

SECTION I

NEW OPPORTUNITIES FOR  
CRIMINALS AND POLICE



# CHAPTER 1

## DOES EXPOSURE MATTER? MEDIA, EDUCATION, AND EXPERIENCE AFFECTING TECHNOLOGY-MEDIATED ABUSE KNOWLEDGE, UNDERSTANDING, AND SEVERITY-PERCEPTIONS

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### ABSTRACT

**Purpose:** *This study explored technology-mediated abuse (TMA) by looking at the influence of topic exposure via education (informal), media (nonfictional), and personal experiences (self/close others) in shaping public knowledge, understandings, and perceptions of TMA.*

**Methodology:** *Community-sampled respondents ( $N = 551$ ;  $n = 235$  men, 263 women; aged 18–81 years,  $M = 27.42$ ,  $SD = 12.31$ ) reported their TMA awareness and topic exposure ( $n = 110$ ; 20% of the total sample indicated prior exposure).*

**Findings:** *Results indicated TMA knowledge, understanding, and perceptions varied by prior sources of topic exposure. This suggests that TMA is a crime varying in public awareness and perceived repercussions.*

**Research limitations:** *Open-ended responses, although ideal for exploratory studies such as this one, limit the scope and power of quantitative analyses.*

*Future work should test the current study's conclusions in a generalizable, random sample via closed-item surveys.*

**Originality/value:** *Present findings elucidate which societal forces and education types are best suited for helping people understand TMA in all its complexity. Such understanding allows for practical considerations of the comparative effectiveness of formal curriculum and media in shaping cognitions regarding TMA victimization.*

**Keywords:** Computer-mediated communication; entertainment education; intimate partner violence; partner violence; primary prevention curriculum; public awareness

More than 112 million people will experience severe psychological aggression from a romantic partner in their lifetime (Black et al., 2011), with partner-perpetrated physical assault, rape, and/or stalking experienced at least once in the lifetimes of over 42.4 million women (35.6% of females) and 32.2 million men (28.5% of males) in the United States (US). Increasingly, technology is harnessed (both legally and illegally) by perpetrators to control, harass, stalk, and violate romantic partners – a phenomenon known as *technology-mediated abuse* (TMA). Because societal treatment of this crime exacerbates victims' stigma, reducing their support and/or coping resources, it is imperative to study public perceptions and/or knowledge regarding the topic. Doing so can increase the efficacy/availability of victim resources and hone the legal status of TMA. Many domestic violence behaviors are criminal, but many others (particularly those that are digitally perpetrated) remain lawful (Commander, 2018). Thus, policy adaptations to evolving technologies depend on public understandings (Palazzolo & Roberto, 2011). Research shows popular TMA-perceptions are influenced by media coverage, education, and/or personal experiences (Spitzberg & Cupach, 2014), making these three potential information sources essential for study.

Considering this social change potential (i.e., to affect criminal policies regarding TMA victims), we examined which/how exposure sources influence public TMA-comprehension in terms of participants' TMA knowledge, understanding, and perceptions of severity. To frame this study, we first consider what is known regarding TMA and how people's impressions of it may be affected by their exposures to media (fictional and nonfiction), education (formal and informal), and personal experiences (self and close-others). We conclude by discussing results of a self-report study of these factors.

## TECHNOLOGY-MEDIATED ABUSE (TMA)

The technological boom has been a boon for victims' help-seeking (Finn & Banach, 2000), but its criminal, relational uses remain victims' bane. Given the extent, forms, and nature of digitally perpetrated abuse, TMA is more than just a

tool or mediator of abuse/rs (see Eckstein, 2020). It is both uniquely complex and distinctively shaped by societal norms.

### *TMA's Complexity*

*Intimate partner violence* describes relationships in which verbal, psychological, or physical abuse; coercive control; and/or intrusive tactics are used to dominate, scare, and/or harm romantic partners. Technologies have long been used to perpetrate stalking or invasion (e.g., calling incessantly or audio/video bugging) and perpetuate fear and control. However, in the last few decades, exponentially increasing usability/access and decreasing costs have allowed its use in ways not previously imagined (e.g., location services, geotagging, and remote home management).

Abuse occurs in varied forms via many technologies. One commonly studied violation is *cyberstalking*, generally known as technology-facilitated, unwelcome, persistent, psychologically abusive behaviors of which victims are aware. Outside digital arenas, "stalking" implies being somewhat removed from the surveilled party; when facilitated online, it achieves goals previously necessitating perpetrators' presence. Because "cyberstalking" references both relational partners and strangers (groups with differing dynamics) and does not account for technology used to abuse in other ways (i.e., beyond stalking tactics), we focus on the broader TMA concept, which includes surveillance, emotional attack, and/or intrusion and more/less invasive/direct abuse methods typical in intimate relationships (see Eckstein, 2020).

TMA tactics are certainly used against strangers or acquaintances, but we focus on romantic contexts as unique, with dynamic, historically shared experiences involving commitments and distinct patterns/norms/rules guiding them (Stafford & Canary, 2006). As such, TMA used in abusive romantic relationships may extend in-person abuse methods *and/or* injure or control partners in ways not possible with technology used to harm strangers/acquaintances. With TMA, one tool serves multiple purposes (e.g., attack, control, monitor) with overlapping victim outcomes (e.g., fear, coercion, anxiety), all dependent on the unique relational history of that dyad (Eckstein, 2020). However, not everyone understands TMA similarly (Davies, 2019).

People perceive digital behaviors differently depending on the relationship's type, status, and members. Burke, Wallen, Vail-Smith, and Knox (2011) found that, regardless of their texting views while in a "healthy" relationship, young adults' perceptions of texting (at the same frequency as before) changed when they broke up; the same repetitive messaging once considered acceptable was viewed as "cyberstalking" when relationships ended. The line between what is acceptable or intrusive is often unclear, but such sender/target "confusion" is particularly problematic when used to abuse (or even perceived that way). An identically worded "romantic" message can become "scary" the next day, for example, depending on what transpires.

Adding to victimization's complexity is the stigma toward those who experience it. *Stigma* is constructed societally and alters people's views of and reaction toward others (Goffman, 1963) by producing in/out groups, the latter risking

social repercussions like ostracization, shame, and resource exclusion (Phelan, Link, & Dovidio, 2008). How people think about a topic – particularly one as fraught as criminal intimate behavior – in/directly shapes those stigmatized. Education is believed to reduce stigma, but that only works if prejudicial beliefs/practices are not further perpetuated (Kang & Inzlicht, 2012). This means that to address a problem – whether through heightened awareness, legal repercussions, or social support – public awareness of the issue first must be understood.

### *Public Cognitions on Complex Topics*

Beyond its potential to facilitate harm, technology itself also reflexively shapes society's view of it. Media used in formal, education settings and informal, entertainment contexts influence people's impressions of romantic relationships (Kretz, 2019), sex and gender norms (Hust et al., 2017), and norms for healthy interpersonal behaviors (Galloway, Engstrom, & Emmers-Sommer, 2015; Lippman, 2015). What is unknown are the comparative influences of different exposure sources on topic understanding. Knowing how people perceive TMA is a crucial step toward addressing the problem.

There are many ways to conceptualize comprehension. To capture nuance in people's familiarity with a topic, we differentiate knowledge from understanding. *Knowledge* is concept awareness; people's ability to label an occurrence is indicative of one knowledge type (Rosch, 1978), and knowledge is illustrated by amount, specificity, and variety (breadth) of communication. *Understanding* refers to connections among underlying concepts that make up a construct (Assilamehou & Teste, 2012). When knowledge categorization interacts with personal perceptions (i.e., connotative meanings), it leads to nuanced cognitions producing understanding (Kelly, 1955). Whereas knowledge is largely knowing something exists and being able to identify cases of it, understanding goes critically deeper to forge associations, contexts, and potential outcomes or applications of a concept (Bannister & Mair, 1968).

Both knowledge and understanding are affected by prior exposures. For example, Oliver, Sargent, and Weaver (1998) showed that those exposed to gender-specific environments early on who then viewed TV violence were desensitized, with lowered ability to identify partner violence. Someone may identify (i.e., have knowledge of) TMA as a crime, but where TMA is culturally normalized, public understandings and perceptions of its deviance may be affected. In other words, we must ascertain not just *if* people know about something, but also *what* they know about it.

Noted previously, TMA is still not fully explored – let alone understood – by professional practitioners and researchers, so laic understandings vary. It seems unrealistic to expect the public to properly deal with an issue in the face of nonexistent, inaccessible, contradicting, and/or blatantly wrong information. Nor would it be appropriate to assign causality of perceptions *to* the public *if/when* they receive their information from particular sources. Because the extent of TMA topic exposure is unknown, we first asked:

*RQ1:* What is the extent (and nature) of a US sample's TMA topic exposure?

