REA Appendices

Appendix I: Critical appraisal through WoE Criteria

The weight of evidence criteria and ranking were as follows (as seen in EFSA, 2017; Horvath et al., 2013):

A) Taking into account all of the quality assessment issues, can the study findings be trusted in answering all of the study question(s)?

- High (e.g., high level of trust in answering the all the questions)
- Medium (e.g., moderate level of trust in answering all the questions)
- Low (e.g., low level of trust in answering all the questions)

To guide decisions, check if:

- There is a clear statement of aims of the research and is it related to the aims of the REA?
- There is a clear statement of findings?
- There is adequate discussion of the evidence for and against the researchers' arguments?
- The findings are discussed in relation to the original research questions?
- The study was subjected to some form of peer review? If not peer reviewed, was it a significant piece that is nonetheless considered very influential (e.g., stimulated new policy/debate/research/law. We took each piece on its merit and discussed between us e.g., if in doubt about these specific articles, they were forwarded to the rest of the team for agreement)

In some studies, it is difficult to distinguish between the findings of the study and the conclusions. In those cases, code the trustworthiness of these combined results/conclusions.

B) Appropriateness of research design and analysis for addressing the question, or sub-questions, of this review.

- High
- Medium
- Low

To guide decisions, check if:

- The reasons for the particular elements of the design have been discussed and justified? Especially choice of data collection methods (questionnaires, interviews, focus groups, diaries, etc.)
- The methodology used (quantitative/qualitative/mixed methods) is appropriate?
- Ethical issues were considered? Were enough details provided so that the reader can assess whether ethical standards were maintained? Was approval from an ethics committee granted? Do the researchers discuss issues such as informed consent, confidentiality etc?
- A control group required/used? If so, how were they matched/recruited?
- Is the data analysis sufficiently rigorous? Was a full description of the analysis process provided? Is it clear how data presented were selected from the sample? Were contradictory data presented/taken into account/discussed?

In summary you should: assess the quality of data, the analysis and synthesis of data, the appropriateness of data and the interpretation of data.

C) Relevance of particular focus of the study (including conceptual focus, context, sample, and measures) for addressing the question, or sub-questions, of this review.

- High
- Medium
- Low

To guide decisions, check if:

- The definitions used are in line with those used for this REA (e.g., technology specifically used to perpetrate intimate partner and domestic violence, and technology-enabled abusive behaviour)? If not, are they similar enough that the study is relevant?
- Was the recruitment strategy appropriate to the aims of the research and for the questions posed for this literature review?
- Has the researcher explained how the participants were selected and recruited?
- Have the researchers explained why the participants included were most appropriate to provide information sought?
- Were there any issues with recruitment? E.g., response rate/ineligibility
- Were there any issues with the data collection methods? Is it clear how it was collected? Was the setting for collection justified? Were the methods justified?
- Do the study authors engage in reflexivity e.g., consider the possibility of researcher bias, considered the relationships between them and the participants?

D) Overall weight of evidence

- High
- Medium
- Low

To guide decisions, check the following:

- Provenance: What are the author's credentials? Are the author's arguments supported by evidence (e.g., primary historical material, case studies, narratives, statistics, recent scientific findings)?
- Objectivity: Is the author's perspective even-handed or prejudicial? Are contrary data considered or is certain pertinent information ignored to reinforce the author's point? Is there evidence of bias in the article? Do the statistics match those in other publications? [If not, is the argument (method, research design etc) on which they are based convincing?] How do we know the data is reliable? What other supporting data is there?
- Persuasiveness: Which of the author's theses are most/least convincing?
- Value: Are the author's arguments and conclusions convincing? Does the work ultimately contribute in any significant way to an understanding of the subject

Appendix II: Independent WoE spreadsheets

Reviewer 1 (questions 1,2,3)

Title of paper	Authors	Behaviour	Methodology	Relevance to Q	WoE	Inclusion/Exclusion	Notes
Cyber pursuit	Dardis & Gidycz (2019)	Unwanted Pursuit Behaviours	quantitative	1,2,4,6	high	include	
Technology enabled IPV	Tseng et al., 2021	Technology Enabled IPV	mixed methods	1,5,6	high	include	Useful gaps and recommendations as well as experiences.
Electronic intrusion	Reed, Tolman & Safyer (2015)	Electronic Intrusion in intimate partners	quantitative	1,2,3,4,5,6	high	include	
lit review of cyber IPV	Fernet, Lapierre, Hebert & Cousineau, 2019	cyber intimate partner victimisation	systematic review	1,3,4,5,6	high	include	
Cyber aggression in relationships scale	Watkins, Maldonado & DiLillo (2018)	adult cyber intimate partner aggression	quantitative	1,2,3,4,6,	high	include	useful for measurement
Perception of IP cyber-harassment	Melander (2010)	cyber-harassment among inrtimate partners	qualitative	1,2,3,4,5,6	high	include	useful themes for violence
technology as a weapon in DV	Woodlock, McKenzie, Western & Harris, 2020)	Technology as a weapon in DV/Digital coercive control	mixed methods	1,2,3,4,5,6,	high	include	Tech used in DCC from the perspective of front line workers
Cyber Abuse among DV perpetrators	Brem, Florimbio, Grigorian, Wolford-Clevenger, Elmquist, Shorey, Rothman, Temple & Stuart (2017)	Cyber abuse in DV perpetrators	quantitative	2,4,6	high	include	good links in apprehended offenders of cyber abuse. Also good advice for clinicians
Predictors of CDA	Branson & March (2021)	Cyber dating abuse	quantitative	2,6	high	include	perpetration and evolutionary/aggression theory cross sectional design
justification beliefs of CDA	Borrajo, Gamez-Guadix & Calvete (2015b)	cyber dating abuse	quantitative	2,4,6	high	include	one of the first studies to be conducted on the topic seminal work talks about beliefs as well as perpetration
predicting IP cyberstalking	Smoker & March (2017)	intimate partner cyberstalking	quantitative	2,	high	include	stalking behaviours in intimate partners role of personality and gender
predictors of IP cyberstalking	March, Litten, Sullivan & Ward (2020)	intimate partner cyberstalking	quantitative	2,	high	include	personality and gneder and control behaviour as predictors of IP cyberstalking
effects of dating violence	Gracia-Leva, Puente-Martínez, Ubillos-Landa, Gonzalez-Castro & Perez-Rovira (2020)	online heterosexual dating violence	quantitative	3, 5, 6	high	include	large sample,links offline and online IPV and suicide risk in young women
Alshehri et al 2020	Alshehri, Salem & Ding 2020	technology and IPV	review	1,3,4,5,6	high	include	systematising of findings on tech abuse in smart homes
Bellini et al 2020	Bellini, Tseng, Mcdonald, Greenstadt, McCoy, Ristenpart & Dell 2020	intimate parnter surveillance	mixed methods	1,2, 6	high	include	qualitative study looking in to perpetrator justifications for Intimate Partner Surveillance. Look it up when writing about technology interventions to help victims
Chatterjee et al 2018	Chatterjee, Doerfler, Orgad, Havron, Palmer, Freed, Levy, Dell, McCoy & Ristenpart, 2018	Spyware in IPV	mixed methods	1,2,6	high	include	this looks into different technologies that can be used as spyware in IPV contexts and proposes solutions.
Freed, et al., 2019	Freed, Havron, Tseng, Gallardo, Chaterjee, Ristenpart & Dell, 2018	Clinical computer security and IPV	qualitative	1,2,3,5,6	high	include	this is along the lines of the project, with what issues victims face with IPV and technology and how to help them.
Grimani et a;. (2020)	Grimani, Gavine & Moncur 2020	Technology based IPV	systematic review	1,2,3,4,5,6	high	include	very interesting paper on four covert behaviours in IPV Looks at both victims and perpetrators USE!
Havron, et al., 2019	Havron, Freed, Chatterjee, McCoy, Dell & Ristenpart (2019)	Clinical computer security and IPV	mixed methods	1,3,4,5,6	high	include	useful for what victims are asking support with
Leitao 2018	Leitao 2018	Digital technologies and IPV	mixed methods	4,5,6	high	include	interveiws and codesign with practitioners and DA survivors and support workers
Leitao 2019	Leitao 2019	Technology facilitated intimate partner abuse	qualitative	1,3,4,5,6	high	include	analysis of digital forums with victims of TFIPA outlining forms of abuse, technology used and security advice exchanged. Also focuses on impact and gaps USE
Leitao 2019a	Leitao2019a	Technology facilitated intimate partner abuse	qualitative	3, 6	high	include	this looks at technology used by IPA victims and how their privacy and security can be safeguarded. Interviews with victims and workshops
Levy & Schneier (2020)	Levy & Schneier 2020	Intimate threats	quantitative	1,3,4,5,6	high	include	looks at intimate privacy threats within relationships
Harkin & Molnar 2021	Harkin & Molnar (2021)	Spyware and Technology Facilitated Abuse	quantitative	1,2,3,4,5,6,	high	include	paper addressing consumer spyware, sold to people to purposely spy and monitor family members and intimate partners
Facebook stalking	Lyndon et al., 2011	Facebook stalking and Cyber Obsessional Pursuit	quantitative	1,2	high	include	discusses college students patterns of cyber obsessional pusuit, offline stalking and facebook stalking.
Electronic Aggression.	Kellerman et al., 2013	Electronic Aggression	quantitative	1,2,3	high	include	motivations and perpetration/victimisation onf electronic aggression
Cyber dating abuse	Borrajo, Gamez-GUadix & Calvete 2015a	Cyberdating abuse, prevalence context and relationships with offline	quantitative	1,3,4	high	include	examined prevalence as well as link to offline aggression and the types of technology used to harass.
Stalking and domestic abuse & technology	Freed, Palmer, Minchala, Levy, Ristenpart & Dell 2018	Stalking and types of tech used by perpetrators	qualitative	1,2,6	High	include	qualitative study with 89 participatns, detailes how abusers exploit technology
Cyber Violence	Al-Alosi (2017)	Cyber-Violence	review	1,2,4,6	medium	include	
Digital coercive control	Harris & Woodlock (2019)	Digital coercive control	review	1,3,4,5,6	medium	include	
Digital IPV	Lopez-Cepero, Vallejos-Saldarriaga & Merino-Garcia	Digital intimate partner violence	quantitative	1,2,3,4,5,6	medium	include	
Abuse of technolgy in DV	Woodlock (2017)	Technology in domestic abuse and stalking	mixed methods	1,2,5	medium	include	useful to include, mixed methods and also thematic analyses. How stalkers use technology
Measuring digital dating abuse	Brown & Hegarty (2018)	digital dating abuse	review	1,6	medium	include	very useful tables and useful lit review.
CPA A systematic review	Taylor & Xia (2018)	cyber partner abuse	review	1,4,6	medium	include	useful for themes and some additional papers identified.
Sexting coercion	Ross, Drouin, & Coupe (2019)	Intimate partner polyvictimisation through sexting coercion	quantitative	1,3,4,5,6	medium	include	focused on sexting but interesting.
oT	Drouin, Ross & Tobin (2015)	Sexting as IPV	quantitative	1,3,4,5,6	medium	include	precursor to previous paper shows initial recognition of sexting coercion as IPV form
BPD and psychopathy in cyber IPV	Bui & Pasalich (2021)	Cyber psychological abuse	quantitative	2,4,6	medium	include	good paper linking attachment theory and dark personality as explanation for perpetration
Cyber aggression predicting IPV	Schnurr, Mahatmya & Basche (2013)	Cyber aggression perpetration	quantitative	2, 5 6	medium	include	useful paper looking at the role of dominance and cyber aggression on IPV perpetration. Cyber aggression looked at as embarassment, control, monitoring and arguing via technology
Dark Tetrad CDA	Pineda, Galan, Martínez-Martínez, Campagne, & Piqueras (2021)	Cyber intimate partner violence	quantitative	2,3,4,	medium	include	looks at perpetration and victimation of C-IPV. Good sample of over 1k participants and link with dark tetrad.
Digital dating aggression	Reed, Tolman & Ward (2016)	Digital dating abuse	quantitative	1,2,3,4,5,	medium	include	good study looking into digital dating abuse perpetration especially of digital monitoring behaviours. Medium was only given as the sample is quite young 17-19
Gender norms and CDA	Villora, Yubero & Navarro (2019)	cyber dating abuse	quantitative	2,3,4	medium	include	looks at perpetration and victimisation of cyber dating abuse. Prevalence as well.
Predictors of online IPV perpetration	Duerksen & Woodin (2019)	Technological Intimate Partner Violence	quantitative	2, 4,	medium	include	role of technology inhibition, personality and in person IPV in perpetrating TIPV
Role of Cyber IPA	Watkins, Benedicto, Brockdorf & DiLillo (2020)	Cyber intimate partner aggression	quantitative	2, 4	medium	include	cyberstalking IPA positively associated with sexual IPA perpetration.
TFA in male substance abusers	Gilchrist, Canfield, Radcliffe, Pires * D'Oliveira	technology facilitated abuse	quantitative	2, 4, 6	medium	include	substance use and use of controlling behaviours in TFa perpetration
TFA in Political Economy	Yardley (2020)	Technology facilitated domestic abuse	theoretical framewo	1, 2,3 , 4, 5,6	medium	include	examines the concept of omnipresence and also looks at previous literature. Use to crosscheck. Also great for impact of behaviours on victims.
CDA victimisation	Duerksen & Woodin (2019b)	Cyber dating abuse	quantitative	3, 5	medium	include	discusses CDA victimisation and mental wellbeing
CDA mental health and substance abuse	Lu, van Ouytsel, Walrave, Ponnet & Temple (2018)	cyber dating abuse victimisation	quantitative	3, 5	medium	include	victimisation of CDA and mental health
communication of DDA	Weathers & Hopson (2015	digital dating abuse	qualitative	3, 5	medium	include	qualitative analysis of co-cultural communication and digital IPA in females who have been in abusive hetero romantic relationships for IMPACT MOSTLY
Coping strategies of DDA	Weathers, Canzona & Fisher (2019)	digital dating abuse	qualitative	3, 5	medium	include	semi structured interviews on maladaptive coping strategies and factors influencing coping
Parsons et al., 2019	Parsons et al., 2019	Gendered surveillance and stalkerware	mixed methods	1,2,5,6	medium	include	examines the use of stalkerware in DV
cyber IPV effects on depression	Cantu & Charak (2020)	Intimate partner cybervictimisation	quantitative	3, 5, 6	medium	include	cyber and face to face IPV and depression. Psychological and sexual Cyber IPV linked to depression.
cyber IPV victimisation	Melander & Marganski, 2020	intimate partner cyber aggression victimisation	quantitative	3, 5, 6	medium	include	examines the links between face to face and cyber IPV and maladaptive functioning and mental health correlates
Effects of cyber IPV	Trujillo, Cantu & Charak (2020)	intimate partner cybervictimisation	quantitative	3,5, 6	medium	include	exposure to three types of cyber Ipv and links to alcohol use and behavioural health challenges
2020 part IV	Clevenger & Gilliam 2020	IPV and internet	book chapter	1,2,3,4,5,6	medium	include	good for introduction and for future research gaps definitely USE
2020 part IV	Henry & Flynn 2020	Image based sexual abuse	book chapter	1,2,3,4,5,6	medium	include	discussion on IBSA but useful to include aspects of IPV in it
Virtual world real feare	Women's Aid 2013 Laxton, C	Online Abuse and DV	report	1,3,4,5,6,	medium	include	the first report on tech IPV include for background and comparison prevalence
Antisocial use of tinder	Duncan & March (2019)	Antisocial behaviours in online dating	quantitative	2,4,5,6,	medium	include	it is a good study just need to establish whether online dating between people who have never been intimate physically will be included in our analysis.
TAR scale	Brown & Hegarty (2021)	Technology facilitated abuse in relationships TAR	quantitative/survey	1,2,3,4,5,6	medium	include	I give this a medium only because although the mean age was 20 it is difficult to discern any differences. good to include though on exception due to the overall overview
Online Mate retention tactics	Brem, Spiller & Vandehey	Online mate retention tactics	quantitative	2	medium	include	examined mate retention tactics on FB included coercive control and jealousy in their measurements as well as threats. Found links with IPV perpetration psychological and physical
Technology used by stalkers	Eterovic-Soric, Choo, Ashman, & Mubarak, 2017	Technology used by stalkers	review	1,2	medium	include	examined technology used by stalkers as well as technology used to deter stalkers.

