta_p^2 = .01$ . However, there was no difference between males and females in relation to how common they believed posting sexy videos of oneself online was, and how common they believed the sending of sexy videos to others was. In relation to hypothesis five, this hypothesis is partially upheld.

### **Attitudes.**

The second analyses involved three MANOVAs with gender as the independent variable and attitudes about consensual and non-consensual sharing as the dependent variables. The first MANOVA determined gender differences in relation to attitudes about sexy messages. Using Pillai's trace, this was significant,  $V = 0.04$ ,  $F(6, 312) = 2.43$ ,  $p = .03$ ,  $\eta_p^2 = .05$ . Follow-up univariate ANOVAs on the dependent variables revealed that: females ( $M = 4.03$ ,  $SD = 0.95$ ) were significantly more likely than males ( $M = 3.57$ ,  $SD = 1.07$ ) to agree that sexy messages end up being seen ( $M = 4.03$ ,  $SD = 0.95$ ) than males ( $M = 3.57$ ,  $SD = 1.07$ ),  $F(1, 317) = 10.61$ ,  $p = .001$ ,  $\eta_p^2 = .03$ .

The second MANOVA tested for gender differences in attitudes about sexy pictures, this analysis was not significant. The third MANOVA assessed for gender differences in relation to attitudes about sexy videos. Using Pillai's trace, this was significant  $V = 0.37$ ,  $F(6, 353) = 2.27$ ,  $p = .04$ ,  $\eta_p^2 = .03$ . Follow-up univariate ANOVAs on the dependent variables revealed that: females agreed significantly more that individuals their age are more forward/aggressive using sexy videos than in real life ( $M = 3.69$ ,  $SD = 0.98$ ) than males ( $M = 3.21$ ,  $SD = 1.16$ ),  $F(1, 358) = 11.49$ ,  $p = .001$ ,  $\eta_p^2 = .03$ . As with subjective norms, regarding attitudes, hypothesis five is partially supported.

## Discussion

This research was the first to examine the nature of the perpetration *and/or* victimization of non-consensual sharing in a UK young adult university-based population; specifically examining prevalence, subjective norms and attitudes, gender differences in behaviors, the association with coercion and finally, the motivations behind such behaviors. In doing so, this research has further confirmed that a significant number of young people are sending and receiving sexually explicit material (see also Drouin et al., 2013). However, importantly, the findings have also demonstrated that there are a small, but substantial number of individuals who are perpetrating and/or experiencing victimization through non-consensual sharing of private sexually explicit material.

In relation to the first objective, this research has established that non-consensual sharing (both perpetration and victimization) most commonly occurred in relation to sexually explicit messages. It was found that around a quarter of this sample had perpetrated non-consensual sharing of sexually explicit messages, with fewer non-consensually sharing pictures (16%), then videos (4%). Likewise,

with victimization there was a similar pattern, where a fifth had experienced victimization through non-consensual sharing of sexually explicit messages, with fewer experiencing their pictures being shared (13%) then videos (4%). Comparison with prevalence levels reported in other studies and understanding how this might differ by country and therefore cross-nationally, is challenging due to the lack of consistency in the research methodologies. However, in relation to experiences of victimisation of non-consensual sharing of *images*, these were higher (at 13%) than those reported in Reed et al. (2016, 3%, U.S. study) and Borrajo et al. (2015, 5.1%, Spanish study). Regarding perpetration (*images*), prevalence was higher than that reported by Reed et al. (2016, 1.1%, U.S. study), but lower than Hudson et al. (2014, 35.2%, U.S. study) who examined prevalence of non-consensual sharing of *both images* and *videos*. A strength of our research is that it has determined prevalence according to the material type, whereas prior research (e.g., Hudson et al., 2014) has combined different material types together. To facilitate future comparisons of prevalence, research needs to adopt a consistent approach of measuring non-consensual sharing according to the material type.