### *Exposure Variety*

Three main exposure sources influence people in modern society: (a) education, including formal schooling and informal community programs; (b) media, including fictional and nonfiction forms; and (c) personal experience, including personal and friend/family victimizations.

#### *Formal Education*

Particularly at undergraduate (Fox & Cook, 2011) and earlier (Kang & Inzlicht, 2012) levels, education is believed to influence knowledge, and thus, understanding and perceptions. One assumption guiding many education programs is that more familiarity leads to less uncertainty (accompanied by negativity) felt about a topic (Corrigan & Penn, 1999); exposure lowers likelihood of negative reactions/perceptions caused by internalized fears of the unknown (Kang & Inzlicht, 2012). Further, familiarity (via receiver personalization) increases sympathetic views toward and salience of a topic (Stephens & George, 2009). This is why mental health professionals and community educators frequently employ outreach methods (e.g., intervention curricula and public health campaigns) that not only expose a problem, but that presumably educate about it as well (e.g., Kang & Inzlicht, 2012). However, it matters how and what people are exposed to, particularly with socially sensitive topics like abusive relationships.

*Primary prevention education* presumes that early knowledge and attitude formation later primes awareness and sensitivity toward behaviors otherwise “ingrained” unhealthily by parents, peers, or other members of society (Browne-Miller, 2012). Based on social learning theory (e.g., Bandura, 1977), primary prevention approaches rely on sources outside people’s typical “at risk” social networks to shape understandings. For example, in the case of violence, education may attenuate negative community or familial influences (Copp, Giordano, Longmore, & Manning, 2019), particularly when modeled on strengths-based (versus deficit-based) approaches to decreasing violence tolerance (Crooks, Jaffe, Dunlop, Kerry, & Exner-Cortens, 2019).

Despite practitioners’ current acceptance of this approach as a best practice, education’s effectiveness remains unconfirmed, particularly for violence prevention (Nation et al., 2003). For one thing, long-term changes in attitudes, beliefs, and/or behaviors are difficult to distinguish and measure. Also, varied programs across schools with diverse student bodies convolute potential direct effects of particular curricula (Halpern-Meekin, 2012). As Crooks et al. (2019) note, rigorous study of programs’ effects (particularly long term) is lacking, and this is difficult to remedy in many situations with limited funding and/or marginalized populations.

When dealing with violence, most practitioners, clinicians, policymakers, and law enforcers (e.g., police, lawyers, and judges) are primarily uneducated, tend to rely on cultural myths, or otherwise demonstrate bias (Ahrens, 2006; Amar, Strout, Simpson, Cardiello, & Beckford, 2014; Brubaker & Keegan, 2019; Venema, 2019) – a concerning trend, given that education’s influence depends on not just *if* but also *what* is being taught. Even with an ideal curriculum, content updates must constantly reflect current audience (e.g., youths) practices *and*

empirical research, which remains sparse and ever-evolving for TMA. Given that true social change emerges not only from mere awareness of an issue, but also complex understanding of it, we examined education's role in predicting TMA knowledge (i.e., basic exposure level), understanding (i.e., comprehension complexity), and severity perceptions as follows:

*H1:* Prior educational TMA exposure will increase TMA: (a) knowledge (i.e., example frequency, specificity, and breadth); (b) understanding (i.e., contextual and thematic complexities); and (c) severity perceptions (i.e., tactics rated most harmful).

A final concern for violence-prevention educators is that many programs are not implemented until early adolescence, largely because of beliefs that teens' romantic practices inform their adult relationships (Murphy, 2013; O'Leary & Smith-Slep, 2003) and/or that educators should avoid exposing children to violent/sexual ideas (Chappell & Maggard, 2010). As such, formative beliefs informing normative behaviors may already be established by the time students receive formal topical education (Crooks et al., 2019). This is one reason why many scholars prefer to focus on more-ubiquitous and early-reaching exposure forms.

### *Media Exposure*

A rich literature exists on media's role in shaping how/what people think. Media ubiquity is purported to affect, intentionally or not, people's knowledge, beliefs, and attitudinal behaviors – especially for impressionable youth (Bonomi, Eaton, Nemeth, & Gillum, 2017). The type versus amount of influence media has on users is still debated (e.g., agenda setting versus media effects theories; see Bryant & Zillman, 1986; McCombs, 2004). Regardless, the belief that it influences *something* remains so prevalent that media outlets receive frequent criticism related to social issues like the appropriateness of children's content and the ways in which in/accuracy of media portrayals may perpetuate negative stereotypes and unhealthy social norms (Kahlor & Eastin, 2011). Simultaneously, this aspect of media is harnessed for its potential power in more structured, educational ways.

Understanding that “dry,” obvious, or otherwise didactic education methods fail to reach people en masse, educators may employ subtle media infiltration via *entertainment education* (EE), which embeds factual content meant to challenge myths or raise awareness about issues into already-mainstream narrative-style media (Singhal & Rogers, 2004). EE has existed for a while, although its intentional usage and formal study are more recent. Although research on its success is mixed (Hoffman, Shensa, Wessel, Hoffman, & Primack, 2017), when not enacted in a “clunky” manner (e.g., by “posting cringe,” to use a recent expression), it may increase long-term awareness of particular health and interpersonal information (Hether, Huang, Beck, Murphy, & Valente, 2008; Hust et al., 2017).

Influence effectiveness varies by genre and media type (e.g., dramatized film/TV, comic books, magazines, etc.). Although increasingly overlapping, genres are generally distinguished as fictional (i.e., to entertain) or nonfiction (i.e., to inform). How and where users encounter material may affect how it influences



them. For example, when an effort to persuade is noticed, it can backfire, especially if users resent its intrusion in their entertainment moments (Asbeek Brusse, Fransen, & Smit, 2015). Topic exposure via user-chosen media is more likely to be received positively and/or facilitate passive internalization of information (Kahlor & Eastin, 2011). Thus, media may educate even unintentionally.

Exposure amount has been found to influence users' intimate violence perceptions (Coyne et al., 2011), and some scholars suggest that frequently viewing violence depictions increases people's "adaptation" to seeing them (e.g., Bonomi et al., 2017). Via mechanisms similar to formal education, topic familiarity may increase sensitivity to unhealthy practices or influence societal normalization that, in turn, decreases people's ability to recognize particular interpersonal crime (such as TMA signs and symptoms). In either case, before studying the direction/degree of its effects, media's influence in this context (heretofore never studied) must first be established. We did so as follows:

*H2:* Prior media TMA exposure will increase TMA: (a) knowledge (i.e., example frequency, specificity, and breadth); (b) understanding (i.e., contextual and thematic complexities); and (c) severity perceptions (i.e., tactics rated most harmful).

### *Personal Experience*

A final common way people gain exposure is via life experiences. Personal TMA experience occurs in two ways – experiencing TMA oneself or experiencing it vicariously. *Personal victimization* is a first-hand experience, whereas *affiliate victimization* involves experiencing (often, still directly) the victimization of close friends or family members. Both types of experience can shape people's lives.

In the case of violence, real-life exposure differentiates victims, close friends/family, and even bystanders (i.e., those who "experience" it) from those with no personal experience (DeKeseredy, Hall-Sanchez, & Nolan, 2018; Gregory, Williamson, & Feder, 2017). Personal victims may *know* about more tactics used against them, but they also may *understand* violence differently from those who have never been victimized by it (Davies, 2019). It is also possible that first-hand and vicarious experiences are compounded to further affect violence perceptions (Copp et al., 2019). We tested these notions accordingly:

*H3:* Prior experiential TMA exposure will increase TMA: (a) knowledge (i.e., example frequency, specificity, and breadth); (b) understanding (i.e., contextual and thematic complexities); and (c) severity perceptions (i.e., tactics rated most harmful).

## SAMPLE AND METHODS

After receiving training/certification in ethical research practices, roughly 60 research assistants each solicited several family members, friends, co-workers, and/or local strangers in an effort to obtain non-student participants located across multiple US regions (i.e., Midwest, Northeast, Northwest). To qualify,

respondents first affirmed they (a) read English, (b) consented to participate in the study, and (c) had not previously participated. These inclusion parameters resulted in a social network sample ( $N = 551$ ) of 235 (42.7%) males and 263 (47.7%) females who ranged from 18 to 81 years of age ( $M = 27.42$ ,  $SD = 12.31$ ).

Sample demographics largely mirrored the US population (see US Census Bureau, 2019). Participants' self-reported racial designations included: White (67.5%,  $n = 372$ ), Black (12.5%,  $n = 69$ ), Latinx (9.8%,  $n = 54$ ), and Bi/Multi-Racial (3.8%,  $n = 21$ ). Highest completed level of education included: 2% ( $n = 11$ ) less than high school, 43.6% ( $n = 240$ ) high school diploma, 29.6% ( $n = 163$ ) some college, 17.2% ( $n = 95$ ) undergraduate degree, 2.5% ( $n = 14$ ) graduate degree, and 0.7% ( $n = 4$ ) postgraduate degree.