CDA Surveillance	Flach & Deslandes, 2019	Cyber dating abuse	qualitative	1,	medium	include	used critical discource analysis to look at text messages from Android and IOS applications for monitoring (stalkerware)
IoT and Tech Abuse	Tanzcer, Lopez-Neira, Patel & Danezis 2018	Tech abuse and IoT	report by UCL	1,2,3,4	medium	include	Report on UCL from IoT
IoT and Tech Abuse	Parkin, Patel, Lopez-Neira &Tanczer 2019	Tech abuse and IoT	report by UCL	1,2,6	medium	include	same report as the above used for consolidation
TFDA review	Henry, Flynn & Powell (2020)	Technology facilitated domestic and sexual violence	review	1,2,3,4,5,6,	medium	include	good review but lots of otehrs too.
Roundy et al., 2020	Roundy, Mendelberg, Dell, McCoy, Nissani, Ristenpart & Tamersoy 2020	Interpersonal attacks	mixed methods	1,2,3,4,5	low	include with trepidation	technical as well, doding and characterising potentially abusing apps, creepware but not entirely focused on iPV some relevance though.
tech facilitated coercive control	Dragiewicz, Matamoros-Fernandez, Salter, Suzor, Woodlock & Harris (2018)	Technology facilitated coercive control	review/research not	1,2,3,4,5,6,	low	include	good positioning of TFDA as coercive control could use to strengthen other points
TF sexual violence	Zhong, Kebbell & Webster (2020)	Technology facilitated sexual violence in romantic interactions	quantitative	1,2,4,5,6	low	include	interesting article on perceptions but also has a perpetration portion in there. The concept of toxic disinhibition is there. Difficult to discern the IP element.
Evolutionary prediction of CDA	Bhogal, Rhead & Tudor, 2019	digital dating abuse	quantitative	2	low	include	looks at perpetration only but from an evolutionary perspective about mate retention tactics.
Assessing techology mediated IPV	Hertlein, Eddy & Strickland (2020)	techonlogy mediated IPV	review/recommend	3, 6	low	include	refers to gaps in more detail than victims so I would include for the gaps section
relationship quality in CDA	Lancaster, Seibert, Cooper, May & Fincham, 2020)	cyber dating abuse	quantitative	3, 5, 6	low	include	low sample but examines attachment and relationship quality in CDA
Harkin et al (2019)	Harkin, Molnar & Vowles (2020)	Mobile Phone surveillance	semiological analysi	1, 5	low	include	Analysis of spyware products and nine vendors of spyware products with high search engine presence
Lopez-Neira et al 2019)	Lopez-Neira, Patel, Parkin, Danezis, & Tanzcer (2019)	technology facilitated abuse	report	1,2,3,4,5,6	low	include	a report on the Internet of Things project of UCL need to include.
DA in a digital age	Hadley 2017	Online Domestic abuse	recommendations re	1,3,5,6	low	exclude	include for background
Digital Stalking Guide	Perry, 2012	Digital Stalking	guide	1,5,6	low	exclude	list of potential technologies used and guide to counteract it. Useful to compare to 10 years later.
Alcohol use as a risk factor for CA	Crane, Umehira, Berbary & Easton, 2018)	Alcohol use as a risk factor for Cyber Agression in RR	quantitative	2,4,5,6	low	include	perpetrators and alcohol linked to perpetration in romantic relationships. N is too low therefore it gets a low score.
Adolescent CDA victimisation	van Ouytsel, Ponnet, Walrave & Temple (2016)	Adolescent cyber dating abuse	quantitative	3, 5,6	low	include with trepidation	low is given because of the mean age it is based on teen if available infomration on adults is sufficcient we will exclude
Psychological Violence	Safe Lives (2017	Psychological Violence	mixed methods	1,2,3,	low	exclude	include the portion on coercive control The rest is not relevant
Digital dating abuse perp and impact	Brown, Flood & Hegarty (2020)	Digital dating abuse	qualitative	2,5	medium	exclude	this study although good for context doesn't address perpetration but rather people's perceptions of it which is not relevant in this case.
Abusive online communications	The Law Commission (2018)	Abusive online communications	scoping review	1,3,4,5,6	medium	exclude	could include parts about online harassment and stalking but no mention of IPV. Generic and law based but interesting parts
Poly-victimisation & Peer harassment	Mitchell, Segura, Jones & Turner, 2018	Technology Harassment Victimisation	quantitative	3,4	medium	exclude	surveyed youth 10-20 yoa the concept of polyvictimisation is interesting though
IPV tech and stalking	Southworth, Finn, Dawson, Fraser, & Tucker, 2007	Cyberstalking and IPV	research note	1, 6	low	exclude	date is beyond cutoff
cyber-teasing	Madlock & Westerman (2011)	Cyber-Teasing and Violence	quantitative	1,2,3,5	low	exclude	one of the least relevant papers in terms of what cyberteasing is actually measuring.
Emerging technologies in abuse	Cardoso, Sorenson, Webb & Landers (2019)	Cyber IPV (but multiple terminologies used	quantitative/review	1,,3,4,5,6,	low	exclude	too difficult to glean IPV data but has some interesting stats about protective vs perpetrating factors and technology
Abuse in Dating apps	Gillett (2018)	Intimate intrusions in dating apps	review	1,2,3,4,5,6,	low	exclude	review but not as useful as others. Also not sure about ages included.
2020 part IV	Semenza (2020)	dating and sexual relationships in the age of the internet	book chapter	1, 2, 3, 4,5,6,	low	exclude	book chapter no real data but interesting although dated so far. Would be low in the list and possible exclusion
2020 part IV	O'Connor & Drouin (2020)	sexting and social concerns	book chapter	1, 2, 3, 4,5,6,	low	exclude	very little on IPV but some on sexting between partners
2020 part IV	Holt & Liggett 2020	revenge pornography	book chapter	1, 2, 3, 4,5,6,	low	exclude	potentially not relevant but re read. Generic and not specific to IPV but some considerations about law and impact
2020 part IV	Reyns & Fissel 2020	cyberstalking	book chapter	1,2,3,4,5,6	low	exclude	maybe include as possible links to IPV and legal reponses.
Legal Guide	Rights of Women, 2016	Revenge porn and online abuse	guidelines and advic	1, 3	low	exclude	only for background and legal stuff
Sexts and dating violence	Morelli, Bianchi, Baiocco, Pezzuti & Chirumbolo (2016)	not-allowed sharing of sexts (really meaning Revenge Porn)	quantitative	2, 4, 6	low	exclude	included school children in sample despite mean being 22. Also describing revenge porn (IBSA) but named differently. Looked at sexism as moderator of perpetration of
ICT use correlates to IPV	Xue, Lin, Sun & Liu (2018)	Intimate partner violence	quantitative	1 3 5	low	exclude IPV is not technology facilitated	
Gender Based perceptions	Messinger, Birmingham & DeKeseredy (2018)	Intimate Partner Cyber Monitoring	quantitative	1	low	exclude (focus on attitudes)	
Pornography in YA	Stanley, Barter, Wood, Aghtaie, Larkins, Lanau & Överlien, 2018)	pornograhy and sexting in intimate relationships	mixed methods	1,2,3,4,5,6	low	exclude	great study but ages are out of range. 14-17
traditional vs CDA	Temple, Choi, Brem, Wolford-Clevenger, Stuart, Peskin & Elmquist (2016)	Cyber dating abuse	quantitative	2,3,4,5,6,	low	exclude	good article focused on dating abuse and comparing to offline abuse but sample was adolescents
tech based sexual coercion	Thompson & Morrison, 2013)	technology based sexual coercion	quantitative	2,6	low	exclude	it doesn't specify that these are in the context of intimate relationships.
adolescent victims of CDA	Cava, Tomas, Buelga & Carrascosa (2020)	cyber dating violence	quantitative	3, 5, 6,	low	exclude	mean age of participants was 14
Perception of digital abuse	Sanches-hernandez, Herrera-Enriquez & Exposito 2019)		quantitative	3,	low	exclude	this is a paper on perceptions rather than victimisation or perpetration rates or impact
teens experiences of digital IPV	Hellevik (2019)	digital intimate partner violence	qualitative	3, 5, 6	low	exclude	sample was teenagers. If not enough data include with caveat.
Bellin et al 2020a	Bellini, Forrest, Westmarland, Jackson & Smeddinck (2020)	domestic violence interventions	mixed methods	2,6	low	exclude	this is an innovative method to intervene with perpetrators. Perhaps look into it for future suggestions
Farinholt et al 2019	Farinholt, Razaeirad, McCoy & Levchenko, 2019	malware and security	mixed methods	1,2,6	low	exclude	although this has some interesting facts and data, there is no distinction between IPV victims and non IPV
Geeng & Roesner., 2019	Geeng & Roesner. 2019	Multiuser smart homes	mixed methods		low	exclude	interesting paper but no mention of IPV. Potential issues identified with control but not relevant
Hsu & Henke 2020	Hsu & Henke 2020	Mobile device tracking	mixed methods	1,2,3,4,	low	exclude	effects of stay at home orders and social distancing on IPV but using technology to measure it. Not technology as part of IPV
Mladenovic et al 2020	Mladenovic, Osmjanski & Vujicic-Stankovic (2020	Cyber aggression	review	1,4	low	exclude	no clear mention of IPV in the behaviours examined.
Davidson	Davidson, Grove-Hills, Bifulco, Gottschalk, Caretti, Pham & Webster, 2011	Online abuse	lit review		low	exclude	child abuse related.
Online Communications Consultation	The Law Commission (2020)	Online abuse	policy and review	law	low	exclude	difficult to distinguish the IPV elements of this. Legal in its basis but could return to it for legal proposals.
Online harassment and cyberbullying	Strickland & Dent, 2017	Online harassment and cyberbullying	policy and review	1,3	low	exclude	no mention of IPV
Online Harms White paper	HM Government 2019	Online harms	policy and review	5,6	low	exclude	no mention of IPV
Regulating Online Harms	Woodhouse (2021)	Online harms	briefing paper	6	low	exclude	not relevant to IPV but some good advice for tech companies steps to take for prevention
Support for domestic abuse	Loft & Library Specialists (2021)	Domestic abuse	briefing paper	3 6	low	exclude	could use for background but no mention of IPV and technology
VAWG 2019	CPS Brown 2019	Domestic abuse	report		low	exclude	no mention of technology in IPV