The levels of non-consensual sharing of pictures are a more problematic issue than non-consensual sharing of messages in that they may fall within the domain of the Criminal Justice and Courts Act (2015), within England and Wales (if the intention behind the sharing is identified as “to cause distress”). This has significant implications for people’s lives if they do not understand that the behaviour that they are engaging in is potentially criminal. As reported earlier, given that approximately 16% of the sample had non-consensually shared pictures and 13% reported being victims, a proportion of the perpetrators may well have engaged in a criminal act (if their actions were deemed as having an intention to cause distress). There were occurrences of these materials being posted publicly, either through social media sites such as Facebook (e.g., approximately 3% of instances of victimization of non-consensual sharing of pictures) or through general websites (e.g., 5% of instances of victimization of non-consensual sharing of pictures); this, by its nature, is more likely to be seen as having intention to cause distress (more so than for example if the pictures were just shown to a friend) and therefore identified as a criminal act.

The levels of victimization found in the current study are equivalent to those in the extant literature. For example, Borrajo et al. (2015) reported that 2.9% of their sample had experienced a partner disseminating intimate information or compromising images about them on social media (note the

different phrasing to this question), although this was measured in the last six months opposed to ‘ever’ as in the current study. However, the levels of victimization in relation to posting on general websites is higher than previous studies have found. For example, Gámez-Guadix et al. (2015) reported that only 1.1% of their sample had ‘ever’ experienced victimization of non-consensual sharing on the internet of sexually explicit photos or videos. No previous study has specifically examined the prevalence of social media or online posting in relation to the *perpetration* of non-consensual sharing of sexually explicit pictures (or videos) before, so no comparisons can be made here. However, this study has found low levels of perpetration in terms of posting publicly on a social media site and no reports of posting pictures or videos publicly on a general website. It could therefore be the case, that this type of image-based sexual abuse is not being perpetrated within university populations in the U.K. (although more research would be required to assess for generalisability of these findings). Alternatively, due to the self-report nature of the research, and hence the potential for socially desirable responding around such behaviors, it is possible that there is some under reporting of this behavior.

For the second objective of this research, although, it has been discussed that non-consensual sharing needs to be considered within the continuum of IPVA, the data also suggested that sexually explicit material was not necessarily from intimate partners and that the motivation for sharing is not always for revenge, or done with malice within the context of an abusive (ex) relationship. In the current study, the main motivation given for the perpetration of non-consensual sharing was for fun/as a joke and was portrayed as something rather unremarkable by participants, suggesting that they do not necessarily identify this as being a problematic behavior. The motivation of fun/a joke was similarly found in research by Burkett (2015), who identified that sharing of sexually explicit material does not always occur within a specific ‘sexual context’ (i.e., for the purpose of arousal, flirtation) and that non-consensual sharing is often undertaken as a source of humor and a ‘joke’ with friends. Burkett (2015) identified that it is framed as being *commonly* accepted and *assumed* that such behaviors are intended to be ‘funny’ and ‘light hearted.’ However, as Burkett (2015) also identified, while this can be framed as a joke and light-hearted and that those looking at the images do so in a non-sexual way, the images can actually be misinterpreted and viewed through a sexualized lens. It could be argued that purely dismissing non-consensual sharing as a joke minimizes the potential harm that this may cause and the

possible impact that such a 'joke' may have on individuals' rights, reputation, and feelings. Jokes such as this are subjective, and what is seen as funny by the 'perpetrator' of the joke is not likely to be found as funny by the 'victim' of the joke. It has been suggested that use of humor can be maladaptive, where this is used to humiliate others and decrease their popularity (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003). This could suggest that although framing non-consensual sharing as a 'joke' and humorous, the motivation remains harmful and possibly with an intent to cause others distress (which then becomes a criminal offence). In addition, by framing this action as a joke this is perhaps also a way for individuals to justify their behavior and reduce potential cognitive dissonance (Festinger, 1962) that might arise from non-consensual sharing.

