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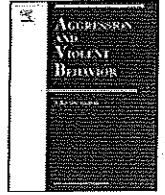


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Intimate partner homicide–suicide: Perpetrator primary intent across young, middle, and elder adult age categories



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ABSTRACT

Intimate partner homicide–suicide (IPHS) is the most violent domestic abuse outcome, devastating families and communities. Nationwide murder–suicide data were collected from news surveillance of 728 events (representing 1611 deaths) reported 1999–2005. Content analysis compared perpetrator's primary intent (homicide or suicide) across 3 age categories: young (18–44), middle aged (45–59) and elder adult (60+) couples. Based on information obtained, a known history of intimate partner violence (IPV) was most common in young dyads, compared to other age categories. Suicide pacts and mercy killings appear to be very rare. The majority of perpetrators were men who utilized firearms. Female victims varied in their awareness of danger. Evidence suggests there were differences in the primary intentions with young adults reflecting homicidal motive and elders were more often suicidal. Those in middle age indicated a mix, with most similarities to young adults. If substance abuse and mental illness played a significant role in the IPHS events, it was not evident from these data. Triangulation of data analysis methods contributed rich details about themes associated with danger clarity, perceptions of lethality, and evidence of the perpetrator's view of the self and others. Understanding existing distinctions in primary intent is crucial to the development of appropriate lethality assessments and prevention efforts.

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Contents

| | |
|--|----|
| 1. Introduction and background | 26 |
| 2. Research questions | 27 |
| 3. Data & methods | 28 |
| 4. Results | 29 |
| 4.1. Quantitative analysis | 29 |
| 4.2. Qualitative analysis | 30 |
| 4.2.1. Homicidal intentions and intimate terrorists | 30 |
| 4.2.2. Suicidal intentions | 31 |
| 4.2.3. Perpetrators with substance abuse or mental illness | 32 |
| 5. Discussion and implications | 32 |
| 5.1. Discussion | 32 |
| 5.2. Research implications | 33 |
| 5.3. Limitations | 33 |
| 5.4. Directions for future research | 34 |
| Acknowledgments | 34 |
| References | 34 |

Abbreviations: IPHS, intimate partner homicide–suicide; IPV, intimate partner violence; IT, intimate terrorist; SI, suicidal intent; HI, Homicidal intent.

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1. Introduction and background

Intimate partner homicide–suicide (IPHS) prevalence was recently estimated at between 1,300 and 1,400 deaths annually in the United States. Although not a major cause of death, the trauma of a homicide–suicide has far-reaching effects on surviving family, neighbors, and the community at large. Over 60% of murder–suicide cases with three or more victims have male “family annihilators,” who kill spouse, children, and other family members before committing suicide (Violence Policy Center, 2012). Secondary victims, while not the primary target, also lose their lives in murder–suicide events. If children survive, they are left parentless, and have often witnessed brutal violence with life-long consequences (Sillito & Salari, 2011). The public impact of IPHS is devastating because the murderer cannot be prosecuted and the criminal justice system is bypassed.

Perpetrators of homicide–suicide do not often fit the preconceived profile of a “dangerous killer”. Rather, they are more similar to “ordinary men”: better educated and more often employed, when compared to the “criminal” type (Dobash, Dobash, Cavanagh, & Lewis, 2004). Standard homicidal risk factors (such as a history of violence, alcohol or drug abuse, family problems, mental illness, or a criminal career) are less likely to apply to perpetrators of IPHS (Dobash et al., 2004). Instead, these offenders may suffer from reactions to situational circumstances, such as distress over relationship termination (Adler, 1999; Campanelli & Gilson, 2002; Eliason, 2009).

Intimate partner violence researchers have made theoretical distinctions among types of violence (Johnson, 2008; Johnson & Ferraro, 2000), with a recognition that characteristics, motivations, and outcomes vary. Understanding these distinctions helps to determine the level of violence severity, and can improve community and criminal justice response to these family problems (Johnson & Ferraro, 2000; Johnson & Leone, 2005; Leone, Johnson, & Cohan, 2007).