Reviewer 2 (questions 4,5,6)

File Title	Authors	Behaviour	Methodology	Qu. No.	WoE	Incl /Excl	Status	Notes
Cyber sexual harassment prevalence	Reed, E. et al, 2019	cyber sexual harassment	quantitative	1,4,5	high	include	done	
Using technology to control intimate partners	Burke, C. et al, 2011	control	quantitative	1,2,4	high	include	done	
Digital Coercive Control	Harris, B. 2019	digital coercive control	mixed methods	1,5,6	high	include	done	interesting insight into spacelessness, might be useful for the lit rev
Digital dating abuse among a national sample	Hinduja, S. 2020	digital dating abuse	quantitative	1,4,	high	include	done	adolescents, online and offline
Digital intimate partner violence among Peruvian	Lopez-Cepero, J. 2018	digital IPV	quantitative	1,4,	high	include	done	
Exploring Latinx youth experiences of digital dating abuse	Reed, L. et al, 2020	digital dating abuse	quantitative	1,2,4,	high	include	done	victimisation and perpetration addressed
Internet risks	Machimbarrena, J. et al, 2018	cyber dating abuse, sexting	quantitative	1,4,	high	include	done	detailed, looks at comorbidities
Intersections of stalking and tecnology-based	Messing, J. et al, 2020	technology based abuse, IPV	mixed methods	1,4,6	high	include	done	useful detail
Domestic violence and information communication	Dimond, J. et al, 2011	ICT facilitated abuse	qualitative	1,5,6	low	include		useful contextual info
Perpetrating cyber dating abuse	Deans, H. 2019	cyber dating abuse	quantitative	1,2	high	include	done	focus on perp risk factors
Policing technology facilitated sexual violence	Powell, A. 2018	TFSA	qualitative	1,5,6	high	include	done	
Prevalence, age of initiation and patterns of	Ellyson, A. et al, 2021	digital dating abuse	quantitative	1,2,4	high	include	done	
Snooping and Sexting	Reed, L. et al, 2016	digital dating abuse	quantitative	1,2,4	high	include	done	
Mental health and academic impacts of IPV	Wood, L. et al, 2020	digital dating abuse	quantitative	1,4,5	high	include		couldn't decipher the findings to disaggregate between CIPV and IPV
Off- and online hetereosexual dating violence	Graia-Leiva, M. et al, 2020	online dating violence	quantitative	1,4,5	high	include	done	
Technology as a weapon in domestic violence	Woodlock, D. et al, 2020	digital coercive control	quantitative	1,4,5	high	include		don't know as is with practitioners not victims directly?
Technology-facilitated domestic and family violence	Douglas, H. et al, 2019	digital family violence	qualitative	1,4, 5	high	include	done	
An examination of the partner cyber abuse	Wolford-Clevenger, C. et al. 2016	Cyber coercive control	quantitative	1,4,6	medium	include	done	
College partner violence in the digital age	Melander & Hughes, V. 2018	cyber aggression, dating violence	quantitative	1,	medium	include	done	might be useful for online / offline corrolates
Cyber dating abuse assessment	Lara, L. 2020	cyber dating abuse	quantitative	1,4	medium	include	done	adolescents, online and offline
Digital media as a context for dating abuse	Weathers, M. 2019	digital dating abuse	qualitative	1,5	medium	include	done	more about coping strategies and impacts
Cyber dating abuse prevalence	Borrago, E. et al, 2015	cyber dating abuse	quantitative	1,4	medium	include	done	online and offline
Intimate partner violence experiences	Whitton, S., et al, 2019	cyber IPV among s/g minorities	quantitative	1,	medium	include	done	cyber part only a small aspect
Justification beliefs of violence	Borrajo, E. et al, 2015	cyber dating abuse	quantitative	6,	medium	include	done	explores relationship between online and offline dating abuse too
Young people's online and face-to-face experiences	Barter, C. et al, 2017	cyber dating abuse	quantitative	1,4,5,6	medium	exclude		under 18s, also not final draft of paper?
Perpetration of electronic inclusiveness	Doucette, H. et al 2018	cyber dating violence	quantitative	5,	medium	include	done	under 18s
Physical and sexual intimate partner aggression	Watkins, L et al, 2020	cyber IPA, stalking, sexual IPA	quantitative	2,3	medium	include	done	
Social media, cyber-aggresion	Mishna, F. et al, 2018	cyber aggression, dating violence	mixed methods	1,4	medium	include	done	part of a wider cyber aggression focus
Teenagers' personal accounts of experiences	Hellevick, P., 2019	digital IPA	qualitative	1,	medium	include	done	under 18s
The psychometric properties	Rothman, E., et al 2020	dating violence	quantitative	1,	medium	include	done	cyber part only a small aspect
They'll always find a way to get to you	Stonard, K. et al, 2015	dating violence	qualitative	1,5	medium	include	done	under 18s
Understanding digital dating abuse from an	Bhogal, M. et al, 2019	digital dating abuse	quantitative	1,2,	medium	include	done	
Cross-sectional and temporal associations between cyber dating abuse	Lu, Y. et al, 2018	cyber dating abuse	quantitative	5,	medium	include	done	
Cyber and in-person intimate partner violence	Melander, L., & Marganski 2020	cyber IPV	quantitative	1,5	medium	include	done	mostly focused on impacts
Digital dating abuse perpetration and impact	Brown, C. et al, 2020	digital dating abuse	qualitative	1,5	medium	include	done	useful contextual info
Patterns of childhood maltreatment and IPV	Charak, R., et al, 2019	cyber IPV and child abuse	quantitative	1,4,5	medium	include	done	need Afro to have a look to check I've understood it correctly.
Private, hidden and obscured image based sexual abuse	Vitis, L., 2020	IBSA	qualitative	1,4	medium	include	done	
The impact of cyber dating on self-esteem	Hancock, K. et al, 2017	cyber dating abuse	quantitative	1,5	medium	include	done	
Adolescent cyber dating abuse victimization	Van Ouytsel et al. 2016	cyber dating abuse	quantitative	1,5	medium	include	done	
Cyber and offline dating abuse in a Portuguese sample	Caridade, S. et al, 2020	online dating violence	quantitative	1,4	medium	include	done	
Dangerous dating in the digital age	Branson, M. 2021	dating violence	quantitative	2,	medium	include	done	
Policing image based sexual abuse:stakeholder perspectives	Henry, et al 2018	IBSA	qualitative	6,	medium	include	done	
Technological intimate partner violence	Duerksen, K. 2019	online IPV	quantitative	2,	medium	include	done	
The abuse of technology in domestic violence and stalking	Woodlock, D. 2016	online DV and stalking	quantitative	1,	medium	include	done	
Usability analysisof shared device ecosystem security	Parkin, S. 2019	online harms	quantitative	1,5	medium	include?		bit complex, not sure I follow what they've done
I define what hurts me	Weathers, M. 2015	digital IPA	qualitative	5,	low	exclude		
A framework for assessing technology-mediated IPV	Hertlein, K. et al, 2020	cyber abuse	overview	1,6	low	exclude		useful info
Adolescents' perceptions	Van Ouytsel et al. 2019	digital IPA	qualitative	1,4	low	exclude		
An exploratory study of technology-facilitated sexual violence	Zhong, L. et al, 2020	tfsa, cyberstalking, exploitation	quantitative	1,	low	exclude		attitudinal research, useful for impact of internet and victim blaming attitudes
Associations between feminine gender norms	Villora, B et al. 2019	cyber dating abuse	quantitative	1,2	low	exclude		seems to apply a victim/offender overlap
Changing your status in a changing world	Leadbeater, B. 2018	online and offline dating violence	none	1,	low	exclude		thematic review of research
Countering technology-facilitated abuse	Witwer, A. et al, 2020	responses to TFA	qualitative	3,	low	exclude		attitudinal, policy focused
Crime script analysis for adult image based sexual abuse	O'Hara, A. et al, 2020	online harms	qualitative	1,	low	exclude		content analysis
Cyber dating abuse, investigating digital monitoring behaviors	Van Ouystel, J. et al, 2020	cyber abuse	quantitative	1,	low	exclude		theoretical
Dating and sexual relationships in the age of the Internet	Semenza, D. 2020 (book chapter)	sexting, revenge porn, cyber stalking	none	1,	low	exclude		summary overview
Digital crime, trauma and abuse	Yok-Fong Paat, 2021	cyberbullying, sextortion, RP	none	1,6	low	exclude		more of a thematic review