### *Procedures*

After signing a consent form (which was filed separately from the data to maximize confidentiality and data anonymity), each participant completed the in-person, paper survey, which included demographic questions, an open-ended TMA example prompt, and a checklist topic-exposure indicator.

### *TMA Knowledge, Understanding, and Perceptions*

An initial prompt asked participants to write as many examples as possible of ways someone might hypothetically “use technology to threaten, stalk, or hurt” a current or former romantic partner. Exemplars ( $n = 4,092$  distinct across the sample) were first analyzed qualitatively; open-ended data were constant-comparatively analyzed using open and axial coding (Glaser & Strauss, 1967) and then enumerated as part of a larger study (see Eckstein, 2020 for more on this qualitative, construct-level examination). This enumerated output formed our study's dependent variables.

*Knowledge.* Based on research ascertaining how people form/maintain nuanced cognitions, TMA knowledge was assessed using three (expected to overlap) methods: (a) *frequency*, tied to how many topic examples people can provide when asked (Rosch, 1978); (b) *specificity*, addressing people's level of detail/broadness in illustrating a concept (Assilamehou & Teste, 2012); and (c) *breadth*, indicating cognition variety/nuance (i.e., providing different types, not merely repeating different examples of the same type; see Bannister & Mair, 1968).

*Frequency* was each participant's total provided examples ( $M = 7.43$  examples,  $SD = 4.00$ , *range* = 1 to 30). *Specificity* was the total of a participant's examples identifying distinct behaviors ( $M = 3.55$  unique tactics,  $SD = 1.95$ , *range* = 0 to 10), as opposed to concept variations repeated in slightly different ways (e.g., listing many different media tools but all that are used to text/message someone). *Breadth* was calculated as the number of different TMA categories each participant represented across provided examples ( $M = 5.71$  categories,  $SD = 2.10$ , *range* = 1 to 12).

*Understandings.* Mentioned previously, enumerated exemplars formed categories (finalized based on two independent coders achieving  $\kappa \geq .80$  per category) used as continuous dependent variables. Data were three media type categories co-occurring with 12 behavioral tactic categories. Comprising TMA understanding,

behavioral tactics included: *information stalking* (e.g., research or monitor), *slander* (e.g., attack reputation or assault public character), *affiliate intrusion* (e.g., harass loved ones), *victim intrusion* (e.g., constantly contact or spam), *identity fraud* (e.g., impersonate or catfish), *shaming* (e.g., reveal private info or embarrass), *emotional attack* (e.g., psychologically harm or threaten), *coercive control* (e.g., blackmail or crazy-making), *hacking* (e.g., steal data or send viruses), *physical isolation* (e.g., prevent contacts or limit resources), *physical attack* (e.g., bodily attack or reprogram equipment), and *intrusion by third parties* (e.g., frame or “swat”).

*Perceptions.* Participants were asked to identify three of their exemplars that they considered the “worst” or “most hurtful if a current/former romantic partner did them to you.” Using a similarly inductive perception gauge has several established benefits, including: (a) permitting responses to personally applicable vignette exemplars, rather than researcher-provided, general, and possibly inapplicable ones (Rossi & Nock, 1982); (b) avoiding defining or ranking a concept for respondents (see Bourhis, 2017); and (c) reducing respondents’ tendencies toward social desirability (see Follingstad, 2011).

Respondents identified 935 of their own examples as a top-three “worst” way to experience TMA (presented later in Table 1.3), including shaming ( $n = 200$ ), emotional attacks ( $n = 136$ ), and manipulation or coercive control ( $n = 112$ ). The *specific* tactics most commonly rated “worst” were shaming via social media ( $n = 135$ ; e.g., posting nude photos or sexts from their earlier relations) and victim harassment (i.e., intrusion) via instant/text messages ( $n = 72$ ).

### *TMA Exposure*

Participants’ prior TMA exposure was initially filtered via dichotomously indicating whether or not they had “received education (read a book about, received a lecture or class) that discussed” romantic TMA. Slightly more than half of participants ( $n = 254$ ) responded, with 102 (18% of the total sample and 40% of exposure respondents) having received prior TMA “education.” A further responding subsample ( $n = 110$ ; 20% of the total sample) reported the nature of their exposure via a 14-item checklist containing various types of exposure to media (e.g., Read fictional book? Viewed [non/]fictional film/show?), education (e.g., Covered in-depth/[mentioned briefly] in college/[H.S.] class?), and personal experience (e.g., You experienced? Someone you know experienced?). Finally, qualitative descriptions of each checked item were provided.

## RESULTS

### *Extent and Nature of Overall Exposure (RQ1)*

The entire sample’s reported topic exposures ranged from none (80% of sample) to as many as 14 different sources of exposure (0.2% of sample), with 10.5% of the entire sample indicating 1–3 sources of exposure across the three categories: Media, Education, and Experience.

Across the entire sample, 15.8% had media exposure to TMA (see Table 1.1). Those participants read about TMA in nonfiction books (1.8%), fiction books

**Table 1.1.** TMA Knowledge Predicted by Amount and Source-type of Exposure.

Exposure Type <sup>a</sup>	TMA Example Frequency				TMA Tactic Specificity				TMA Concept Breadth			
	None		Had		None		Had		None		Had	
	<i>M</i> ( <i>SD</i> )	<i>t</i>	<i>F</i>	<i>t</i>	<i>M</i> ( <i>SD</i> )	<i>t</i>	<i>F</i>	<i>t</i>	<i>M</i> ( <i>SD</i> )	<i>t</i>	<i>F</i>	<i>t</i>
ANY EXPOSURE	7.76 (4.00)	7.35 (4.00)	0.97	0.95	3.96 (1.80)	3.44 (1.97)	2.48 *	6.14 **	6.17 (2.05)	5.60 (2.10)	2.59 **	6.70 **
MEDIA	8.06 (4.13)	6.65 (3.31)	1.51	4.85 *	4.00 (1.83)	3.78 (1.73)	0.51	0.32	6.35 (1.96)	5.52 (2.29)	1.73	0.15
<i>N</i> = 87, 79, 1%	8.18 (4.24)	6.67 (3.09)	1.78 <sup>†</sup>	3.46 <sup>#</sup>	4.04 (1.89)	3.73 (1.57)	0.79	0.16	6.36 (2.01)	5.67 (2.09)	1.60	0.11
Any Nonfiction	7.30 (4.14)	7.81 (4.01)	0.38	0.15	3.60 (1.43)	3.99 (1.84)	0.65	0.42	5.60 (1.58)	6.23 (2.09)	0.93	0.86
Nonfiction Book	8.59 (4.34)	6.37 (2.91)	3.22 **	8.52 **	4.02 (1.94)	3.85 (1.57)	0.45	0.20	6.36 (2.05)	5.85 (2.03)	1.26	1.59
<i>n</i> = 10, 9.1%	8.10 (4.64)	7.56 (3.57)	0.68	0.46	3.79 (1.89)	4.06 (1.75)	0.77	0.59	6.14 (1.93)	6.19 (2.13)	0.12	0.01
News	8.41 (4.54)	6.89 (2.98)	2.12 *	4.01 *	3.95 (1.95)	3.96 (1.62)	0.02	0.35	6.32 (2.05)	5.98 (2.05)	0.86	0.13
<i>n</i> = 69, 62.7%	10.17 (6.59)	7.47 (3.50)	1.39	5.04 *	4.17 (2.04)	3.93 (1.78)	0.43	0.19	6.42 (2.31)	6.14 (2.03)	0.44	0.19
Documentary	8.73 (4.45)	7.09 (3.54)	2.15 *	4.62 *	4.09 (2.04)	3.86 (1.63)	0.65	0.42	6.51 (2.06)	5.94 (2.02)	1.45	2.10
<i>n</i> = 42, 38.2%	7.96 (4.54)	7.61 (3.55)	0.46	0.21	3.55 (1.84)	4.28 (1.72)	2.14 *	4.57 *	5.96 (1.97)	6.34 (2.11)	0.98	0.96
Any Friction	8.48 (4.35)	6.46 (2.89)	2.91 **	6.64 **	3.99 (1.92)	3.90 (1.59)	0.25	0.05	6.32 (2.04)	5.90 (2.06)	1.05	0.38
<i>n</i> = 63, 57.3%	8.00 (4.21)	7.35 (3.63)	0.82	1.95	3.97 (1.86)	3.93 (1.73)	0.13	0.91	6.33 (1.97)	5.90 (2.18)	1.06	0.02
Friction Book	7.98 (3.95)	7.48 (4.09)	0.65	2.32	4.15 (1.97)	3.71 (1.56)	1.26	0.10	6.37 (2.21)	5.92 (1.81)	1.16	0.08
<i>n</i> = 12, 10.9%	8.70 (4.55)	7.29 (3.63)	1.77	1.20	4.16 (2.14)	3.85 (1.61)	0.86	0.26	6.46 (2.41)	6.03 (1.84)	1.05	0.38
Friction Film	7.33 (2.99)	8.01 (4.48)	0.97	1.10	3.95 (1.67)	3.96 (1.67)	0.02	0.30	6.15 (2.21)	6.19 (1.97)	0.09	0.30
<i>n</i> = 45, 40.9%	9.75 (6.28)	7.52 (3.60)	1.21	0.79	3.83 (2.17)	3.97 (1.77)	0.25	0.87	6.00 (2.34)	6.19 (2.02)	0.31	0.93
Friction TV	7.67 (3.99)	7.97 (4.09)	0.36	0.00	3.88 (1.80)	4.12 (1.84)	0.63	1.11	6.17 (1.96)	6.18 (2.26)	0.01	0.00
<i>n</i> = 49, 44.6%	7.71 (4.41)	7.79 (3.79)	0.09	0.01	3.72 (1.89)	4.09 (1.76)	1.02	1.04	6.21 (2.05)	6.16 (2.06)	0.12	0.02
Any Read	7.78 (4.11)	7.74 (3.87)	0.04	0.00	3.87 (1.86)	4.09 (1.73)	0.64	0.41	6.15 (1.99)	6.21 (2.17)	0.15	0.02
<i>n</i> = 71, 64.6%												
Any Watch												
<i>n</i> = 70, 63.6%												
EDUCATION												
<i>N</i> = 62, 56.4%												
High School												
<i>n</i> = 37, 33.6%												
College												
<i>n</i> = 40, 36.4%												
Community												
<i>n</i> = 12, 10.9%												
EXPERIENCE												
<i>N</i> = 76, 69.1%												
Self												
<i>n</i> = 39, 35.5%												
Other												
<i>n</i> = 67, 60.9%												