Research has compared homicide–suicide to homicide only. This perspective assumes perpetrators have homicidal motives including anger, rage, or previous domestic violence (Banks, Crandall, Sklar, & Bauer, 2008; Bourget, Gagne, & Whitehurst, 2010; Dawson, 2005; Lund & Smorodinsky, 2001). Another view compares homicide–suicide to suicide-only, and assumes perpetrators have primarily suicidal motives including depression, failure or loss (Dawson, 2005; Palmero, 1994). Homicide–suicide has different event and sociodemographic characteristics, and has been found to have a unique etiology compared to homicide or suicide alone (Liem & Nieuwbeerta, 2010; Lund & Smorodinsky, 2001). Previous research indicates homicide–suicide is more likely to occur at home and in non-urban settings. Perpetrators of HS tend to be older than perpetrators of homicide alone, but younger than those who commit suicide (Liem & Nieuwbeerta, 2010). These and other demographic and social factors make it important to examine homicide–suicide as a distinct event rather than only in comparison to homicide or suicide alone.

Studies of homicide with suicide tend to include lethal events among non-intimate relationships (Malphurs & Cohen, 2002; Violence Policy Center, 2012), which differ from our exclusive focus on current or ex-intimate partners. This research aims to clarify unique aspects of these events by recognizing distinctions among types of IPHS perpetrators. The literature does not address differences in motives, and the extent to which mental illness, mercy killing and substance abuse play a role in IPHS patterns across age categories. It is commonly assumed that substance abuse (Banks et al., 2008) and mental illness (depression) are frequent motivating factors (Eliason, 2009; Roma et al., 2012), as they are in domestic homicide or suicide cases.

Previous research indicates that male perpetrators of IPV primarily use physical methods to maintain control and power, whereas female perpetrators primarily use violence in fear or self-protection (Johnson, 1995; Johnson & Ferraro, 2000; Johnson & Leone, 2005; Melton & Belknap, 2003). Homicide is the only way to ensure ultimate control over a partner.

“Intimate Terrorists” (IT) are the most dangerous type of abuser according to pioneering work by Johnson et al. This type of perpetrator uses violence to control his partner (Johnson, 2008; Johnson & Ferraro, 2000; Johnson & Leone, 2005; Leone et al., 2007). Pence and Paymar (1993) ‘Power and Control Wheel’ can be used to describe this abuse, which includes a campaign of isolation, threat of harm to victim, and threat of perpetrator suicide (Johnson & Leone, 2005). Mutual violence between partners is less likely in relationships characterized by intimate terrorism (Johnson & Ferraro, 2000).

There are several risk factors for domestic homicide. Location matters, as the home is a dangerous place for victims (Naylor, Petch, & Ali, 2011). Perpetrators may also obtain access and attack in public settings, such as the workplace (LaVan, Lopez, Katz, & Martin, 2012). Risk of domestic homicide is increased with a history of IPV and the presence of a gun (Campbell, Glass, Sharps, Laughon, & Bloom, 2007). Previous research by these authors indicates that firearms are the most common method used to complete IPHS events (Salari, 2007; Sillito & Salari, 2011). Furthermore, relationship estrangement puts women at increased risk of being beaten, raped, assaulted, stalked, or killed (Campbell et al., 2007; Melton, 2007; Sillito & Salari, 2006). Research examining a sample of 309 women who left an abusive relationship, found that most were not able to make a “clean break” without further violence (Davies, Ford-Gilboe, & Hammerton, 2009).

Suicide intention (SI) may be the primary motive for some IPHS perpetrators, who then make the decision to kill other victims. Perpetrator depression may be “the most convincing unifying diagnosis common to all types of murder–suicide (Marzuk & Tardiff, 1992, p. 3182)”. Studies have estimated that 20 to 75% of homicide–suicide perpetrators were known to have suffered from depressive symptoms (Roma et al., 2012). Adler (1999) found cases where news reporters and neighbors suggest that the homicide–suicide was a result of grief due to relationship estrangement. Salari (2007) noted that it can be assumed that perpetrators of homicide–suicide have an inability to successfully cope with life disappointments, such as a terminated relationship, financial issues, illness, functional disability, depression, or shame.

Suicidal men who commit IPHS may do so because they view wives and children as property (Baumeister, 1990; Serran & Firestone, 2004) or part of an “extended self.” The killing of family members is considered necessary for a complete suicide and the autonomy of the victim is discounted (Palmero, 1994; Starzomski & Nussbaum, 2000). The perpetrator may believe that the victim will suffer without him, or that he cannot survive without her (Adler, 1999; Bourget et al., 2010; Salari, 2007). When this rationale includes the depressive, self-centered, and inward thinking that accompanies suicide (Baumeister, 1990), the perpetrator does not see himself as killing an “autonomous entity,” but rather, “killing his extended self (Palmero, 1994, p. 205).”