Efficacy evaluation of date-e adolescence	Sanches-Jumenez, V. et al, 2018	dating violence prevention	quantitative	1,	low	exclude	
Fighting fire with fire	Al-Alosi, H. 2020	focus on using tech to prevent IPV	review	1,	low	exclude	useful for the lit rev
How do ICTs media gender-based violence	Thakur, D. 2018	online gbv	mixed methods	1,6,	low	exclude	quite descriptive rather than presenting the findings
Image-based sexual abuse in a culturally conservative Nigerian society	Aborisade, R. 2021	IBSA	qualitative	1,	low	exclude	
Intimate intrusions online	Gillet, R. 2018	intrusions via dating apps	overview	1,6	low	exclude	useful for the lit rev
Intimate partner violence victimisation in the cyber and real world	Marganski, A. 2018	online and offline dating violence	quantitative	1,	low	exclude	focused on whether CDA is a predictor for DA
Mapping sociocultural controversies	Burgess, J. et al, 2016	online harms	quantitative	1,	low	exclude	
Nonconsensual porn as a form of IPV	Eaton, A. et al, 2020	IBSA	quantitative	1,	low	exclude	content analysis of news articles
Promoting the safe and strategic use of technology	Finn, J. 2009	evaluation of training	quantitative	1,	low	exclude	more about coping strategies and impacts
Real world dangers in an online reality	Mishna, F. et al, 2009	analysis of posts about cyber harm	qualitative	1,4,5	low	exclude	useful info
Revenge pornography and manhood acts	Hall, M, 2019	revenge porn	qualitative	1, 2,	low	exclude	
Sexual violence in the digital age	Henry, N. et al, 2016	online sexual violence	overview	1,	low	exclude	
Somebody that I used to know	March, E. et al, 2020	intimate parter cyberstalking	quantitative	5,	low	exclude	seems to be more focused on characteristics linked to experiences?
Technology facilitated coercive control	Dragiewicz, M. et al, 2018	TFDA	overview	1,	low	exclude	
Technology, domestic violence advocacy	Harries, B. et al, 2021	online IPV	overview	1,4	low	exclude	useful info
Technology-facilitated domestic abuse	Yardley, E. 2020	tfda	none	1,	low	exclude	theoretical paper
Technology-facilitated stalking	DeKeseredy, W. et al 2019	stalking, cyber sexual harassment	quantitative	1, 4	low	exclude	might be useful for stalking but is more about peer support?
The development and validation of the cyber	Borrago, E. et al, 2015	cyber dating abuse	quantitative	1,	low	exclude	is about the design of the questionnaire used in studies
The nasty effect, online incivility	Anderson, A et al, 2014	online harms	quantitative	1,	low	exclude	
The psychology of nonconsensual porn	Eaton, A. 2020	online pornography	overview	1,6	low	exclude	
Thinking sociologically about image based sexual abuse	DeKeseredy, W. et al 2016	IBSA	overview	1,5	low	exclude	useful for the lit rev
Trading nudes like hockey cards	Dodge, A. 2020	sexual victimisation	qualitative	1,	low	exclude	legal case studies
Understanding revenge pornography	Bothamley, S. 2017	revenge porn	quantitative	1,	low	exclude	attitudinal research, useful for impact of internet and victim blaming attitudes
Cyber dating abuse (CDA)	Caridade, S. et al, 2019	cyber dating abuse	review	1,6			might be useful as a recent review
Digital dating abuse measures	Brown, C. 2018	digital dating abuse	review	1,4,			useful for the lit rev
Intimate partner violence, technology and stalking	Southworth, C. et al, 2007	cyberstalking	overview	1,			
Rape threats and revenge porn	Fairbairn, J.	sexual violence	overview	1,5			useful for the lit rev
Technology and family violence in the context of	Marwick, K. et al, 2019	technology based abuse, IPV	overview	1,			useful for the lit rev
Operating-system design and its implications for victims	Harkin, D. 2020	smartphone tech analysis	other	1,			useful for bits on smartphones?
Partner abuse, control and violence through internet and smartphones	Gamez-Guadix, M. et al, 2018	online IPV	review	1,4			
Technology-facilitated domestic and sexual violence	Henry, N. et al, 2019	TFDA	review	1,6			review
An evidence synthesis of covert online strategies	Grimani, A. et al, 2020	online IPV	review	1,4			useful info
A systematic review of literature on cyber	Fernet, M. et al. 2019	direct and indirect cyber IPV	review	1,4			is a review
Networked individuals	Backe, E., 2018	cyberviolence	review	1,			useful to explore terminology breadth too
The relevance of technology to the nature, prevalence	Stonard, K. et al, 2014	dating violence	review	1,2,			very comprehensive

Appendix III: Bibliographic overview of included studies:

Reviewer 1 (questions 1,2,3)

Code:

High WoE source

Medium WoE source

Low WoE source

1. **What evidence exists about the nature of the different types of TFIPV experienced by adults?**

Typology/Terminology/Technology of Abuse	**Source**	**Notes**
Facebook Stalking of Ex partners Examined mainly SNS abuse. *Covert provocation* (cyberstalking, monitoring of ex partners on social media, posting on own social media to taunt ex partners)*Public Harassment* (asking to be unblocked, creating a false profile, spreading rumours, IBSA)*Complaining/Venting* (write inappropriate things about ex partners and their social circle)	(Lyndon et al., 2011)	First direct examination of Cyber Obsessional Pursuit and also relationship between online and offline stalking behaviours in college samples of ex intimate partners. Perpetrator focused.

Electronic Aggression victimisation and perpetration Types of Abuse: Bullying/Harassment/threat through electronic communication (e.g. email, text, post on chatroom) Intrusive calls or texts to monitor Fake profiles/hacking IBSA	(Kellerman et al., 2013)	victimisation and perpetration used only the partner statistics here and not the friends for the purposes of this REA. Victimisation/perpetration % not that different but reporting overall more victimisation. Most common: mean text messages, monitoring via calls and messages, and trying to make someone jealous online. Motivations: Women= jealousy and insecurity, negative emotions, retaliation, and privacy reasons *Men*=insecurity, humour and negative emotions and retaliation
Technology Based Intimate Partner Aggression/ Cyber Intimate Partner Aggression Types of Abuse: *Psychological* (harassment, bullying, threatening, insulting on social media,ignoring), *Sexual* (IBSA, pressuring for sexual information, sexting, sextortion) *Stalking* (checking email accounts/phones/internet activity, using social media to track partner, GPS tracking, extracting information/images without permission Perpetration was higher than victimisation for CIPA over 50% of sample had perpetrated Stalking CIPA over 30% had perpetrated Psychological CIPA and over 10% had perpetrated sexual CIPA. Over 45% had been victimised by stalking CIPA, over30% by psychological CIPA and over 16% had been victimised by sexual CIPA	(Watkins et al., 2018)	New instrument to measure CIPA. Found links with jealousy, trait anger, alcohol use and overall mental health problems. All linked to in person IPA
Cyber Unwanted Pursuit Types of Abuse: Controlling or harassing behaviours via electronic means GPS/surveillance/threats: use of webcams, hidden cameras, social media to surveil, IBSA, threaten ex partners, Communication/checking: excessive calls, checking phones/email/web histories	Dardis & Gidycz, 2019	IPV during relationship is linked to CUPB following the break up. 48% women vs 34% men engaged minor CUPB. Men and women engaged in more severe CUPBs 11% Minor UPBs =Reconciliation or love-based motives severe UPBs. = retaliation/control motives may underlie Possessiveness/jealousy and self-control difficulties shouldbe assessed as potential predictor of UPBs, and IPV prevention programs should include UPBs in theircurricula. prior violence in the relationship is associatedwith severe (and to a lesser extent, minor) UPBs. Paths in thismodel were similar by gender, however, coercive control wasmore strongly associated with severe in-person and cyber UPBperpetration among men.
Electronic Intrusion Types of abuse: Using social media to intrude into the privacy of a dating partner and monitor whereabouts and activities. Monitoring partner using phone, without permission, monitoring whereabouts	(Reed *et al.*, 2020)	Latinx youth aged 14-18, male and female (73% female), higher than usual rates, online/offline link Electronic intrusion the most common of the digital dating abuse and electronic victimisation behaviours. Attachment insecurity and anxiety linked to higher levels of EI perpetration. No gender difference in EI perpetration

37.1% digital sexual abuse, 44.3% digital direct aggression, 57.1% digital monitoring and control (n=70)		
Cyber Intimate Partner Victimisation 2 main modes of violence (direct and indirect; 5 main types of violence: Stalking and control, harassment, sexual cyber IPV and indirect sexual cyber IPV, and indirect cyber IPV non sexual 4 types of tools used: Online Social Network Strategies:. Email Use: Mobile Use: Other devices: software, keylogging, hidden cameras, remote activation of cameras.	Fernet et al., 2019	Systematic review. Highlights differing definitions. Use in introduction and other parts for consolidation
Intimate partner cyber harassment: Utilised Johnson's typology of intimate partner violence Situational couple Violence (SCV), Intimate terrorism (IT): always in your inbox. Omnipresence term encountered in Woodlock, 2017, Mutual Violent Control (MVC) similar to IT but both partners exert control via technology, Violent Resistance (VR) retaliation towards an aggressive partner via technology Quick and easy violence: speed and ease Private becomes public: arguments in the public exposure and embarrassment as a punishment. Secondary victimisation when friends and family take part in the shaming and abuse.	Melander, 2010	Interview data: one of the initial studies focusing on the phenomenon.
Digital coercive control (DCC): Technology as a weapon Tactics and impacts: Omnipresence: Technology enabled the perpetrator to invade every aspect of victim's life Isolation and Ostracism: women fear public humiliation (in particular via IBSA) due to threats received by perpetrator and thus result in not using social media and online platforms. Additional risks and barriers to safety: cultural and linguistic diversity as well as disability. Women in remote and rural areas also in particular risk as perpetrators threaten with public humiliation in small towns where everyone knows you	Woodlock et al., 2020	Over 98% had worked with clients who had experienced DCC. Most used technology: mobile phone text messaging with nearly 50% of practitioners seeing it all the time, Facebook was identified as the most likely SNS with 37% seeing it all the time. Nearly 50% of practitioners reported victims experiencing threats of distribution of intimate images. GPS technology followed with 34% of practitioners reporting they had seen it happen to the victims often.
Cyber dating abuse Two types:	(Borrajo et al., 2015a)	Usually present in offline IPA too. Normally appears in the context of jealousy, also over 50% of participants showed they had been victims of some kind of CDA in the last 6 months.