Notes: \**p* < .05, \*\**p* < .01, \*\*\**p* < .001, <sup>†</sup>*p* = .08, <sup>#</sup>*p* = .07.

<sup>a</sup> Except in first row (which compares total sample on exposures; i.e., 441 w/o any exposure), all other *n*% values based on subsample reporting previous exposure. *t*(*df*) = 549 in first row and then 108, except where noted) compares groups with/out that exposure; *F*(*df*) = 1, 549 in first row and then 1, 108 except where noted).

(2.2%), and news stories online or in print (12.5%), and they viewed TMA on media including nonfiction or documentary shows/films (7.6%), fictional films (8.2%), and fictional TV shows (8.9%). Media exposure formed three independent variables: Total Nonfiction Media (e.g., “article on *GoogleNews* site,” “story in *People*,” or “documentary on *HBO*”), Total Fictional Media (e.g., “*Catfish*,” “saw *Cyberbully* on Lifetime,” or “a lot of crime shows on TV like *Law & Order: SVU*”), and Overall Media Exposure.

TMA exposure via formal education was reported (by 11.3% of the total sample) as *briefly* mentioned in their high school (6.5%), college (6.5%), and/or community education (2.0%) class and/or as covered *in depth* in high school (1.6% of total sample), college (1.6%), and/or community education (0.7%). We collapsed each of the two coverage “levels” to produce four education-exposure independent variables: Total High School, Total College, Total Community, and Overall Formal TMA Education.

Finally, 13.8% of participants reported having personal TMA experience, with 7.1% of the sample self-reporting personal victimization and 12.2% reporting affiliate victimization. Thus, in final analyses, experiential exposure formed three independent variables: Self, Other, and Overall Personal TMA Experience.

When used as independent variables to test main hypotheses, exposure variables were counted as absent/present only for participants indicating *any* exposure to a particular source (i.e., not cumulative exposures, but distinct across the three sources). Otherwise, exposure level computed as a continuous variable was used to determine predictive results.

### *Exposure Effects*

We first ran bivariate correlations for variable pairings (see Table 1.2), followed by two-way linear regression tests, and probed by independent samples *t*-tests comparing the entire sample (i.e., had/not a particular TMA-exposure type). For two-tailed significance tests ( $\alpha = .05$ ), power for independent samples *t*-tests between those exposed and not exposed to various overall exposures was .47 for small (Cohen's  $d = .20$ ) and 1.00 for medium ( $d = .50$ ) and large ( $d = .80$ ) effects. Regression power was .91 for small (Cohen's  $f^2 = .02$ ) and 1.00 for medium ( $f^2 = .15$ ) and large ( $f^2 = .35$ ) effects.

#### *Overall Exposure Effects*

*TMA knowledge.* Comparing those with any topic exposure to those reporting none, exposure predicted TMA knowledge in terms of higher exemplar specificity and breadth, but not frequency. Prior overall TMA topic exposure increased participants' TMA knowledge, lending initial support to specific hypotheses.

*TMA understanding.* Having any TMA exposure predicted identifying TMA as involving slander [ $F(1, 549) = 13.45, p < .001, f^2 = .02; M_{\text{Expos}} = .66$  examples,  $SD = 1.09; M_{\text{NoExpos}} = .36, SD = .67; t(130.29) = 2.78, p < .01$ ]; emotional attack [ $F(1, 549) = 8.28, p < .01, f^2 = .02; M_{\text{Expos}} = 1.40, SD = 1.74; M_{\text{NoExpos}} = .97, SD = 1.30; t(140.69) = 2.42, p < .05$ ]; coercive control [ $F(1, 549) = 5.39, p < .05, f^2 = .01$ ];

$M_{\text{Expos}} = .86, SD = 1.42; M_{\text{NoExpos}} = .59, SD = .99; t(549) = 2.32, p < .05$ ; and physical isolation [ $F(1, 549) = 11.04, p < .001, f^2 = .02; M_{\text{Expos}} = .65, SD = 1.00; M_{\text{NoExpos}} = .37, SD = .73; t(139.44) = 2.76, p < .01, d = .33$ ].

Those with any TMA exposure also were significantly less likely than those without any exposure to demonstrate TMA understanding by listing specific social media types (as opposed to specific behaviors) [ $F(1, 549) = 4.54, p < .05, f^2 = .01; M_{\text{Expos}} = 2.85$  examples,  $SD = 1.83; M_{\text{NoExpos}} = 3.37, SD = 2.38; t(210.48) = 2.49, p < .05, d = .25$ ], as well as less likely to identify TMA as involving intrusion to affiliates [ $F(1, 549) = 4.52, p < .05, f^2 = .01; M_{\text{Expos}} = .06, SD = .25; M_{\text{NoExpos}} = .15, SD = .42; t(286.79) = 2.88, p < .01, d = .26$ ]. Overall TMA exposure did not distinguish participants on any other thematic characteristics of TMA understanding.

*TMA perceptions.* Across the entire sample, having any form of prior TMA exposure predicted perceiving slander as a worst tactic,  $F(1, 300) = 4.94, p < .05, f^2 = .02; r = .13, p < .05$ . Among the subsample of severity-responding participants, those with any prior TMA exposure (26.3% of those reporting) perceived cases of slander as worst experiences more often than those without prior exposure (15.5% of those reporting),  $\chi^2 = 4.48, p < .05, \phi = .12$ .

#### *Educational Exposure Effects (H1)*

*TMA knowledge.* Educational exposure did not affect knowledge in terms of frequency, specificity, or breadth (see Table 1.1). This finding held after each type of educational setting was individually parsed. Thus, *H1a* was rejected.

*TMA understanding.* Bivariate correlation tests showed overall TMA education was not significantly related to any TMA understanding variables. High school TMA education positively associated with viewing TMA as involving hacking, whereas community-sourced education positively related to seeing TMA as physically isolating (see Table 1.2). Regression predictions for *H1b* confirmed that overall TMA education positively predicted understanding TMA as involving physical isolation,  $F(1, 549) = 5.25, p < .05, f^2 = .01$ .

High school TMA exposure positively predicted understanding TMA as involving hacking:  $F(1, 108) = 4.85, p < .05, f^2 = .04; M_{\text{Expos}} = 0.70, SD = 1.29; M_{\text{NoExpos}} = 0.21, SD = .47; t(40.93) = 2.27, p < .05, d = .51$ . In contrast, those with college exposure were less likely to understand TMA as involving physical isolation [ $M_{\text{Expos}} = 0.40, SD = .78; M_{\text{NoExpos}} = 0.80, SD = 1.09; t(102.38) = 2.24, p < .05, d = .42$ ]; when measured continuously for *amount* of (versus “any”) college exposure, this prediction only approached significance,  $F(1, 108) = 3.68, p = .058, f^2 = .03$ . Finally, those with community TMA education reported less understanding of TMA as involving slander [ $M_{\text{Expos}} = 0.17, SD = .39; M_{\text{NoExpos}} = 0.72, SD = 1.14; t(40.97) = 3.47, p < .01, d = .65$ ] and third-party intrusion [ $M_{\text{Expos}} = 0.00; M_{\text{NoExpos}} = 0.15, SD = .39; t(97) = 3.89, p < .001, d = .54$ ] than those without this exposure type. Again, however, community education *amount* failed to significantly predict these two forms of understanding.