Lethal violence toward others by elderly persons with dementia is rare, but individuals with memory impairment may be at risk of becoming victims of caregiver killings (Cohen, 2004a, 2004b). In cases of elder IPHS, it is often assumed that the perpetrator acts out of mercy to spare his spouse pain from illness or functional disability. However, Salari (2007) indicates that few IPHS cases meet the Centers for Disease Control definition of ‘mercy killings’ as cases where there is documented evidence that the victim wished to die because of a terminal or hopeless condition (see Karch, Logan, McDaniel, Parks, & Patel, 2012). ‘Suicide pacts’ are another potential motivation wherein both members agree to the act, but these are reportedly very rare in cases where members of a couple die together (Salari, 2007). With high suicide rates among baby-boomers (Centers for Disease Control and Prevention, CDC, 2013), it is important to examine possible motivational factors in elder suicide where the individual kills themselves and a current or former partner.

2. Research questions

In this research within group analysis identifies variation in perpetrator types among intimate and former partners. We examine data

from 728 events across three age categories for evidence of homicide intent (HI) or suicide intent (SI) as the primary motivating factors in IPHS. In addition, we identify intimate terrorist perpetrators, who carried out homicide and suicide. Furthermore, we assess location, use of weapons, history of domestic violence, and relationship estrangement as possible predictors of fatal events. We utilized a triangulation of qualitative and quantitative research methods in what we believe to be the first examination of perpetrator intent and IPHS distinctions. Prevention efforts across the life course can be improved with knowledge of variations from comparisons within and between age categories.

The official research questions addressed in this manuscript are as follows:

- 1) What are IPHS perpetrator characteristics and primary intentions?
- 2) Do differences with regard to intimate partner characteristics and perpetrator primary intentions vary across age categories (young, middle-aged, and elder adults)?

3. Data & methods

Content analysis involves a systematic count of units of meaning within media or other written documentation and allows for the examination of trends, patterns, themes, and main ideas which emerge from these data (Mayring, 2000). News surveillance is an important method of content analysis for the study of homicide–suicide because it does not require self-reporting of violence or victimization. However, there are some shortcomings to this type of data collection. As one researcher explained:

“There are inherent flaws in using nonscientific reports to determine the incidence and prevalence of a condition in a population. Just as the medical examiner’s office may not record all ... cases as such, the news media may not report all cases. Furthermore, internet-based search engines may not include all newspapers in circulation. Also, editorial decisions can lead to reporting cases that sensationalize ... Despite these weaknesses, the findings help emphasize an important point (Coorg & Tournay, 2013, p. 749).”

Despite these limitations, many previous studies (Coorg & Tournay, 2013; Genovesi, Donaldson, Morrison, & Olson, 2010; Malphurs & Cohen, 2002; Violence Policy Center, 2012; Warren-Gordon, Byers, Brodt, Wartak, & Biskupski, 2010) have found news surveillance research to be useful for examining homicide–suicide because of added background information, as well as quotes from police, family, friends and neighbors.

Researchers (Malphurs & Cohen, 2002) have estimated that in the late 1990’s only about 41% of homicide–suicide cases were being reported in newspapers. However, with increased access to internet, we believe that the portion of reported cases is much higher now. To test this hypothesis, we examined state fatality reports in a western state with high suicide rates (Utah No More Secrets Report, 2004, 2005). We found by internet search that every IPHS in the state fatality reports for the 2 years examined (2004–2005) was reported in at least one local newspaper. While there may be some variance by state, this is a good indication that news media is including most reports of IPHS. Recent research found that the majority of suicides were reported in 1–2 newspapers, while the majority of homicides were reported in 11 to 34 newspapers (Genovesi et al., 2010). Reporting homicides is less controversial, and may account for higher documentation of IPHS, compared to suicides alone. If indicators from Utah are similar to other states, the likelihood is good that our research includes many of the events over the observed time period.