Direct aggression: threatening partner or former partner with physical aggression using technologies Control: Using mobile devices to monitor and control the internet use or connection of a partner or former partner.		433 university students (60% women, 37% men, and 3% did not indicate sex) with a mean age of 20.4 yr. (*SD* = 2.1, range = 18–30). half of the total behaviors (52.04%) were carried out via social messaging services or messaging applications (e.g., Whatsapp), 40.92% through social networks, and 7.04% via e-mail.
Technology facilitated abuse (tech abuse) 3 types Traditional abuse: not using technology Tech abuse: any abuse using technologies such as smartphones, personal computers or social media Smart Home Facilitated Tech Abuse (SHOT): using smart home devices	(Alshehri et al., 2020)	A comprehensive analysis of all the phases of abuse in smart homes and categorize risks and needs in each phase by designing a unified analytical frame-work.
Intimate Partner Surveillance in online forums Looked at narratives of IPS from perpetrators, included cases where poster introduced themselves, their target and other people, described a single or pattern of events and signified motivation in bringing about change (storytelling)	(Bellini et al., 2021	556 stories of IPS posted on publically accessible forums for sexual infidelity. Examined narratives of IPS from perpetrators and justifications of abuse
Stalking/domestic abuse and technology They show that many of the attacks in IPV contexts are technologically unsophisticated from a cybersecurity perspective. Nevertheless highly impactful and devastating for the victims. Predominantly carried out by a UI-bound-adversary, or an adversarial but authenticated user that interacts with a victim's device or account via standard interfaces Conventional threat models and countermeasures for those do not anticipate attackers with intimate knowledge of, and access to victims. TYPES: **Ownership based access:** Abusers frequently exploit their legal ownership of victims' devices or online accounts. They can physically prevent victim from use of device or account, turn off the internet, and track location and monitor usage via family plans etc.	Freed et al., 2018)	ualitative study with 89 participants that details how abusers in intimate partner violence (IPV) contexts exploit technologies to intimidate, threaten, monitor, impersonate, harass, or otherwise harm their victims. HCI=human-computer-interaction 11 focus groups with 39 survivors of IPV and 50 professionals. Average age 42 years. Pretty good for that.

Account/device compromise: They can also compromise victims' accounts by guessing their passwords or forcing them to disclose them.. They can inspect a device without a victim knowing or hack security passwords and questions remotely. They can also install spyware, monitor through IoT, monitor via SNS text or email, steal information such as bank accounts, delete victim's data, change victims password so locking them out of accounds and impersonate victims. **Harmful messages/posts:** Call/text/message from identifiable or anonymised accounts (e.g. spoofed number or fake SNS profile) Post content to humiliate victim or threaten Harass victims friends and family Facilitate harassment of third parties (abuser's new intimate partner) **Exposure of private information:** Threaten to expose information to blackmail victim Posting private information (doxing) about victim (e.g. medical status) Revenge porn/IBSA Create fake profiles advertising sexual services of victim		
Technology enabled IPV: Clinical computer security interventions with survivors technology design projects aimed at improving the lives of oppressed or targeted people. Ranging from domain-specific frameworks for health equity [58] to HCI4D [15, 44] to broad examinations of technology's potential in social justice [19, 30] or design justice [13, 25], theseworks share a common concern: thoughtful examination of the role technologists play as interventionists in these contexts. Main goal of paper was to understand IPV survivor's experiences to consultations. often extremely challenging to obtain a clear understanding of clients' chief concerns and to map them to potential attack vectors for investigation	Freed et al., 2019)	consultations with 31 survivors, as well as IPV professionals working on their behalf, uncovered a range of digital security and privacy vulnerabilities exacerbated by the nuanced social context of such abuse VERY RELEVANT TO WORKSTREAMS 2-3 THEY DETAIL THEIR CONSULTATION PROCESS. USEFUL FOR 2-3 Also their concluding part is useful for the final workstream for policy and practice.

Difficulties in identifying chief concerns of client as the language used to describe concern is not clear and clients don't often know exactly what the concerns are Mapping concerns of clients onto digital footprints. (clients have multiple devices, accounts and digital assets. Clients are more interested in technology after consutlations and also want to take action immediately, although that may not be advisable or safe. Advised to safety plan with IPV professional and only immediately changed settings etc when professional was present and safety plans were in place. Tech consultants must be seen as the new note in the IPV ecosystem. Safety planning can be a collaborative effort between tech consultants and IPV professionals.		
Covert online strategies in IPV	(Grimani et al., 2020)	Systematic review 9 qualitative and 11 cross sectional studies between 2004-2017 Use table in REA also use for consolidation
Spyware and Intimate partner abuse (IPA) Spyware vendors face particularly fraught marketing challenges as the general deployment of spyware: a) is often utilized in forms of intimate partner abuse; b) is "morally troubling" from the perspective of being corrosive to many forms of social relations (Loader et al., 2014: 469); and c) has limited contexts where it could be deployed without violating surveillance laws. More specifically, this article compares the social meaning that vendors attempt to give to spyware and contrasts this with the powers of surveillance provided by the product, the marketing messages that appear to support nonconsensual use, and the lack of guidance for non-consenting spyware targets to have recourse with the vendors.	Harkin et al., 2020)	Commodification of spyware and developer responsibility

Clinical Computer Security for IPV victims Used IPV Spyware Discovery tool (ISDi) Technology Assessment Questionnaire TAQ Diagrammatic method for summarising a client's digital assets (technograph) Clients expressed a range of chief concerns, 1. Abusers Hacking or having access to clients account 2. General concerns about abuser tracking them or installing spyware 3. Few wanted to know more about privacy and had no specific concerns Most concerns linked to security issues 52% of clients also identified important security risks during consultations Many problematic apps were identified, majority of which were dual use apps However low number of stalkerware apps on this client pool Compromised accounts (e.g. abuser would know passwords) were more usual and stalking/surveillance may have happened that way	Havron et al., n.d.)	A report on the iterative design, refinement, and deployment of a consultation service that we created to help IPV victims obtain in-person security help from a trained technologist. To do so we created and tested a range of new technical and non-technical tools that systematize the discovery and investigation of the complicated, multimodal digital attacks seen in IPV. An initial field study with 44 IPV survivors showed how our procedures and tools help victims discover account compromise, exploitable misconfigurations, and potential spyware.
Intimate partner spying IPS applications were classified in three categories based on their capabilities: *personal tracking* (e.g., location tracking, remote locking, syncing SMS, call log and browser history), *mutual tracking* (e.g., mutual location sharing, family tracker, alerts of friends in vicinity) and *subordinate tracking* (e.g., employee tracking, parental controls and overt and surreptitious spying)	Chatterjee et al., 2018)	searched combined web and app stores with query recommendation APIs, and ultimately identified over 600 queries for spyware apps over the space of one month. Too technical
Technology facilitated Intimate partner abuse	Leitão, 2019b)	Workshops with 11 survivors of IPA and 7 professional support workers It was a replication of Woodlock's 2017 work for the UK
Intimate Partner Violence and Digital Technologies focused on cyber-aggression and cyber-harassment Development of IoT based solutions for IPV victims with codesign methods (including victims in. the design	Leitão, 2018)	IoT focus student paper Qualitative methodology 4 practitioner interviews Findings have been incorporated for support throughout REA

of interventions) IPV victims and support workers with semi structured interviews. Inductive analysis Themes: harassment through instant messaging is the most common type of technology enabled abuse		
Technology facilitated intimate partner abuse 1. Forms of TFIPA discussed on the forums -overt and covert surveillance -physical restrictions to devices -threats harassment and abuse 2. Ways in which forum members are using technology within the context of intimate partner abuse -evidence gathering -social media used by victims for support 3. The digital privacy and security advice exchanged between victims -advice on covering digital footprints -advice exchanged on how to deal with hijacked or hacked accounts -advice exchanged on how to deal with spyware -ways in which victims manage their communications with perpetrators, e.g., blocking etc.	Leitão, 2019a)	Qualitative analysis of data from 3 online domestic abuse forums A total of 745 individual posts were included in the data and analyzed following a keyword search method.
Technology facilitated abuse (mainly stalking) Technology: smartphones, mobile phones and social media (particularly FB) (82% of sample). Email 52% and GPS at 29% Typology: text messaging 78%(excessive numbers), tracking location 56%, accessed devices without permission 47%, IBSA 39%. Co-occurs with emotional abuse 82%, sexual abuse 58%, physical violence 39% and financial abuse 37%. Impact:84% reported impacted mental health. 82% reported being too embarrassed to seek assistance. 44% sought help (predominantly from friends and family but 44% of that sample went to DV services)	(Woodlock, 2017)	Findings of the SmartSafe study, introduction of digital coercive control term. IPStalking can last longer than stalking by others, more frequent using vast array of tactics and also more risky for lethality (68% of atte9mpted or actual homicide had experienced IP stalking)

Tactics of intimidation and control: *Omnipresence* Isolation: Direct harassment of friends and family via texts phone and social media and Indirect harassment: having to change phone numbers, relocate or go offline to avoid perps. Punishment/Humiliation/IBSA: either threat or actual public setting embarrassment for victims via social media,		
Cyber partner abuse	(Taylor & Xia, 2018)	Review, so lots of statistics involved and also papers to cross check.
Technology Facilitated Abuse/Cyber Violence/Digital Abuse Types of abuse: GPS tracking and sat nav technology, spyware applications (software developed for other purposes), surveillance cameras, keylogging (recording keystrokes on computer). Social media (facebook in particular), monitoring, hacking, publicly harassing, false accounts, impersonating Emails, texts phonecalls bypassing protection orders. Revenge porn/IBSA	(Al-Alosi, 2017)	Strong association between domestic violence and cyberstalking. Suggestions of strongly outlining cyber contact/digital abuse in protection orders. Makes some suggestions for legislation and policy. Use for that part of the review.
Digital Coercive Control Not so much typologies (same as Woodlock) but victim vulnerabilities. Use in that section Monitoring and surveillance, public attacks and shaming women, threat of shaming, Women in rural areas more in danger Spacelessness, transcending geography, omnipotence, omnipresence, entrapment	(Harris & Woodlock, 2019)	Terminology overview. Cite Vera-Gray 2017 about the need to centre on women's abuse rather than the medium so technology-facilitated may not accurately reflect the problem. Propose Digital Coercive Control. Mostly would use in victim vulnerabilities section.
Digital Intimate Partner Violence Types of Abuse: Threats to share information, IBSA, accessing accounts/social networks/phones to control and monitor, sexting, unwanted/disturbing content via email or phone/social media harassment via social media, impersonating, buying things without someone's permission using their account, incessant texting and calling, publishing offensive or false rumours, sextortion, contacting friends and family, demands access to accounts, hacking. Two types of abuse: control-centred and damage centred	(López-Cepero et al., 2018)	Digital Intimate Partner Violence Questionnaire has two types of violence Control centred abuse includes indirect harm to the victim by intrusion and control: trying to obtain passwords, monitor, surveil, incessant calling/texting, sending messages to friends and acquaintances, impersonating. Damage centred abuse is direct ways of harming the victim threatening or perpetrating IBSA, sextortion, using accounts to buy things without permission, 20-30% of participants (Peruvian university) had experienced digital dating abuse related to intimate partner control.