*TMA perceptions.* Overall education did not predict any TMA severity evaluations (*H1c* rejected). However, high school TMA exposure negatively predicted

**Table 1.2.** Bivariate Relations Among TMA Exposure Types, Understanding, and Knowledge.

Exposure Type	TMA Understanding Variables											TMA Knowledge						
	Social Media	Site/ App	Info Tool	Info Stalk	Info Slander	Info Intrusion	Victim Intrusion	ID Fraud	Emotion Shame	Coercive Attack	Control Hack	Phys. Isolate	Phys. Attack	Intrusion by 3rd	Ex. Freq.	Ex. Specif.	Ex. Breadth	
TOTAL TMA	.11	.27**	.05	.08	.07	-.06	.14	-.01	.07	.00	-.06	.01	-.05	-.11	-.03	.15	-.08	.20*
TOTAL MEDIA	.17	.31**	.08	.04	.12	-.08	.24*	.11	.08	.00	-.06	-.01	-.09	-.06	.08	.21*	-.06	.21*
Nonfiction Media	.19*	.27**	.07	-.01	.16	-.07	.16	.09	.07	-.01	-.00	-.01	-.07	-.01	.07	.18	-.04	.16
Fictional Media	.12	.29**	.07	.07	.06	-.07	.25**	.10	.06	.01	-.10	-.01	-.09	-.09	.06	.19*	-.06	.21*
Read Media	.14	.25**	.17	.15	.06	.01	.27**	.10	.05	.19*	-.13	-.03	-.02	.02	.02	.24*	.02	.10
Watch Media	.16	.28**	-.00	-.05	.13	-.12	.16	.09	.08	-.12	-.00	.00	-.11	-.10	.10	.13	-.09	.23*
TOTAL EDUCATION	-.05	.09	-.03	.11	-.03	-.02	-.08	-.02	.05	-.01	-.09	.09	.03	-.08	-.05	.04	-.03	.00
High School	-.00	.10	-.01	.05	.08	.01	-.09	.07	-.00	.02	-.01	.21*	.10	-.06	-.01	.11	.05	.04
College	-.05	-.03	-.14	.08	-.04	-.06	-.08	-.08	.16	-.07	-.10	-.16	-.18	-.07	-.01	-.10	-.05	-.02
Community Education	-.08	.14	.13	.12	-.16	.00	.02	-.06	-.09	.04	-.09	.16	.20*	-.03	-.12	.09	-.09	-.03
TOTAL EXPERIENCE	.08	.11	.03	.03	.03	.01	.10	-.21*	-.00	.02	.06	-.08	-.03	-.12	-.18	-.00	-.10	.22*
Self-Experience	.04	.19*	.07	-.00	.07	.04	.13	-.20*	-.17	-.04	.10	.10	.01	-.07	-.22*	-.01	-.10	.24*
Other-Experience	.09	-.02	-.02	.05	-.03	-.02	.03	-.14	.16	.07	-.01	-.13	-.05	-.12	-.06	.00	-.06	.10

Notes: *n* = 110 people (*N* = 551) indicating any type of TMA exposure.

\**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

intrusion to victim,  $F(1, 74) = 5.84, p < .05, f^2 = .07; r = -.27, p < .05$ . In the responding subsample, those with high school topic exposure identified cases of victim intrusion as the worst significantly less than did those without high school exposure. College and community education both approached significance for group exposure differences in severity ratings of physical isolation/tracking; those with college TMA exposure were less likely, and those with community education were more likely, to see this tactic as a worst TMA strategy (see Table 1.3).

### *Media Exposure Effects (H2)*

*TMA knowledge.* Bivariate correlations showed that, for the TMA-exposed subsample, example breadth positively related to overall media TMA exposure (particularly film) and to examples mentioning specific websites/apps. Example frequency also significantly related to overall media TMA exposure. However, regression results show that among only those who indicated prior TMA exposures, having had it via any media predicted exemplar frequency, but not specificity or breadth of knowledge (*H2a*). As shown in Table 1.1, this appeared to be largely the result of exposure via news stories and fictional media (particularly TV), especially those types that were viewed/watched (versus read).

*TMA understanding.* Identifying TMA as victim intrusion positively correlated to overall media TMA exposure. Supporting *H2b*, total media exposure predicted understanding TMA as involving victim intrusion [ $F(1, 108) = 6.36, p < .05, f^2 = .06$ ], with those having exposure to any media TMA coverage ( $M = 1.18, SD = 1.32$ ) more likely than those without this media exposure ( $M = 0.61, SD = .78$ ) to give victim intrusive examples,  $t(108) = 2.00, p < .05, d = .53$ . Although group differences found those with any media exposure ( $M = 0.76, SD = 1.21$ ) were more likely than those without ( $M = 0.35, SD = .65$ ) to provide info-stalking examples,  $t(66.84) = 2.19, p < .05, d = .42$ , regression tests failed to support this prediction. Parsing specific media types, those with exposure to any fictional media ( $M = 1.30, SD = 1.41$ ) were more likely than those without fictional exposures ( $M = 0.74, SD = .90$ ) to understand TMA as involving intrusion:  $t(105.59) = 2.53, p < .05, d = .47; F(1, 108) = 7.00, p < .01, f^2 = .06$ .

*TMA perceptions.* Supporting *H2c*, media exposure negatively predicted evaluating physical tracking/isolation as severe,  $F(1, 74) = 4.04, p < .05, f^2 = .05, r = -.23, p < .05$ . Those with media TMA exposure (11.7% of those exposed) were less likely than those without this exposure (31.3% of those exposed,  $\chi^2 = 3.64, p = .056, \phi = .22$ ) to perceive physical tracking/isolation as a worst tactic. This was largely due to watched (i.e., film/TV) media [ $F(1, 74) = 5.22, p < .05, f^2 = .07, r = -.26, p < .05$ ], as those viewing (versus reading) media were less likely to rate physical tracking/isolation severely and more likely to rate coercive control severely than those without this exposure type (see Table 1.3).

### *Experiential Exposure Effects (H3)*

*TMA knowledge.* Bivariate correlations showed that for the subsample of those having been exposed to TMA, example breadth positively related to having self-experienced TMA. However, regression results show neither personal nor affiliate



victimization affected overall TMA knowledge in terms of example frequency, specificity, or breadth (*H3a*).

*TMA understanding.* Having personal TMA experience negatively correlated to identity-fraud and intrusion-by-third-party understandings (see Table 1.2). Regression results for *H3b* confirmed that personal victimization decreased understanding TMA as involving identity fraud [ $F(1, 108) = 4.39, p < .05, f^2 = .04; M_{\text{Expos}} = 0.03, SD = .16; M_{\text{NoExpos}} = 0.20, SD = .50; t(92.90) = 2.67, p < .01, d = .46$ ] and as third-party intrusion [ $F(1, 108) = 5.63, p < .05, f^2 = .05; M_{\text{Expos}} = 0.03, SD = .16; M_{\text{NoExpos}} = 0.20, SD = .44; t(97.84) = 2.98, p < .01, d = .51$ ].

*TMA perceptions.* Tests for *H3c* showed overall TMA experience positively predicted perceiving victim intrusion as a worst tactic [ $F(1, 74) = 5.59, p < .05, f^2 = .07, r = -.27, p < .05$ ], an effect largely due to personal victimization in particular [ $F(1, 74) = 8.68, p < .01, f^2 = .11$ ]. Those who had been personal victims were more likely to rate victim- and affiliate-intrusion TMA tactics as severe, but were less likely than nonvictims to mention impersonation/framing as a most-severe strategy (see Table 1.3).

## DISCUSSION

This study examined how prior topic-exposure sources contributed to people's knowledge, understanding, and perceptions of an interpersonal crime. By prompting participants to provide their own explanations of TMA, rather than identifying the concept for them (e.g., via survey items), this study's unique, participant-informed method uncovered community (i.e., nonclinical) awareness of a misunderstood phenomenon. In this section, we discuss our major findings in terms of current research and curricular implications, as well as applications for practitioners and victims. We conclude by discussing some limitations and future research possibilities.

### *TMA Knowledge: How Do They Know?*

Overall, a majority of participants reported not having prior TMA topic exposure (RQ1). Despite this, the sample as a whole clearly knew that TMA exists. Although that knowledge may be only because we primed them with the study's topic, the number of unique exemplars each person was able to provide without guidance suggests they did actually possess an awareness of TMA prior to this study. Furthermore, people identified (what they thought) were a large variety of TMA tactics; in actuality, most participants listed numerous, largely repetitive variants of similar TMA tactics and implementation methods. Together, this suggests a common public knowledge of TMA, if not necessarily vast understandings. The role of prior exposure thus became of increasing interest.