Data include events from all 50 states. Internet search engines were utilized in addition to Newslink (www.newslink.org), a website which, at the time, provided access to 1193 major-metro and daily newspapers and television news transcripts across the United States. Archives and current news sources were examined for keywords “murder–suicide”,

“attempted murder suicide”, “homicide–suicide”, and “attempted homicide suicide” within the title or body of the text. Each time a homicide–suicide event was found the article was archived, and information was entered into the database.

This research of IPHS events (including current or former intimate partnerships), took place between January 1, 1999 and December 31, 2005. Although there were 728 cases identified, 10 of these were determined to be “suicide pacts”, and were excluded from the descriptive and multivariate analysis measuring primary intention of IPHS. Most IPHS events (683) were “completed”, but 35 cases included one who lived, and in one case both members of the dyad survived. Data contained a total of 1611 deaths, most often two per event. “Secondary victims” (191) included fatalities not central to the intimate partnership such as children, neighbors, other family members, and friends. Cases were identified in three age groups – categorized by the age of the oldest member of the dyad. We compared findings both within and between age groups.

The categories included young (age 18–44; $n = 325$ events), middle aged (age 45–59; $n = 178$ events), and elder adults (age 60 and older; $n = 215$ events). Data collection captured the immediate publicized community response to the violent event. This study did not pose a risk to human subjects, as most were fatally wounded prior to collection. Special procedures were in place for non-identification of survivors. Due to the unobtrusive nature of this research, an IRB exemption was issued for this study (University of Utah IRB 00014793).

A team of three social scientists, including the two authors, met regularly to clean and code the news surveillance IPHS data. The authors had extensive training in research methods and coding. Each case was read in its entirety. The raters then independently assigned a label to the description (i.e., perpetrator primary intent homicide, suicide, joint suicide pact, etc.) and results were shared to determine agreement. Sometimes motivations were obvious, such as previous threats to the victim or suicide attempts. Life circumstances such as divorce or estrangement alone did not automatically place cases into a category, because it was recognized that either SI or HI reactions could ensue under those conditions. Qualitative research identified indicators listed in Fig. 1.

Raters were trained to use a combination of two or more of these indicators to code motivation. News surveillance research does not typically include a formal test of interrater agreement (Brossoie, Roberto, & Barrow, 2012; Greenberg & Hier, 2009). Justification is based on a consistent high level of agreement among the raters, thereby indicating internal validity and reliability of the study findings (Anfara, Brown, & Mangione, 2002). In the rare event when team members had a coding disagreement, discussion was undertaken. In some cases, further news reports were commissioned via internet search. Multiple news sources typically agreed about the basic facts of the case, but some contained additional interviews, investigation results or community reactions. If new details were not enough to create 100% agreement, the case was coded as “missing”. Similar “missing” cases included those without enough detailed information, or where a combination of SI and HI factors existed together. Ultimately, 25% of the cases were deemed to be “missing.” Reliability and validity were highly valued, and variables were constructed that were mutually exclusive and exhaustive.

After careful consideration, homicidal intentions (HI) were predicted by IPV history, threats, crimes against victim, stalking, severe wounds, and when the perpetrator killed other adults (i.e., new love interest or parents/siblings of victim). Some of HI could be further identified as intimate terrorists (IT), where perpetrators exhibited patterns of purposeful isolation, along with a campaign causing fear for the victim. Some cases had IT, which was clearly evident by the inclusion of two or more of the following factors: power and control tactics, isolation, stalking, kidnapping, terrorism, protective orders, and/or previous death threats. Primarily suicidal intentions (SI) were predicted by victims who were unaware of danger and/or perpetrators who were

| Primary Intention Homicide | Primary Intention Suicide |
|--|--|
| IPV history | sad/ depressed mood |
| threats to victim | previous suicide attempts/ ideology |
| isolated victim | financial trouble, gambling problem |
| power and control | turmoil, confusion |
| stalking and/or kidnapping | suicide note or other preparations |
| protective order/ victim feared for safety | victims unaware of danger |
| crimes against victim | perpetrator described as very quiet, nice, |
| severe wounds | tired, worn out, poor health, etc. |
| others killed (new love interest or victim's family) | |

Fig. 1. Characteristics of primary intention coding.

described as sad, depressed, previously suicidal, quiet, fatigued, and/or having poor health. Their lives may have been in turmoil, with financial difficulties, such as gambling debt or unpaid bills which may have precipitated the suicidal motive. Sometimes a note or other preparations may have indicated a premeditated plan.