Digital Sexual Victimisation as part of IPA Polyvictimisation Women were more likely than men to be coerced into sexting. Both sexting coercion and sexual coercion were significantly and independently related to negative mental health symptoms, sexual problems, and attachment dysfunction, and, notably, sexting coercion was found to be a cumulative risk factor for nearly all of these negative effects.	(Ross et al., 2019)	885 undergraduates (301 men and 584 women), 40% had experienced some type of coercion. sexual coercion and sexting coercion (21% of participants had experienced both), some individuals had experienced only sexting coercion (8%) and some only sexual coercion (11%). Women were more likely than men to be coerced into sexting. Both sexting coercion and sexual coercion were significantly and independently related to negative mental health symptoms, sexual problems, and attachment dysfunction, and, notably, sexting coercion was found to be a cumulative risk factor for nearly all of these negative effects.
Sexting: Digital intimate partner aggression the more sexting coercion, physical sex coercion, or intimate partner violence participants experi-enced, the more general anxiety symptoms, depression, and trau-matic stress they reported.	(Drouin et al., 2015)	480 young adult under-graduates (160 men and 320 women). Approximately one fifth of the sample indicated that they had engaged in sexting when they did not want to. Relevant for Impact section
Technology Used by Stalkers	(Eterovic-Soric et al., 2017)	Review but good for technology parts. Use their table 1 for technology used by stalkers
Technology Facilitated Abuse in Relationships (TAR) 527 youth (53% women and47% men) aged 16–24 years completed a survey on 54 TAR behaviours to establish reliability and validity evidence for a new scale measuring TAR victimisation, perpetration and impact. Exploratory factor analysis revealed a scale comprising 30 items and four factors - Humiliation, Monitoring and Control, Sexual Coercion, and Threats–with Cronbach's alphas ranging from 0.80 to 0.88 and overall explained variance of 53.4%.	(Brown & Hegarty, 2021)	Development of a scale to measure TAR Good to consolidate classification of 4 factors of abuse. Based on young people, mean age 20.
Technology Facilitated Domestic and Sexual Violence TFDSV is *Digital dating abuse* (IBSA, password access, surveillance and monitoring, constant communication/harassment) *Intimate partner cyberstalking* (repeated threats or harassment via digital communication which cause the victim to feel afraid; gathering information, impersonation, computer hacking, false accusations, repeated contact/harassment, monitoring intimidation	(Henry et al, 2020)	Review: good for the introduction and definitions. Also used to consolidate other findings.

and threat via phone/sms/calls computer, SNS, GPS, Drone etc.) *Technology facilitated sexual assault* (technology used by predators to meet victims on dating sites to sexually assault, rape-by-proxy (posting messages online calling third parties to assault a victim or pretending to be a victim) coercing victims into engaging in sexual acts or sending images (sextortion) *Image based sexual abuse:*creating and distributing intimate images of a person without their consent. Can be hacked, or shared, videos, images or deepfakes *Online Sexual Harassment* Unwanted sexual attention, requests for dates, requests for sex, simulated rape, cyberflashing,		
Privacy threats in intimate relationships overview of intimate threats: a class of privacy threats that can arise within our families, romantic partnerships, close friendships, and caregiving relationships. Attackers may have multiple motivations but intimate or ex intimate attackers are motivated by seeking knowledge and control over partners' behaviours Sometimes they may preface tthat with caretaking reasons or protection, particularly when someone is vulnerable (e.g child, elderly adult or ID) Control, jealousy and fear are other motivators Desire to cause harm or retaliation for a perceived wrong Emotional motivations are strong Copresence facilitates device and account access Implications for policy and design: Recognise privacy in intimate contexts as a balancing act among multiple interests and values. Protection needs to be present without someone feeling they	Levy & Schneier, 2021)	REVIEW overview of intimate threats: a class of privacy threats that can arise within our families, romantic partnerships, close friendships, and caregiving relationships. Attackers may have multiple motivations but intimate or ex intimate attackers are motivated by seeking knowledge and control over partners' behaviours

are being spied on. Some parent apps need to send the right amount of information. Different data sensitivities to intimate threats:data should be considered sensitive also in the context of being used by an intimate partner and not just the financial or political data e.g. doctor, lawyer, therapist information that someone can use against the victim Recognise privacy sharing preferences are dynamic and that they may change, couples break up, children grow up, people move in and out of homes=systems should accommodate changes to preferences and not come with default settings or difficult to change settings. Systems should facilitate separating of accounts and help owners monitor their accounts for login attempts by ex partners. Households should not be seen as units and devices not seen as personal, and the purchaser is not the sole user.		
IoT facilitated tech abuse	(Parkin et al., 2019)	Advice on IoT technology and what is useful for victims/ general and technical, used to consolidate findinPgs on IoT and recommendations for practice.
Gendered Surveillance Stalkerware Across a range of use-cases, spyware can easily transform into stalkerware. Perhaps most obviously, spyware that is explicitly sold or licenced to facilitate intimate partner violence, abuse, or harassment,	Parsons et al., 2017)	Has some very interesting recommendations= Part 6 based on the findings of parts 4 and 5

including pernicious intrusions into the targeted person's life by way of physical or digital actions, constitutes stalkerware by definition. However, spyware can also operate as stalkerware when surveillance software that is sold for ostensibly legitimate purposes (e.g., monitoring young children or employees) is repurposed to facilitate intimate partner violence, abuse, or harassment. To be clear, this means that even application functions which are included in mobile operating systems, such as those which help to find one's friends and colleagues, can constitute stalkerware under certain circumstances.		
Technology-facilitated abuse Types of technology: Android operating system due to its open sources format, is more vulnerable to abusive or "stealth" applications than iOS, has a broader range of consumer spyware with concerning functionalities, and iPhones will require jail-breaks to match the stealth and power of spyware on Android platforms, Androids also allow users to download spyware from unknown sources, whereas iOS highlights suspicious behaviours. Recommendations for tech developers: Engage with programmers and developers at the design stage, designers and developers should be considered as responsible agents in the same way that social media companies have been identified as a source of intervention for gender based abuse.	(Harkin & Molnar, 2020)	Not talking specifically of abuse, but mobile phone technologies that are more vulnerable. Could use to back up. Owners of Android phones are more at risk of consumer spyware than iPhone users. Android phones are more affordable so spyware risk is also not equally distributed among social groups. Those of poorer backgrounds are more at risk.

Operating system design in smartphones should be regarded as critical to the safety of victims of family violence. Design better on-device scanning software for spyware. Design consent-based systems for data being shared with regular reminders and push notifications		
Technology Facilitated Coercive Control	(Dragiewicz et al., 2018)	Research note on coercive control, some good points made but overal use for consolidation and good for definitions.
Technology Facilitated Sexual Violence high levels of toxic disinhibition and prior sexual aggression towards a partner would predict an increased likelihood of TFDA perpetration.	(Zhong et al., 2020)	340 university students. Participants rated five TFSV scenarios concerning online sexual harassment, image-based sexual exploitation, cyberstalking, gender- and sexuality-based harassment, and sexual assault and/or coercion. Each scenario depicted a perpetrator and victim conversing online This is looks at perceptions, acceptance and proclivity? Or what they think of scenarios. No clear view of whether they have been in relationships or experienced it themselves? USE FOR THE TOXIC DISINHIBITION PART
Smart Home Abuse Same as other one, summary but used to consolidate	(*Lopez-Neira et al (2019)*, n.d.)	Part of gender and IoT project at UCL
Creepware in Interpersonal attacks Really hard to get through… Recognised technology used in creepware Fake surveillance apps, bomber or repeater text apps, fraud, hack tools etc. Not that relevant. Low just used for consolidation.	(Roundy et al., 2020)	A study of creepware using access to a dataset detailing the mobile apps installed on over 50 million Android devices. We develop a new algorithm, CreepRank, that uses the principle of guilt by association to help surface previously unknown examples of creepware, which we then characterize through a combination of quantitative and qualitative methods.

2. Who are the perpetrators of TFIPV?

Perpetrator type/characteristics:	**Source**	**Notes:**
Cyber abuse:	(Brem et al., 2019)	Prevalence and frequency of cyber abuse among men arrested for DV.N=216 Recommendations: Clinicians should assess for cyber abuse

Men who use cyber monitoring (therefore accessing emotionally salient instigatory cues) who also have alcohol problems are at higher risk of perpetrating IPV. 81% of abusers perpetrated at east 1 act of cyber abuse prior to entering intervention programmes but also 84% of perpetrators were also victims of cyber abuse. Alcohol problems and psychological and physical IPV positively related with high cybermonitoring. Cyber abuse entails: sending threatening texts to partner, making threatening calls via mobile phone, monitoring via SNS		and alcohol use among DV offenders. Amendments to legal statutes for DV offenders should consider incorporating common uses of technology into legal definitions of stalking and harassment. Social media campaigns and BIPs should increase individuals' awareness of the criminal charges that may result from some forms of cyber abuse and monitoring.
Cyber Dating Abuse: Jealousy, vulnerable narcissism and secondary psychopathy were all significant positive predictors of cyber dating abuse and gender was not a significant predictor. Results of the current study provide insight into Cyber Dating Abuse perpetrator typologies, indicating that individuals who are more prone to relationship jealousy, have high trait vulnerable narcissism, and high trait secondary psychopathy are more likely to perpetrate this behav-iour. The cyber-dating abuser is characterised by jealousy, insecurity, and emotionality (vulnerable narcissism), and impulsivity and antisocial tendencies (secondary psy-chopathy). Thus, although Cyber Dating Abuse may be considered a form of Intimate Partner Violence (Cheyne & Guggisberg, 2018), there are distinct differences in the abuser typologies	(Branson & March, 2021)	817 participants 78.2% women took an online questionnaire via social media on aggressive and controlling behaviours against an intimate partner using technology. Also found differences between online and offline perpetration. Offline is associated with hostility, jealousy, narcissism and psychopathy whereas online was found to only be associated with specific types of narcissism and psychopathy as well as only jealousy and not hostility. Although cyber dating abuse is part of IPV/DV the perpetrator typologies are claimed to be different.
Cyber-dating abuse Justifications of dating abuse were linked to a higher likelihood of direct aggression in online dating relationships. Also common myths about love were linked to control in online relationships. The link between justification of cyber dating abuse and perpetration of direct aggression was stronger in women. Myth beliefs (e.g. jealousy is proof of love and you can mistreat someone you love) and perpetration of control were strongest in younger individuals.	(Borrajo et al., 2015b)	656 young people (18-30) 80% women
Intimate partner Cyberstalking	(Smoker & March, 2017)	Predictors of perpetration N=689; 30% men, 70% women

Women found to be more likely to engage in that behaviour (also in Helsper & Whitty; Purcell 2010, women more likely to engage in cyberstalking and married women more likely to use technology to discreetly monitor partners) This looked at cyberstalking which could be considered more similar to covert stalking which has been linked with women, however men are more likely to perpetrate overt types of stalking . Machiavellianism, narcissism, psychopathy, and sadism were all significant predictors of IP cyberstalking. Similarly to offline stalking. Menard & Pinkus (2012) also found that narcissism was linked to higher likelihood to perpetrate stalking and cyberstalking.		
Intimate Partner Cyberstalking Controlling relationship behaviours was a significant predictor of intimate partner cyberstalking. Further, gender (women), vulnerable narcissism, direct sadism (verbal and physical), and secondary psychopathy were significant, positive predictors of intimate partner cyberstalking. Importantly, significant gender differences appeared regarding predictors;vulnerable narcissism and direct verbal sadism were significant predictors for women, and only secondary psychopathy was a significant predictor for men. Vulner-able narcissistic individuals are hypersensitive to perceived inter-personal rejection (Besser & Priel, 2010). Such rejection may be inter-nalised as an ego-threat, which could result in aggressive responses (seeJones & Paulhus, 2010) Linked to Branson & March	(March et al., 2020)	N= 405; 69.6% women
Antisocial use of dating applications three forms of antisocial behaviours(General, esteem, and sexual) gender not a significant predictor of antisocial dating behaviour General: dark tetrad traits were predictive of antisocial general use of tinder. Users of dating applications with these characteristics may use applications like tinder and	(Duncan & March, 2019)	this is on Tinder. (N= 587; 21% men, 79% women) completed an online ques-tionnaire, including the Antisocial Uses of Tinder®Scale which was constructed to measure a range of antisocial behaviours. Exploratory and Confirmatory factor analyses revealed three forms of antisocial behaviours(General, esteem, and sexual) Apart from the sexual the rest were not that linked with TFDA, used to consolidate findings