Support was found for the notion that prior, overall topic exposure increased knowledge regarding TMA, particularly when conceptualized as specificity and breadth of exemplars provided. In regard to specific exposure sources, education (*H1a*) and personal experience (*H3a*) did not predict TMA knowledge. Media exposure (*H2a*), largely via reading news articles and viewing fictional media, predicted knowledge only in terms of exemplar frequency. However, on its own,

**Table 1.3.** Exposure-type Differences in Perceptions of TMA Tactics Understood as a “Worst Experience.”

Mentioned as Top-3 “Worst”	High School		College		Community		Watched Film/TV <sup>a</sup>		Self-Victimization	
	<sup>b</sup> Chose: Not	$\chi^2$ $\phi$	<sup>b</sup> Chose: Not	$\chi^2$ $\phi$	<sup>b</sup> Chose: Not	$\chi^2$ $\phi$	<sup>b</sup> Chose: Not	$\chi^2$ $\phi$	<sup>b</sup> Chose: Not	$\chi^2$ $\phi$
Shaming 200 (23.8%)	13 : 13 50.0 : 40.0	0.70 .10	13 : 11 54.2 : 38.5	1.65 .15	2 : 6 25.0 : 45.6	1.24 .13	20 : 24 45.5 : 40.6	0.18 .05	7 : 17 29.2 : 50.0	2.90 .20
Emotional Attack 136 (16.2%)	9 : 17 34.6 : 30.0	0.17 .05	7 : 17 29.2 : 32.7	0.09 .04	4 : 4 50.0 : 29.4	1.40 .14	14 : 30 31.8 : 31.3	0.00 .01	9 : 15 37.5 : 28.8	0.57 .09
Coercive Control 112 (13.3%)	10 : 16 38.5 : 32.0	0.32 .06	11 : 13 45.8 : 28.8	2.11 .17	1 : 7 12.5 : 36.8	1.87 .16	19 : 25 43.2 : 21.9	3.74 <sup>i</sup> .22 <sup>i</sup>	11 : 13 45.8 : 28.8	2.11 .17
Intrusion to Victim 92 (11.0%)	2 : 24 7.7 : 32.0	5.59* .27*	5 : 19 20.8 : 25.0	0.16 .05	2 : 6 25.0 : 23.5	0.01 .01	12 : 32 27.3 : 18.8	0.75 .10	11 : 13 45.8 : 13.5	9.52** .35**
Info Stalk/Lurk 71 (8.5%)	3 : 23 11.5 : 18.0	0.54 .08	4 : 20 16.7 : 15.4	0.02 .02	2 : 6 25.0 : 14.7	0.57 .09	8 : 36 18.2 : 12.5	0.45 .08	2 : 22 8.3 : 19.2	1.47 .14
Phys. Track/Isolate 63 (7.5%)	5 : 21 19.2 : 14.0	0.35 .07	1 : 23 4.2 : 21.2	3.56 <sup>i</sup> .22 <sup>i</sup>	3 : 5 37.5 : 13.2	3.17 <sup>ii</sup> .20 <sup>ii</sup>	4 : 40 9.1 : 25.0	3.53 <sup>i</sup> .22 <sup>i</sup>	4 : 20 16.7 : 15.4	0.02 .02
Slander 59 (7.0%)	6 : 20 23.1 : 28.0	0.21 .05	5 : 19 20.8 : 28.8	0.54 .09	1 : 7 12.5 : 27.9	0.88 .11	11 : 33 25.0 : 28.1	0.09 .04	8 : 16 33.3 : 23.1	0.89 .11
Steal/Hack 38 (4.5%)	4 : 22 15.4 : 8.0	0.99 .11	1 : 23 4.2 : 13.5	1.51 .14	1 : 7 12.5 : 10.3	0.04 .02	4 : 40 9.1 : 12.5	0.23 .06	4 : 20 16.7 : 7.7	1.40 .14
Impersonate/Frame 25 (3.0%)	3 : 23 11.5 : 8.0	0.26 .06	1 : 23 4.2 : 11.5	1.07 .12	0 : 8 0.0 : 10.3	0.91 .11	5 : 39 11.4 : 6.3	0.58 .09	0 : 24 0.0 : 13.5	3.56 <sup>i</sup> .22 <sup>i</sup>
3 <sup>rd</sup> Party Intrusion 22 (2.6%)	2 : 24 7.7 : 12.0	0.34 .07	4 : 20 16.7 : 7.7	1.40 .14	0 : 8 0.0 : 11.8	1.05 .12	5 : 39 11.4 : 9.4	0.08 .03	1 : 23 4.2 : 13.5	1.51 .14
Intrusion to Affiliate 20 (2.4%)	1 : 25 3.8 : 6.0	0.16 .05	2 : 22 8.3 : 3.8	0.66 .09	0 : 8 0.0 : 5.9	0.50 .08	2 : 42 4.5 : 6.3	0.11 .04	3 : 21 12.5 : 1.9	3.68 <sup>i</sup> .22 <sup>i</sup>
Physical Attack 2 (0.2%)	0 : 26 0.0 : 2.0	0.53 .08	0 : 24 0.0 : 1.9	0.47 .08	0 : 8 0.0 : 1.5	0.12 .04	0 : 44 0.0 : 3.1	1.39 .14	0 : 24 0.0 : 1.9	0.47 .08

*Notes:* First column shows *n* of responding subsample (*n* = 312) identifying tactic as worst. Phi ( $\phi$ ) scores indicate effect size and likelihood association between particular exposure type and identifying that TMA tactic as a “worst” one. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , <sup>i</sup> $p < .06$ , <sup>ii</sup> $p = .08$ .

<sup>a</sup>No statistically significant group differences emerged for other media types in terms of “worst” TMA perceptions.

<sup>b</sup>First-row *n* values and second-row %s are w/i-group-exposure type only for those in severity-responding subsample, with those who Chose a tactic as worst compared (:) to those who did Not choose it as worst.

fictional programming also increased knowledge specificity, a finding supporting the potential usefulness of incorporating new concepts into existing media portrayals that people already enjoy watching (Singhal & Rogers, 2004).

#### *TMA Understanding and Severity Perceptions: What Do They Know?*

Overall exposure failed to predict any contextual TMA understanding – only that it involved various media tools. Put another way, those with exposure did not differ from those without it in understanding *most* of TMA's complexities. This lack of difference/prediction by overall exposure also extended to most people's evaluations of TMA severity. When asked to report their perceptions, people's prior topic exposure predicted only a likelihood of seeing slander as a worst tactic. Those aspects of TMA understandings that specific exposure/s did affect indicate areas of particular concern for practitioners and the victims and/or perpetrators with whom they deal.

#### *Education*

Results for *H1b* show those who had coverage via high school curriculum were more likely than others to understand TMA as involving hacking. Exposure via college curriculum actually decreased understanding TMA's physical components (e.g., isolation), and community education decreased understanding TMA as involving slander and third-party intrusion. Considering that *many* people's "community" exposure overlaps with guest speakers from local community agencies visiting classrooms (Karjane, Fisher, & Cullen, 2002), the combined effects of these two sources (i.e., both *lessening* understandings) is particularly noteworthy.

It may be that, because attendance is far more enforced in high school than in college, high school coverage is more in depth or thorough than that from college programming. Although some college classes may mention this topic, lacking requirements off/for these courses makes it harder to reach students comprehensively. Similarly, participants are not typically required to learn about TMA from community agencies (e.g., Women's Media Center). Another explanation may be that professional educators targeting teens bring in different emphases than those visiting college classrooms. Certainly, research on high school relational education, the type of programming that would cover TMA, has shown small effects (Halpern-Meehin, 2012).

Although high school education increased TMA knowledge and understanding, it decreased perceptions of victim intrusion being a worst/severe tactic (*H1c*). Victim intrusion is in fact one of the most concerning types of abuse experienced by victims (Wuest, Ford-Gilboe, Merritt-Gray, & Berman, 2003). Given that this abuse tactic is often seen by outsiders as not particularly severe, the fact that high school education actually reinforced this inaccurate perception reveals a potential focal area for all educators.

Scholars currently lack definitive evidence that primary prevention approaches produce long-term, desirable results. Furthermore, comparisons of particular curricula and individual facilitators' effectiveness remain unexplored. When things as seemingly innocuous as an educator's relatability (e.g., age, race, and sex), their words and tone, and their time allotment (per session and collectively) all have

the power to influence success rates, implementation of otherwise “successful” programs can be uneven (Nation et al., 2003).

Ultimately, formal education curricula, over which practitioners/academics have the most influence, predicted the least-accurate and most-simplistic TMA understandings. Despite the apparent importance of *some* education sources in shaping knowledge, understandings, and perceptions of TMA, other sources may prove more-productive outlets on which to focus instruction. This would not be the first time formal education proved to be a secondary-information source regarding sensitive topics. For example, Sanne, Nikkelen, vanOosten, Marieke, and vanDenBorne (2020) found that, even though public schools were an important source of sex education, many students still received most of their sex education from educational websites.