Similarly, a perceived reason and motivation for victimization i.e., the reasons why individuals *thought* they may have been victims of non-consensual sharing, was for fun/as a joke. However, revenge/cause distress as a motivation was also cited by victims (but not perpetrators, although this could be due to social desirability), with 14.29% victims reporting this as a perceived motivation (i.e., this was the victim's belief about what they thought the motivation was, which could not be confirmed/refuted by the perpetrators). If this is the case, such actions under the Criminal Justice and Crime Act (2015) would be deemed as a criminal offence which raises some interesting questions and challenges and major implications for criminal prosecutions. For example, victims are identifying and suggesting that the intent is to cause distress, but perpetrators are suggesting it is done for fun/as a joke; therefore how is the decision made as to if this is criminal, particularly in determining intent which is likely to be perceived differently by the victims and perpetrators. Likewise, even if distress was not the intention (showing off, seeking advice, to discuss), the behaviour could still cause distress and may leave individuals exposed to further sharing. However, the law is framed in relation to the intention of the perpetrator and not the many and various harms experienced by victims. Careful consideration is needed as to how we address the non-consensual sharing of sexually explicit material and how we establish and determine the boundaries of criminal and non-criminal behaviors, to protect victims and effectively deal with image-based sexual abuse regardless of the intention behind it.

Hypothesis one stated that there would be an association between gender and perpetration and victimisation, however, this hypothesis was rejected. No associations between gender and perpetration

and victimization of non-consensual sharing were found across either messages or pictures. The current study is the first to examine this across messages and pictures in relation to both victimization and perpetration. Of the four published studies that have examined gender and non-consensual sharing, only Borrajo et al. (2015) found a significant gender difference in relation to a partner disseminating intimate information or compromising images about them, finding higher levels of reported victimization in male participants compared with female participants. In determining the implications of our findings, in the potentially parallel literature of intimate partner violence and abuse (IPVA), gender differences remains a significantly contentious issue, with numerous articles devoted to arguing both for and against the existence of such differences (e.g., Dutton & Nicholls, 2005). This debate may be being mirrored in relation to non-consensual sharing and specifically ‘revenge pornography’, which is commonly viewed, particularly in the media, as a gendered crime. Our findings contest this depiction of non-consensual sharing and suggest that it is not helpful to continue to frame this behaviour as gendered, particularly as this is likely to be a barrier for men help-seeking. We know in relation to IPVA victimization, that males are less likely to report the occurrence and/or seek help and, when they do, they can experience several barriers such as finding support systems are for women only, that they are deemed to be the perpetrators and/or they are ridiculed and experienced gender-stereotyped treatment (Douglas & Hines, 2011). Data from the Revenge Pornography Helpline (GOV.UK, 2017) indicated that 75% of their callers were female victims, with only 25% being male, although it is not known how much this difference is due to under-reporting and reluctance to help-seek by males. Our findings show that these behaviors are perpetrated and experienced by *both* males and females at comparable levels. This needs to be reflected in support services, policy, and education, meaning changes are required in these domains so that both men and women are acknowledged as perpetrators and/or victims and support is tailored, accessible, and available for both genders.

The above observations are particularly important given that the current study also found an association between reporting perpetration of non-consensual sharing of sexually explicit messages and pictures and experiencing victimization of these material types. This supported hypothesis two. Again, there is evidence from the potentially parallel literature of IPVA that reciprocal use of partner violence is common in relationships (e.g., Cuenca Montesino, Graña Gómez, & Martínez Arias, 2015; Renner,