the anonymity they afford to meet narcissistic needs, enhance their reputations and manipulate social relationships, and facilitate sadistic sexual interactions like sending of unsolicited sexual material to matched partners. Esteem: Women more likely to display Machiavellianism linked to their use of Tinder (e.g. for self and other esteem and purposes to self monitor and promote) Sexual: Men were more likely to engage in antisocial sexual behaviour on tinder. Machiavellianism, psychopathy and sadism were significant predictors for me. Compared to women they are more likely to use tinder for sexual and coercive purposes		
Cyber psychological abuse Individuals with heightened anxiety or avoidance in close relationships may have lower threshold for acting aggressively towards a partner in conflict scenarios wither in person or in a cyber-context.	(Bui & Pasalich, 2021)	community-based sample (N = 200; M_{age} = 22.28 years) in Australia who completed a battery of online questionnaires.
Cyber aggression perpetration High levels of female cyberaggression linked to lower physical IPV perpetrated by males due to feeling weakened by the constant monitoring	(Schnurr et al., 2013)	emerging adult dating couples (n _ 148 couples) difficult to decipher perhaps rethink
Cyber IPV positive relations of psychopathy and narcissism with cyber controlling behaviors. Psychopathy was found to be strongly related with direct cyber aggression behaviors; sadism was mainly related with C-IPV victimization in both controlling and direct aggression, and, finally and interestingly, Machiavellianism presented negative correlations with direct cyber aggression. Remarkable is that joining sadistic personalities increased vulnerability to victimization from C-IPV direct aggression, as well as more psychopathic traits and an increased probability of perpetration. These combinations may create dangerous situations. In	(Pineda et al., 2021)	Dark personalities and cyber IPV 1,189 participants, we measured C-IPV victimization and perpetration rates and compared the results with the Dark Tetrad profiles of the respondents.

conclusion, we found that both C-IPV perpetrators and victims present higher scores in the dark personality traits and gender-based differences than in-person IPV actors.		
Digital dating aggression Electronic intrusion the most common of the digital dating abuse and electronic victimisation behaviours. Attachment insecurity and anxiety linked to higher levels of EI perpetration. No gender difference in EI perpetration	(Reed et al., 2016)	Survey of 365 college students was conducted, finding that digital monitoring behaviors were especially common
Cyber Dating Abuse: 35.8% of women indicated beingvictims/perpetrators of cyber dating abuse as opposed to the 8% who reported being only victimsand 13.6% being only perpetrators. Mutual learning patterns of abuse through social interactions and relationships. Also authors emphasises that some behaviours are not seen as abusive. In particular those involving excessive communications, control and intimidation are seen as an important part in relationships	(Villora et al., 2019)	The sample study included 1041 female university students (mean age=20.51) from central Spain
Technological IPV social media use,but not texting, uniquely predicted tIPV perpetration These results suggest that, while there are important technology-related perpetration factors such as technological disinhibition (e.g. easier to communicate via technology, fear less repercussions etc) (e.g. anonymity, invisibility, asynchronicity, solipsistic, introjection, dissociative imagination, attenuated status and individual differences) and technology use, in-person IPV also remains an important risk factor for tIPV	(Duerksen & Woodin, 2019b)	278emerging adults via an online survey. Participants reported on their IPV perpetration, technology use, andtechnological disinhibition. Initial results indicated that both technology use and technological disinhibitionuniquely predicted tIPV perpetration, but did not interact.
Cyber Intimate Partner Aggression	(Watkins et al., 2020)	This study examines the interaction between three types of cyber IPA (cyber psychological, stalking, and sexual IPA) and alcohol use in predicting in-person physical and sexual IPA perpetration.

Those who cyberstalked and used more alcohol had a stronger likelihood to perpetrate physical IPA but not sexual IPA. High prevalence of cyber IPA and association with in person IPA		268 undergraduate students, who participated in a mass screening at a large midwestern university. More than half of the sample reported perpetrating cyber IPA.
Technology facilitated abuse TFA and controlling behaviours and the link to substance use Sixty-four percent (143/223) and 33% (73/223) of participants in England and 65% (184/280) and 20% (57/280) in Brazil reported controlling behaviours and TFA, respectively, during theircurrent/most recent relationship perpetrating controlling behaviours was associated with a higher number of ACE, higher anger expression (England) and severe physical IPV perpetration (Brazil),and perpetrating TFA was associated with younger age. Including both IPV victimisation and perpetration in the multivariatemodels; perpetrating controlling behaviour was associated with experiencing a higher number of ACE, higher anger expression(England), emotional IPV victimisation (England) and experiencing controlling behaviour from a partner (England). The perpe-tration of TFA was associated with younger age and experiencing TFA from a partner	(Gilchrist et al., 2017)	Men receiving sub-stance use treatment in England (n = 223) and Brazil (n = 280). F
(Gracia-Leiva et al., 2020)	(Yardley, 2020)	Very useful for impact section Not as useful or novel in perpetration but included as back up for concept of omnipresence
Online mate retention tactics	(Brem et al., 2015)	One hundred and seventy-seven young adults (65 men, 112 women) completed questionnaires that included measures of online and offline mate-retention tactics, Facebook jealousy, Facebook surveillance, and intimate partner violence.

Facebook mate-retention tactics fully mediated the relation between Facebook jealousy and both intimate partner psychological and physical aggression. The Facebook Mate-Retention Tactics Inventory (FMRTI) was developed for this research based on the Mate-Retention Inventory-Short Form (MRI-SF; Buss et al., 2008). Included jealousy and surveillance, and punishment of infidelity items (e.g., check status of partner on FB to check where they are, ask to be given FB passwords, monitor partners FB chat and messages, threaten with break up if someone		
Cyber aggression Problematic alcohol use only associated with cyber privacy invasion (e.g. checking partner's messages without permission) and not Cyber relational aggression (e.g. flirting with others on SM for partner to see) that goes beyond traditional IPV. 42% of sample reported perpetrating cyber-relational aggression and 35% reported perpetrating cyber privacy invasion	(Crane et al., 2018)	100 (40 female) adult participants through online crowdsourcing to complete a series of questionnaires assessing traditional partner violence, cyber aggression, and problematic alcohol use. Low N of participants. I would reclassify as low.
Digital Dating Abuse Evolutionary understanding Digital dating abuse as a mate retention tactic, and those who report higher mate value discrepancy (e.g. considering their mate to be of higher value to themselves) were more prone to digital dating abuse. The authors explain this link with digital dating abuse as a tactic to thwart mate poachers and retain their mate.	(Bhogal et al., 2019)	two independent samples (study 1, n=177; Study 2, n=134) by showing large mate value discrepancies positively predict digital dating abuse, therefore suggesting that digital dating abuse could be a contemporary cost-inflicting mate retention strategy..

3. What are the vulnerabilities and needs of victims of TFIPV

Victim Vulnerabilities/risks/needs/protective factors	Source	Notes
Online dating violence Proximity to peers and parents may prevent risk behaviours in online dating violence in young females but not young males. similarly to offline dating violence. Therefore, suiciderisk was reduced when young and adolescent women found more confidence, communication andless alienation from their parents and peers. Found a significant and positive relationship between all types of DV (off- and online) and suicide risk	(Gracia-Leiva et al., 2020)	young Spanish females (N=1227) (Mage=19,SD=2.82; range=13–28 results are difficult to glean for offline and online and seem to be looked at in combination for the main analyses. The combination of both increases risk. Also sample is quite young
Cyber dating abuse victimisation CDA is specifically impacted by alcohol abuse, and individuals abusing alcohol are more likely to both perpetrate but also suffer from CDA. Authors theorise that alcohol use is an avoidant coping mechanism and therefore more likely to be used as a coping mechanism against CDA than in-person victimisation. Women experience more negative psychosocial functioning than men overall (e.g. less social support and lower quality of life, post traumatic stress and depression).	(Duerksen & Woodin, 2019a)	Also mentions impacts. Such as depression, substance and alcohol abuse 278 men and women between 17 and 25 years of age (M = 20.5, SD= 1.9) who were currently in an intimate relationship for at least 3 months
Cyber dating abuse victimisation Only difference of CDA compared to non abused participants was linked with marijuana use and hard drugs in the past year.	(Lu et al., 2018)	Participants were 641 adolescents (63.3% female) with a mean age of 19.1 years (SD=.79) at Wave 5. Analyses suggested that while CDAV was associated with mental health and substance use cross-sectionally, when examining over time, it was only associated with past year hard drug and past month marijuana use. Although long-term mental health effects of CDAV did not emerge in the current study, we identified a temporal link to marijuana and hard drugs, highlighting the need for prevention efforts to incorporate messages about substance use.
Digital dating abuse Digital IPA: Focuses on practices of DDA victims to protect themselves. Non-assertive assimilation: keeping a positive façade for their perpetrator being respectful and scared to decline things, a lot of self censoring also jhappening Averting controversy: most commonly employed co-cultural communication practice. It means	(Weathers & Hopson, 2015)	Women aged 18-24 in digitally abusive heterosexual relationships. It is more fitting for impact section. In depth interviews. Some data on prevalence could be used in that section.

constantly deflecting communication away from potentially volatile or inflammatory subjects Assertive Assimilation: efforts to go above and beyond to please. Regularly checking social media to delete inflammatory content. Overcompensating and conflating that with acts of love. Assertive Communication: forming networks of support with other women (sisters, roommates, mentors etc) Nonassertive separation: avoiding interactions with abusive partners and maintaining interpersonal barriers (e.g. not responding to calls and texts and avoiding SNS).		
Digital Dating abuse Overall women use maladaptive coping strategies to overcome DDA Normalisation of abuse (e.g. abuse minimised by self or support network), directness of communication (e.g. non-assertive separation like avoiding interactions) and time-based efficacy (again non-assertive assimilation is adopted, developing positive face and sensoring oneself, averting controversy and assertive assimilation like extensive preparation and overcompensating with their partners.	(Weathers et al., 2019)	10 in depth interviews with women. For IMPACT section
Intimate partner Cybervictimisation\ Results indicated that nearly three-fourths (73%) of the sample had experienced at least one type of cyber IPV and 32.7% up to 3. Hierarchical regression analysis showed that psychological and sexual cyber IPV were uniquely associated with depression. Cumulative effect of three types (psychological, sexual and stalking) of cyber IPV on depression	(Cantu & Charak, 2020)	Participants were 903 Hispanic emerging adults in the age range of 18 to 29 years (M = 20.68, SD = 2.42; 74% female)
Intimate partner cyber victimisation Only sexual cyber IPV was uniquely associated with alcohol use In support of the cumulative risk hypothesis, those with exposure to three types of cyber IPV were more likely to have greater alcohol use compared	(Trujillo et al., 2020)	Participants were 277 self-identifying LGB individuals in the age range of 18-29 years (*M* = 25.39, *SD* = 2.77; 16.6% lesbian, 25.6% gay, 43% bisexual women)

to those with exposure to any one type of cyber IPV		
Cyber intimate partner victimisation Inconclusive and mixed results on how CIPV affects men and women. CIPV resembles In person IPV especially the psychological kind. Related to substance abuse and antisocial behaviour	(Melander & Marganski, 2020)	All surveys were completely voluntary and anonymous (*n* = 844). Age was restricted to those 18–25 years, and only those who reported being in a relationship in the past year were included in the analyses, leaving a final sample size of 540.
Technology mediated IPV Couples therapists do not recognise TIPV due to lack of protocols and training. Also population in research is not matched to clinical populations that will come into contact with therapists and practitioners (research largely focused on younger adults). Formal training needs to be incorporated and also training manuals and assessment tools developed.	(Hertlein et al., 2020)	Assessing mostly gaps and impacts. Use in gaps and impacts section.
Cyber Dating abuse Victims of cyber dating abuse were also found to be high in attachment avoidance but no link was found with significantly lower positive relationship quality compared to those who are not victims of cyber dating abuse	(Lancaster et al., 2020)	this study examined whether insecure attachment moderates the relationship between cyber dating abuse and relationship quality in emerging adults (N = 177)
Cyber dating abuse victimisation	(van Ouytsel et al., 2016)	Focused on adolescents so it was only mentioned for context but not included.