### *Media*

Overall media exposure (*H2b*) predicted some areas of TMA understanding. Parsed, these results showed fictional media exposure aided TMA understanding involving victim intrusion – again, an incredibly perceptive understanding of real-life victimization (Wuest et al., 2003). Coupled with this was the also-accurate perception (*H2c*) that coercive control is one of the worst experiences that victims encounter (Crossman, Hardesty, & Raffaelli, 2016). Those with fictional – particularly viewed/watched (e.g., film, TV) – media exposure were more likely to perceive coercive control but less likely to see physical tracking/isolation as severe strategies compared to those whose exposure was via another means. Other media types failed to predict any differences in TMA understanding or severity perceptions.

Some may consider it alarming that media was a source of more complete and complex TMA understandings than was formal education – particularly because violence curricula (especially in colleges and publicly funded community programs) are purportedly informed by researchers’ outcome-based scholarship. Given that mainstream-media content typically has been limited to non-scholarly producers/creators, any assumed benefits of having scholars/practitioners also inform that realm should be undertaken with caution. Alternatively, media exposure, particularly recreational viewing, may be self-selected by those already informed on particular issues.

### *Experience*

Those exposed to close-others’ TMA (i.e., affiliate victimization) were no different than those without any personal TMA experience; they were indistinguishable from the overall sample in reported knowledge, understanding, and perceived tactics’ severity. However, TMA understanding (*H3b*) was somewhat affected by personal victimization. Participants who were ever a target of TMA were less likely to understand TMA as involving intrusion from third-parties and as identity fraud. Victims certainly had unique TMA understandings (compared to those without this exposure). However, the way in which they understood it was limited; having gone through the experience themselves, they may be less aware of acts more often “hidden” when perpetrated against them. Finally, supporting the accuracy of

intrusion as a particularly terrible experience for victims (Crossman et al., 2016), respondents with personal-victimization experience perceived it as a “worst” tactic.

Exposures produce varying outcomes. They may change stereotypes in terms of larger socially shared perceptions, for example, but not in terms of individual belief systems (Paluck, 2009). Topical exposure that changes learned knowledge or perceived attitudes may not always affect behaviors. The relative influences of particular exposure types also differ according to recipients’ characteristics, with younger children more guided by education and older ones more induced by personal experiences (Kang & Inzlicht, 2012). Combined, these results illustrate a need to inform the public about TMA using multiple means.

Findings from this study imply varying “effectiveness” of exposure sources, as respondents’ understandings of this (sometimes) criminal behavior diverged. These results have implications for how TMA victims (subject to criminal uncertainty) are perceived in society, which then shapes potential support sources for those who are vulnerable. Knowing which sources frame TMA in realistic, practical ways can help scholars and practitioners identify promising avenues for raising public awareness of this issue and its ongoing legislation.

Inaccurate portrayals and/or messages about TMA potentially alienate and silence victims. Prior to addressing victims’ societal stigma, however, the problem itself must be clearly elucidated. This study suggests avenues for changing the TMA content conveyed/taught and challenges current violence-education curricula. When popular media advance more accurate, nuanced portrayals of intimate victimization than do “experts” (e.g., community educators or victim advocates invited to classrooms), curriculum designers and education policymakers must closely re-examine their messages and methods. Relational health educators must problematize what is actually being taught regarding abuse, particularly in rapidly advancing technological contexts.

### *Study Limitations*

It is important to discuss two limitations of this study. First, the network sampling method used limits the generalizability of our findings. Our sample mirrored US population demographics *and* was more diverse in terms of age, education, socioeconomic status, sex representativeness, and technology experience than most studies employing college student samples. Nonetheless, future efforts to test the current findings should use random-sampling procedures and broader geographic representation across and outside the United States.

Next, although having participants provide their own TMA exemplars is an ideal method to determine extent and type of knowledge and understanding, having them choose only from their *own* free-response options is not an ideal way to gauge severity perceptions. Presented with an exhaustive list of TMA exemplars, respondents may have perceived their own examples as more or less severe. Seeing a complete list of tactics also may have prompted them to think of TMA in unique ways. However, given that our primary goal was to inductively ascertain knowledge and understanding, this methodological “trade-off” was preferable to avoid priming participants’ TMA insight/awareness. Future work focusing solely

on comparative perceptions should certainly provide a standardized TMA list to all participants.

## CONCLUSIONS AND FUTURE DIRECTIONS

Working from an assumption that varying experiences with media, education, and interpersonal relationships may each influence how people view sensitive topics, we explored how these TMA topic exposures affected TMA knowledge, understanding, and severity perceptions. Unsurprisingly, prior topic exposure increased some knowledge of it. However, different sources were clearly more effective than others in eliciting thorough TMA knowledge and understanding. For example, fictional media played a large role in increasing overall knowledge of TMA's existence. Actual TMA understandings, however, were better predicted by exposure to high school curricula, which appeared to advance more-accurate comprehension (but not attitudinal perceptions) than did college-level and community education sources (both of which may be perpetuating inaccurate or narrow understandings of TMA). Personal-victimization experience also shaped TMA understandings, but these were limited and largely reflected "victim" perspectives, lacking recognition of TMA's myriad possibilities. These findings provide a foundation for researchers exploring technology-mediated interpersonal crimes in our world.

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## REFERENCES

- Ahrens, C. (2006). Being silenced: Impact of negative social reactions on disclosure of rape. *American Journal Community Psychology, 38*, 263–274. doi:10.1007/s10464-006-9069-9
- Amar, A., Strout, T., Simpson, S., Cardiello, M., & Beckford, S. (2014). Administrators' perceptions of college campus protocols, response, and student prevention efforts for sexual assault. *Violence and Victims, 29*, 579–593. doi:10.1891/0886-6708.VV-D-12-00154
- Asbeck Brusse, E., Fransen, M., & Smit, E. (2015). Educational storylines in entertainment television: Audience reactions toward persuasive strategies in medical dramas. *Journal of Health Communication, 20*, 396–405. doi:10.1080/10810730.2014.965365
- Assilamehou, Y., & Teste, B. (2012). How you describe a group shows how biased you are: Language abstraction and inferences about speaker's communicative intentions and attitudes toward a group. *Journal of Language and Social Psychology, 32*, 202–211. doi:10.1177/0261927x12456382
- Bandura, A. (1977). *Social learning theory*. Upper Saddle Hills, NJ: Prentice Hill.
- Bannister, D., & Mair, J. (1968). *Evaluation of personal constructs*. New York, NY: Academic Press.
- Black, M., Basile, K., Breiding, M., Smith, S., Walters, M., ... Stevens, M. (2011). *The national intimate partner and sexual violence survey*. CDC. Retrieved from [www.cdc.gov/violenceprevention/pdf/nisvs\\_report2010-a.pdf](http://www.cdc.gov/violenceprevention/pdf/nisvs_report2010-a.pdf)
- Bonomi, A., Eaton, A., Nemeth, J., & Gillum, T. (2017). Abuse litmus test: Classroom tool to assess power and control in on-screen relationships. *Family Relations, 66*, 154–165. doi:10.1111/fare.12237