Schwab Reese, Peek-Asa, & Ramirez, 2015; Straus, 2011) in both physical violence (e.g., Langhinrichsen-Rohling et al., 2012) and psychological abuse (Follingstad & Edmundson, 2010). It is possible that we are therefore seeing similar reciprocation in relation to non-consensual sharing or that this behavior should be conceptualized within the framework of IPVA. Previous authors have suggested a link between revenge pornography and relationship violence (e.g., Henry & Powell, 2015), but this has only been tested by Morrelli et al. (2016) who found a correlation between a combined measure of dating violence and non-consensual sharing. However, the finding from the current study demonstrating an association between coercion and victimization suggests that this is of critical importance to examine further. This analysis supported hypothesis three. The findings from this study would fit with the gender symmetry model of IPVA aggression (e.g., Straus, 2011). This view argues that violence within relationships is bidirectional, with both partners engaging in violent behaviors, but that the underlying explanation why this occurs may be different e.g., in one relationship this may be retaliation by one partner in response to experiencing violence. This linkage needs to be explored in much more depth, particularly as the current study did not examine perpetration and victimization solely within relationships.

Subjective norms did not predict the perpetration of non-consensual sharing across the three material types in this current study, which meant that we rejected hypothesis four in relation to subjective norms. Previously, Hudson and Fetro (2015) found that subjective norms had the strongest influence, compared to attitudes and behavioral intentions, on whether an individual was a lifetime sexter. This was defined as having ever engaged in sexting behaviors such as sending, posting, Internet sending/posting, or sharing/forwarding sexy messages, sexy images, or both, which therefore may include an element of non-consensual sharing. However, this does not isolate this behavior, or examine this by material type, making it difficult to make inferences in relation to non-consensual sharing.

Two attitudes did predict perpetration of non-consensual sharing of messages: increased agreement that personal sexy messages end up being seen; and increased agreement that sending sexy messages is not a big deal. This meant that hypothesis four was partially supported in relation to attitudes. This suggests that perhaps beliefs about the commonality of a behavior and perceived risk about a behavior are associated with non-consensual sharing. Such beliefs may serve as source of justification for the

perpetration of such behaviors (or as offence supportive attitudes), and serve to minimize and reduce cognitive dissonance (Festinger, 1962) that may occur as a result of engaging in this type of behavior. The Theory of Reasoned Action (Ajzen & Fishbein, 1980), however, argues that attitudes and norms can influence behavior through behavioral intentions. Behavioral intentions were not measured in this study, so the full theory could not be tested. However, given the significant findings in relation to some attitudes being associated with perpetration means that the testing of this model is needed, specifically regarding behavioral intentions in the context of non-consensual sharing.

In examining gender differences in attitudes and subjective norms, only a few differences, with small effect sizes, were observed between genders. This meant that hypothesis five was partially supported. For example, females believed that it was significantly more common for others to non-consensually share pictures than males. However, medium effect sizes were found in relation to females perceiving there was more pressure to post pictures on social media and that messages end up being seen. No prior research has specifically examined these attitudes and norms, although Walker et al. (2013) did note that in their sample of adolescents, that perceptions about the pressure to be involved in sexting was shaped by gender dynamics, whereby girls felt coerced, bribed, or threatened into sending images. This finding that females perceive a greater social pressure to post messages, pictures and videos was aligned with the finding in our study, in that our study found that between 16-27% (across the three types of material) reported that their reason for sending sexually explicit material was being pressurized to do so.

The findings from this research need to be considered in the context of the research design. The research was reliant on self-report about personal, sensitive and possibly criminal behaviors (as participants had to be warned about the content of the CJCA). In relation to perpetration, participants' responses may be affected by social desirability. It is also possible that both victims and perpetrators might be embarrassed about sharing information on their sexual practices and so this may result in under reporting about experiences, although the findings in the current study are in line with those of other studies. To reduce the likelihood of this, all surveys were anonymous, with the majority being completed online. In relation to victimization, using self-report was reliant on individuals' perceptions of the occurrences so it could be argued that these might not necessarily be as accurate. For example,

individuals might not always be aware they are a victim of non-consensual sharing and if aware they can only surmise as to why a (ex)partner/other individual non-consensually shared. Finally, the sample consisted of fewer males, with only 18% ( $n = 70$ ) of the sample being male, although sufficient power was achieved to carry out the analyses and allowed for statistical comparisons to be made between the genders. This imbalance in the sample does mean that the findings are heavily influenced by females' experiences and behaviors. However, the sample characteristics enabled us to demonstrate that perpetration is not only evident in male samples (a common perception). Finally, this was a university-based student sample; given the limited nature of the research at the moment regarding non-consensual sharing, it is unclear whether this sample is generalizable to other populations.