Reviewer 2 (questions 4,5,6)

Code:

High WoE source

Medium WoE source

Question 4: What evidence exists about the scope/prevalence of different types of TFDA experienced by adults?

Scope/Prevalence type	Source	Notes

68.6% experienced at least one form of CSH, usually multiple forms experienced, male perps usually strangers but also known/partners	(Reed *et al.*, 2019)	Females, aged 15-19, not disaggregated,
50% of students surveyed (n= 804) either the initiator or the victim of controlling or monitoring behaviours.	(Burke *et al.*, 2011)	Relevant for perps question – more females engaging in behaviors
28% of students in a relationship victimised, males more likely to report experiences (32% compared to 24%, n=2218). 81% of DDA victims also victims of traditional dating abuse.	(Hinduja and Patchin, 2020)	Males and females, aged 12-17, not disaggregated. Risk factors include being sexually active
20-30% experienced at least one form of DDA (n=449)	(López-Cepero, Vallejos-Saldarriaga and Merino-García, 2018)	Male and female (76% female). Complicated to interpret
37.1% digital sexual abuse, 44.3% digital direct aggression, 57.1% digital monitoring and control (n=70)	(Reed *et al.*, 2020)	Latinx youth aged 14-18, male and female (73% female), higher than usual rates, online/offline link
Evidence of polyvictimisation among young people who are exposed to cybervictimisation, suggests need for an approach that addresses multiple risks. Higher for girls (n=3212)	(Machimbarrena *et al.*, 2018)	Spain, Males and females aged 11-21, not disaggregated
Discovered that women are more likely to disclose TFDA when asked than to bring it up spontaneously in the same way as they do with non-TFDA. Not forefront in their minds. (n=1113)	(Messing *et al.*, 2020)	Sample was all recognised DV victims
Perps posting abusive or harassing content on their own social media pages.	Powell and Henry, 2018	
Note DDA in terms of pressure to respond quickly to a partner. Also noted the non-consensual sharing of own naked photo with partner as a directly aggressive behaviour. High number of trans victims. Starts early for victims to have average age of 16 years.	(Ellyson *et al.*, 2021)	
Note that the bi-directionality of DV doesn't reflect the predominance of suicidal ideation among women. Online DV victims 2.37-3.69 times higher	(Gracia-Leiva *et al.*, 2020)	

risk of SI and attempts. Joint on/offline DV victims 4.19 ties higher risk of suicidal thoughts and 10.55 times higher risk of attempted suicide.		
Technology increasingly important to the dynamics of DFV; standardised measures may miss these; not asked directly but rather volunteered the info; tech used by victims in a positive way to record evidence of abuse; phone monitoring; GPS tracking (phones, children's toys to find shelter); harassment.	(Douglas, Harris and Dragiewicz, 2019)	Queensland study of 55 women victims Good overview of relevant literature
PCAQ; angry or insulting text messages (30.6%) checking emails or messages without permission (20.4%); similar rates for males and females;	(Wolford-Clevenger *et al.*, 2016)	502 College students currently in a relationship, 65.7% female, PCAQ measures incidence and prevalence of past year experiences, CTS2 aswell.
75.3% victims (74.8% males, 73.9% females), 34.3% frequently (36.9% males, 32.5% females); 75.1% perps (72% males, 77.2% females) 29.5% frequently (28.6% males, 30.1% females). Association between cyber and traditional dating abuse.	(Lara, 2020)	CDAQ differentiates between control and direct abuse but asks about victimisation and perpetration. 14-24 yo, 1538 Chileans, 59.8% female
50% experienced cyber dating abuse. More men than women reported being victims of having secret info spread or compromising images shared without consent (8.3% / 3.1%). Demonstrated repeat victimisation, presence of jealousy, indications of being younger and in a same-sex relationship as risk factors too.	(Borrajo, Gámez-Guadix and Calvete, 2015) Is actually Borrajo et al 2015 – the other one	Spain, 433 students, 18-30 yo, 60% women, were or had been in a dating relationship
38.2% experienced CDA, 42.2% perpetrated at least one act of CDA. Positive correlations between offline DA and CDA in victimisation and perpetration patterns.	(Caridade, Pedrosa e Sousa and Dinis, 2020)	173 Portuguese students (86.7% female)
Cyber-aggression, sexting quite prevalent among sample,	(Mishna *et al.*, 2018)	Survey of 1350 Uni students

Question 5: What evidence exists about the impact of these different types of TFDA experienced by adults?

Type of impact	Source	Notes

Police not taking TFDA seriously	(Harris and Woodlock, 2019)	
DCC can deter women from leaving abusive relationships	(Dimond, Fiesler and Bruckman, 2011)	
Discusses substance use, poor mental health and STI but as corelates, not necessarily impacts? Suggests an association.	(Reed *et al.*, 2019)	Links to risk levels perhaps? Higher prevalence rates among this population, anyway. Risk factor of being sexually active.
Psychological harm of online abuse (esp. image sharing) as it never goes away and anyone could see it. Things like facebook posts not being taken seriously.	(Henry, Flynn and Powell, 2018)	
Negative emotional / mental impact noted by victims. Suggest high prevalence of use / experience means it's somewhat normalised among adolescents.	(Ellyson *et al.*, 2021)	
Note how cyber element might decrease physical harm through conflict communications being virtual. Suggest it's better to call it 'digital dating aggression' to reflect unhealthy and unwanted behaviour, but not necessarily exertion of power and control.	(Reed, Tolman and Ward, 2016)	
Isolation (as experience and impact); impeding access to finance; psychological impact of ability to transgress boundaries; use of footage for subsequent blackmail purposes; avoidance of using social or media technologies.	(Douglas, Harris and Dragiewicz, 2019)	
Suggest minor and severe acts important to measure across all technological mediums to determine whether unitary or multidimensional construct; suggests need for more qual research to discern missing measures.	(Wolford-Clevenger *et al.*, 2016)	
Frequency not an indicator of severity; normalisation of controlling and monitoring behaviours; minimised as irritating rather than abusive.	(Lara, 2020)	
Co-cultural coping strategies focus. Time-Based Efficacy: Non-assertive assimilation (developing positive face; censoring self; averting controversy); Assertive assimilation (extensive preparation; overcompensating). Normalisation of Abuse: Assertive accommodation (intragroup networking; using liaisons). Directness of	(Weathers, Canzona and Fisher, 2019)	Interviews with 10 women 18-24 yo previously in digitally dating abusive relationships. Cite impact findings from several other studies that may be of use. Also highlight how victims' strategies to try and manage, cope with or mitigate the abuse were all ultimately pointless as it didn't stop any of it. This is worth noting – not easier managed just because indirect / digital.

Communication: Nonassertive separation (maintaining interpersonal barriers; avoidance). Depression, social isolation, negative toll on physical and mental health.		
Positive correlations between EI perpetration and ADV perpetration. Engaging and endorsing behaviours.	(Doucette *et al.*, 2018)	78 adolescent females aged 14-17 yo. Use term electronic intrusions (EI)
Proliferation of online romantic relationships considered as valid as 'real life' ones. Controlling behaviour can be disguised (or interpreted) as being caring and considerate. Males considered TAADVA less impactful or not taken as seriously as in-person abuse. Females recognised it as worse as could be relentless or carry on post-break up.	(Stonard *et al.*, 2017)	TAADVA term used, UK based, focus groups with 52 kids aged 12-18 yo. 55.8% female
CDAV cross-sectionally associated with all measured mental health and substance misuse variables, but with temporal relevance. Substance misuse more recent than MH? suggest CDAV prevention programs to target / screen for substance abuse among victims, and assessment of MH prior to CDAV.	(Lu *et al.*, 2018)	641 (63.3% female) adolescents
Maladaptive behaviours among victims of C-IPV including problematic drinking, drug use and antisocial behaviour. Depression also positively and significantly associated. C-IPV considered similar to IP-IPV in maladaptive effects	(Melander and Marganski, 2020)	540 undergrads aged 18-25 yo (73.1% female). Not always disaggregated so might need checking.
Positive impact noted on male perps (i.e. status enhancement through sharing / collecting nudes even though without consent); gendered impacts noted re shame and embarrassment (female) verses irritation and annoyance (male). Males worried about reputational damage while female note psychological impacts. Males failed to recognise females (potentially) feeling fear and suggested some might be flattered (nude pics). Also considered women to be more in control in shutting down unwanted attention than is true.	(Brown, Flood and Hegarty, 2020)	38 youth aged 16-24 yo, single-sex semi-structured discussion groups, Australia. Attitudinal.
Class 1 high cyber sexual IPV victimisation reporting higher levels of emotion dysregulation, depression and anxiety. Cybervictimisation class reported higher levels	(Charak *et al.*, 2019)	LGB victims, 288 participants aged 18-29 yo (165 women, 112 men, 11 trans)

of all mental / behavioural health challenges that the face to face IPV class.		
Cultural / regulatory context important. Notes blackmailing of women along gendered lines (i.e. work permits etc) resulting in their compliance and worsening of situation. Family and shaming culture leveraged by perpetrators with little recourse in CJS for women.	(Vitis, 2020)	Singapore
Negative relationship between dating abuse and well-being among emerging adults. CDA a negative predictor of self-esteem and positive predictor of emotional distress. Also high prevalence of partners checking up via text (78% of sample).	(Hancock, Keast and Ellis, 2017)	155 ug students (105 female) 1-25 yo
Victims of CDA of both genders engaged in more frequent heavy episodic drinking, had a higher amount of sexual partners in their lifetime and were more likely to have not used protection in their last sexual encounter.	(Van Ouytsel *et al.*, 2016)	466 students aged 16 – 22 yo (71% female)

Question 6: Gaps in research, recommendations for research, policy, practice

Gaps / recommendations	**Source**	**Notes**
Not enough support for practitioners around TFDA; Focus on digital / electronic dating violence among youth; Focusing on the medium (technology) and acts rather than actors; Gender blindness approach to research where gender specificity exists; Variation in terminology vast and wide-ranging	(Harris and Woodlock, 2019)	
Better policy guidance; social media accountability	(Messing *et al.*, 2020)	
Addressing obstructive social media companies and complicated laws	(Powell and Henry, 2018)	

Need to be alert to TFDV as so intertwined with DFV; need to be aware of different modes of coercion esp IBSA; cite need for future research into, among other things, how survivors manage and access help.	(Douglas, Harris and Dragiewicz, 2019)	
Focused on two beliefs (justification of CDA and myths about love) in control and direct aggression cyber dating abuse to show both are related to CDA with belief in myths about love related to perpetration of online control.	(Borrajo, Gámez-Guadix and Calvete, 2015)	704 people aged 18-30 yo
TFSA, use of tech as proxy sexual violence (i.e. vengefully enticing other men to rape an ex-partner via online communications), note policing difficulties, difficulties in identifying perps, police limited in what they can advise – usually unhelpful. Lack of police tech understanding, budget constraints, higher prioritising of contact offences over non-contact. Masculinist cultures and victim blaming, additional cultural / identity aspects.	(Powell and Henry, 2018)	Austrian stakeholders