- Bourhis, J. (2017). Scales, rank order. In M. Allen (Ed.), *Encyclopedia of communication research methods* (pp. 1560–1561). Newbury Park, CA: SAGE.
- Browne-Miller, A. (2012). Victims and survivors of DV/IPV and general population: Commentary on case for wide-scale prevention education. In A. Browne-Miller (Ed.), *Violence & abuse in society: Understanding global crisis* (Vol. 4, pp. 5–18). Santa Barbara, CA: ABC-CLIO.
- Brubaker, S., & Keegan, B. (2019). Campus victim advocates and promise and perils of professionalization. *Violence Against Women, 25*, 1116–1137. doi:10.1177/1077801218807096
- Bryant, J., & Zillman, D. (Eds.). (1986). *Perspectives on media effects*. Hillsdale, NJ: Erlbaum.
- Burke, S., Wallen, M., Vail-Smith, K., & Knox, D. (2011). Using technology to control intimate partners: Exploratory study of college undergraduates. *Computers in Human Behavior, 27*, 1162–1167. doi:10.1016/j.chb.2010.12.010
- Chappell, A., & Maggard, S. (2010). Theoretical investigation of public attitudes toward sex education. *Sociological Spectrum, 30*, 196–219. doi:10.1080/02732170903496117
- Commander, R. (2018, November 19). Smart devices and domestic abuse: New battlefield or simply new weapons? *Robotics Law Journal*. Retrieved from [www.roboticslawjournal.com/analysis/smart-devices-and-domestic-abuse-a-new-battlefield-or-simply-new-weapons-41033630](http://www.roboticslawjournal.com/analysis/smart-devices-and-domestic-abuse-a-new-battlefield-or-simply-new-weapons-41033630)
- Copp, J., Giordano, P., Longmore, M., & Manning, W. (2019). Development of attitudes toward IPV: Examination of key correlates among sample of young adults. *Journal of Interpersonal Violence, 34*, 1357–1387. doi:10.1177/0886260516651311
- Corrigan, P., & Penn, D. (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist, 54*, 765–776. doi:10.1037/0003-066X.54.9.765
- Coyne, S., Nelson, D., Graham-Kevan, N., Tew, E., Meng, K., & Olsen, J. (2011). Media depictions of physical and relational aggression: Connections with aggression in young adults' romantic relationships. *Aggressive Behavior, 37*, 356–362. doi:10.1002/ab.20372
- Crooks, C., Jaffe, P., Dunlop, C., Kerry, A., & Exner-Cortens, D. (2019). Preventing gender-based violence among adolescents & young adults. *Violence Against Women, 25*, 29–55. doi:10.1177/1077801218815778
- Crossman, K., Hardesty, J., & Raffaelli, M. (2016). Mothers' experiences of nonviolent coercive control during marriage & after separation. *Violence Against Women, 22*, 454–473. doi:10.1177/1077801215604744
- Davies, C. (2019). Young women's perspectives of "OK" & "not OK" in intimate relationships. *Journal of Family Violence, 34*, 479–491. doi:10.1007/s10896-019-00038-2
- DeKeseredy, W., Hall-Sanchez, A., & Nolan, J. (2018). College campus sexual assault: Contribution of peers' pro-abuse informational support and attachments to abusive peers. *Violence Against Women, 24*, 922–935. doi:10.1177/1077801217724920
- Eckstein, J. (2020). Grounded theory approach to conceptualizing technology-mediated abuse (TMA) as spatial and participatory. *Electronic Journal of Communication, 29*. Retrieved from [www.cios.org/www/ejcv29n34toc.htm](http://www.cios.org/www/ejcv29n34toc.htm)
- Finn, J., & Banach, M. (2000). Victimization online: Down side of seeking human services for women on Internet. *CyberPsych & Behavior, 3*, 243–254. doi:10.1089/109493100316102
- Follingstad, D. (2011). Measure of severe psychological abuse normed on nationally representative sample of adults. *Journal of Interpersonal Violence, 26*, 1194–1214. doi:10.1177/0886260510368157
- Fox, K., & Cook, C. (2011). Effects of victimology course on victim-blaming. *Journal of Interpersonal Violence, 26*, 3407–3427. doi:10.1177/0886260511403752
- Galloway, L., Engstrom, E., & Emmers-Sommer, T. (2015). Does movie viewing cultivate young people's unrealistic expectations about love and marriage? *Marriage & Family Review, 51*, 687–712. doi:10.1080/01494929.2015.1061629
- Glaser, B., & Strauss, A. (1967). *Discovery of grounded theory*. Hawthorne, NY: Aldine.
- Goffman, E. (1963). *Stigma*. Saddle River, NJ: Prentice-Hall.
- Gregory, A., Williamson, E., & Feder, G. (2017). Impact on informal supporters of domestic violence survivors. *Trauma, Violence, & Abuse, 18*, 562–580. doi:10.1177/1524838016641919
- Halpern-Meehan, S. (2012). School variation in students' experiences of high school relationship and marriage education courses. *Journal of Family Issues, 33*, 1688–1712. doi:10.1177/0192513x11434910
- Hether, H., Huang, G., Beck, V., Murphy, S., & Valente, T. (2008). Entertainment-education in media-saturated environment. *Journal of Health Communication, 13*, 808–823. doi:10.1080/10810730802487471

- Hoffman, B., Shensa, A., Wessel, C., Hoffman, R., & Primack, B. (2017). Exposure to fictional television & health. *Health Education Research*, *32*, 107–123. doi:10.1093/her/cyx034
- Hust, S., Adams, P., Willoughby, J., Ren, C., Lei, M., Ran, W., & Marett, E. (2017). Entertainment-education strategy in sexual assault prevention. *Journal of Health Communication*, *22*, 721–731. doi:10.1080/10810730.2017.1343877
- Kahlor, L., & Eastin, M. (2011). TV's role in culture of violence toward women: Study of television viewing & cultivation of rape myth acceptance in the United States. *Journal of Broadcasting & Electronic Media*, *55*, 215–231. doi:10.1080/08838151.2011.566085
- Kang, S., & Inzlicht, M. (2012). Stigma building blocks: How instruction and experience teach children about rejection by outgroups. *Personality & Social Psychology Bulletin*, *38*, 357–369. doi:10.1177/0146167211426729
- Karjane, H., Fisher, B., & Cullen, F. (2002). *Campus sexual assault: How America's institutions of higher education respond*. Final Report, NIJ Grant #1999-WA-VX-0008. US Department of Justice.
- Kelly, G. (1955). *Psychology of personal constructs*. New York, NY: Norton.
- Kretz, V. (2019). Television and movie viewing predict adults' romantic ideals and relationship satisfaction. *Communication Studies*, *70*, 208–234. doi:10.1080/10510974.2019.1595692
- Lippman, J. (2015). Effects of media portrayals of persistent pursuit on beliefs about stalking. *Communication Research*, *45*, 394–421. doi:10.1177/0093650215570653
- McCombs, M. (2004). *Setting the agenda: Mass media and public opinion*. Malden, MA: Blackwell.
- Murphy, K. (2013). Partner abuse prevention education: Integrative approach to program development and evaluation. *Partner Abuse*, *4*, 255–273. doi:10.1891/1946-6560.4.2.255
- Nation, M., Crusto, C., Wandersman, A., Kumpfer, K., Seybolt, D., Morrissey-Kane, E., & Davino, K. (2003). What works in prevention: Principles of effective prevention programs. *American Psychologist*, *58*, 449–456. doi:10.1037/0003-066X.58.6-7.449
- O'Leary, K., & Smith-Slep, A. (2003). Dyadic longitudinal model of adolescent dating aggression. *Journal of Clinical Child & Adolescent Psychology*, *32*, 314–327. doi:10.1207/S15374424JCCP3203\_01
- Oliver, M., Sargent, S., & Weaver, J., III. (1998). Impact of sex & gender role self-perception on affective reactions to different types of film. *Sex Roles*, *38*, 45–62. doi:10.1023/A:1018760427785
- Palazzolo, K., & Roberto, A. (2011). Media representations of IPV and punishment preferences: Exploring role of attributions and emotions. *Journal of Applied Communication Research*, *39*, 1–18. doi:10.1080/00909882.2010.536843
- Paluck, E. (2009). What's in a norm?: Sources and processes of norm change. *Journal of Personality & Social Psychology*, *96*, 594–600. doi:10.1037/a0014688
- Phelan, J., Link, B., & Dovidio, J. (2008). Stigma and prejudice: One animal or two? *Social Science and Medicine*, *67*, 358–367. doi:10.1016/j.socscimed.2008.03.022
- Rosch, E. (1978). Principles of categorization. In E. Rosch & B. Lloyd (Eds.), *Cognition and categorization* (pp. 27–48). Hillsdale, NJ: Erlbaum.
- Rossi, P., & Nock, S. (1982). *Measuring social judgments: Factorial survey approach*. Newbury Park, CA: SAGE.
- Sanne, W., Nikkelen, J., vanOosten, M., Marieke, M., & vanDenBorne, J. (2020). Sexuality education in digital era: Intrinsic & extrinsic predictors of online sexual info seeking among youth. *Journal of Sex Research*, *57*, 189–199. doi:10.1080/00224499.2019.1612830
- Singhal, A., & Rogers, E. (2004). Status of E-E worldwide. In A. Singhal et al. (Eds.), *Entertainment-education & social change* (pp. 3–20). Hillsdale, NJ: Erlbaum.
- Spitzberg, B., & Cupach, W. (2014). *Dark side of relationship pursuit* (2nd ed.). New York, NY: Routledge.
- Stafford, L., & Canary, D. (2006). Equity & interdependence as predictors of relational maintenance strategies. *Journal of Family Communication*, *6*, 227–254. doi:10.1207/s15327698jfc0604\_1
- Stephens, K., & George, W. (2009). Rape prevention with college men: Evaluating risk status. *Journal of Interpersonal Violence*, *24*, 996–1013. doi:10.1177/0886260508319366
- US Census Bureau. (2019). QuickFacts. Retrieved from [www.census.gov/quickfacts/fact/table/US/PST045219](http://www.census.gov/quickfacts/fact/table/US/PST045219)
- Venema, R. (2019). Making judgments: How blame mediates influence of rape myth acceptance in police response to sexual assault. *Journal of Interpersonal Violence*, *34*, 2697–2722. doi:10.1177/0886260516662437
- Wuest, J., Ford-Gilboe, M., Merritt-Gray, M., & Berman, H. (2003). Intrusion: Central problem for family health promotion among children & single mothers after leaving abusive partner. *Qualitative Health Research*, *13*, 597–622. doi:10.1177/1049732303013005002