In conclusion, this study has been the first to determine the prevalence of non-consensual sharing amongst a UK young adult sample, as well as providing a thorough examination of the role of subjective norms and attitudes, gender, and motivations in relation to non-consensual sharing. This has shown that there were no associations between gender and perpetration and victimization, but that there were associations between perpetration and victimization, as well as associations between being coerced to send sexually explicit materials and experiencing victimization. Some attitudes did predict perpetration of non-consensual sharing, however subjective norms did not predict perpetration. Finally, some gender differences were found in the endorsement of subjective norms and attitudes. As such, more research is required to develop our understanding of these elements, particularly in relation to determining the potential pathways following consensual sharing, coerced sharing or non-consensual taking (i.e., pictures/videos acquired without the knowledge of the person in them) of sexually explicit material to determine the decision-making process and motivations that may lead to perpetration and/or victimization. This will move the research forward from the findings from this current study, particularly in using a qualitative approach that could potentially better capture the process as it unfolds and therefore give a greater insight into all the different mechanisms (individual and contextual) that facilitate/promote or hinder the likelihood of non-consensually sharing. The work also needs to be extended to other populations e.g., adolescents and older generations.

Advancements in technology, social media, the worldwide web, electronic communication, and accessibility of technology for all ages comes with many advantages, opportunities and positives;

however, there are disadvantages, challenges and negative outcomes that can also arise. Based on the findings of the current study, information, education and policy that is gender inclusive needs to be developed to build an evidence-base to inform individuals that non-consensual sharing is a societal issue, which is perpetrated and experienced equally by both males and females. Existing legislation requires strengthening to better protect victims and therefore not based on proving the intention to cause distress by the perpetrator. Legislation needs to acknowledge the harm and impact caused to victims, regardless of the motivations behind the non-consensual sharing. Given the extent of non-consensual sharing in the population that was studied and the attitudes and beliefs found regarding this behaviour, more awareness raising is required for this age group in relation to legislation and the potential criminal implications, alongside the impact of their behaviours, regardless of the intention. As we create and build our digital footprints we are opening ourselves to the possibility of other people abusing this. We therefore need to drive policy and education to protect (potential) victims and effectively work with (potential) perpetrators through evidence-based prevention and intervention planning and delivery.

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Table 1: *Summary of descriptive data regarding qualitative questions*

Non-consensual sharing	<i>N</i>	Gender	Range length of response (words)	Mean (S.D.)
Perpetration: messages	10	(93 female, 28.97% of female sample; 14 male, 20% of male sample)	1 - 70	14.57 ( <i>S.D.</i> = 12.94)
Victimization: messages	82	(71 female, 22.12% of female sample; 11 male, 15.71% of male sample)	1 - 63	9.32 ( <i>S.D.</i> = 8.75)
Perpetration: pictures	59	(48 female, 14.95% of female sample; 11 male, 15.71% of male sample)	1 - 92	14.25 ( <i>S.D.</i> = 16.67)
Victimization: pictures	49	(44 female, 13.71% of female sample; 5 male, 7.14% of male sample)	1 - 29	8.45 ( <i>S.D.</i> = 7.51)
Perpetration: videos	18	(15 female, 4.67% of female sample; 3 male, 4.29% of male sample)	1 - 76	9.28 ( <i>S.D.</i> = 17.08)
Victimization: videos	20	(18 female, 5.61% of female sample; 2 male, 2.86% of male sample)	1 - 93	12.05 ( <i>S.D.</i> = 20.51)

Table 2: *Descriptive statistics regarding consensual sharing of sexually explicit media*

			Messages (%)	Pictures (%)	Videos (%)
Sent	Who it was sent to	Boyfriend/girlfriend	82.01	79.37	79.63
		Someone I had a crush on	34.53	32.74	23.15
		Someone I dated/hooked up with	50.72	40.36	32.41
		Someone I just met	7.19	10.76	8.33
		Someone I wanted to date/hook up with	31.65	25.11	19.44
		One or more good friends	20.86	19.73	18.52
		Someone I only knew online	20.50	20.17	16.67
Reasons for sending		Get a male/female's attention	46.04	47.53	30.56
		Pressured to send it	16.55	26.91	24.07
		A "sexy" present for a boyfriend/girlfriend	59.71	70.40	74.07
		To feel sexy	50.00	57.85	52.78
		Get a male/female to like me	30.93	27.35	16.67
		As a joke	28.78	21.52	13.89
		To get positive feedback	34.53	40.36	33.33
		To be fun/flirtatious	80.58	72.20	65.74
		To get noticed	21.22	26.46	19.44
		In response to one that was sent to me	67.99	54.26	39.81

Received	Who it was received from	Boyfriend/girlfriend	77.45	74.03	76.92
		Someone I had a crush on	35.29	27.71	29.91
		Someone I dated or hooked up with	46.73	43.29	36.75
		Someone I just met	22.55	19.48	20.51
		Someone I wanted to date or hook up with	53.92	45.02	41.88
		One or more good friends	25.82	29.00	19.66
		Someone I only knew online	40.52	40.69	31.62

Table 3: *Descriptive statistics regarding perpetration and victimization of non-consensual sharing of sexually explicit media*

			Messages (%)	Pictures (%)	Videos (%)
Perpetration			24.55	16.37	3.83
	Who it was shared with	With a close friend	89.58	93.75	NA <sup>Δ</sup>
		With another friend	14.58	9.38	NA
		With a family member	14.58	6.25	NA
		With a connected friend	4.17	1.56	NA
		Everyone (public blog, public networking profile, etc.)	0	0	NA
	How it was shared	Forwarded using messaging app/service on mobile phone	48.96	45.31	NA
		Physically showed message	68.75	71.88	NA
		Posted publicly on a social networking site (e.g., Facebook)	3.13	1.6	NA
		Posted publicly on general website	1.04	0	NA
Victimization			21.51	13.26	3.87
	Who it was shared with	With a close friend	71.93	86.49	NA
		With another friend	35.09	40.54	NA
		With a family member	8.77	5.41	NA
		With a connected friend	12.28	8.11	NA
		Everyone (public blog, public networking profile, etc.)	0	8.11	NA

How it was shared	Forwarded using messaging app/service on mobile phone	47.37	40.54	NA
	Physically showed the message	59.65	72.97	NA
	Posted publically on a social networking site (e.g., Facebook)	5.26	2.70	NA
	Posted publically on general website	3.51	5.41	NA

<sup>a</sup> As percentages of these behaviors are so small overall for videos, descriptive data are not given for who and why videos were shared

Table 4

*Results of binary logistic regression for all predictor variables in relation to perpetration of non-consensual sharing*

Variable	B (S.E.)	Exp(B)	95% C.I. for Exp(B)	
			Lower	Upper
Constant	-3.34 (1.14)	.04		
Personal sexy messages end up being seen	.41 (.16)*	1.51	1.09	2.08
One has to be aware that sexy messages may end up being seen	-.01 (.20)	.99	.67	1.45
Females have to worry about privacy of sexy messages more than males	-.11 (.12)	.89	.71	1.12
People my age are more forward/aggressive using sexy messages	.06 (.17)	1.06	.77	1.47
Sending sexy messages can have serious negative consequences	-.04 (.14)	.96	.74	1.25
Sending sexy messages is not a big deal	.31 (.12)*	1.36	1.08	1.72

Note:  $N = 391$ ,  $*p < .01$ , Cox & Snell  $R^2 = .04$ , Nagelkerke  $R^2 = .06$ .