Quantitative data analysis included both descriptive and multivariate statistics. Perpetrator characteristics were dummy coded and included sex (male = 1), and intimate terrorist (yes = 1). Event characteristics are also dummy coded and include location of IPHS (home of victim = 1), a known history of IPV (yes = 1), whether a firearm was utilized (yes = 1), and relationship status (estranged = 1). Primary intentions for the IPHS were identified as HI, SI, or unclear/missing. Coding was based on inter-rater agreement. We utilized conservative judgment with clear evidence to identify motives. Other precipitating factors were noted, such as evidence of psychotic break or substance use. We included suspected suicide pact, and the potential mercy killing, although almost none followed the CDC definition described above. All of these variables were dummy coded (yes = 1).

Logistic regression was used to predict categorical placement based on independent variables since there is a dichotomous dependent variable (Knoke, Bohrnstedt, & Mee, 2002). Primary intention has two categories: homicide intent, and suicide intent. Independent variables include age category (young as the reference category, middle aged and elder adult dyads), relationship estrangement, firearm, and location of event. For the multivariate analysis, we excluded cases determined to be joint suicide pacts. Methods were triangulated by combining quantitative and qualitative content analyses. Themes emerged across age groups which were associated with previous IPV history, and IPHS reactions from police, neighborhood, and family.

4. Results

4.1. Quantitative analysis

Descriptive statistics about the characteristics and motives in IPHS events were reported in Table 1. Perpetrators were primarily male (97%) and victims were mostly female (97%). Nearly all were heterosexual, with the exception of two couples. The majority of dyads (45%, $n = 325$) were younger than 45 years old. About a quarter of dyads (25%) were middle aged, between 45 and 59 years old, and 30% were age 60 or older.

Lethal methods include firearms that were used in the vast majority (88%) of the cases and proportions were similar by age group (young 87%, middle 91%, and elder 87%). Non-gun related deaths include asphyxiation, stabbing, poisoning, bludgeoning, etc.

Relationship status was measured, with evidence that 39% of dyads were estranged (leaving, divorced or ex-partner). Breakups were most common among young couples (51%) and least common among elder adults (14%). A history of known IPV was more common among the young (28%) and middle aged (28%), but less common among the elder dyads (14%). IPHS among young adults (24%) was more likely to include secondary victims (children, neighbors, or kin), when compared to middle (12%) or elder (7%) categories.

Most perpetrators were motivated by one of two primary intentions, homicide (48%) or suicide (27%). The motive was missing or unclear in 25% of the cases. Data was examined for other possible contributing factors. Only a small portion of perpetrators were reported to have been impaired by alcohol or drugs (3%), or had evidence of a psychotic episode or mental breakdown (3%). No young couples had evidence of mercy killing. Of cases with known intent, only 5% were "possible" mercy killings based on speculation, but the vast majority did not

Table 1
Descriptive characteristics of IPHS perpetrators, event, and intentions.

| Characteristics (N = 718) | X ² (DF) | Young % (n = 325) | Middle % (n = 178) | Elder % (n = 215) | |
|----------------------------|-------------------------------|-----------------------------|--------------------|-------------------|-----------|
| Perpetrator | Male perpetrator (97%) | 24.4 (2)*** | 99.7% (324) | 92% (163) | 97% (208) |
| | Intimate terrorist (24%) | 15.9 (2)*** | 29% (95) | 25% (45) | 14% (31) |
| Event | At home of victim (83%) | 10.7 (2)** | 84% (272) | 75% (133) | 87% (187) |
| | Known IPV history (24%) | 23.2 (2)*** | 28% (91) | 28% (50) | 15% (32) |
| | Firearm used (88%) | 2.2 (2)* | 87% (282) | 91% (162) | 87% (187) |
| | Estranged relationship (39%) | 79.7 (2)*** | 51% (167) | 40% (71) | 14% (30) |
| | Family annihilators 3+ (16%) | 40.1 (4)*** | 24% (79) | 12% (22) | 7% (14) |
| | Primary intention | Homicidal intent (HI) (48%) | 100.4 (4)*** | 57% (184) | 55% (97) |
| Suicidal intent (SI) (27%) | | | 14% (46) | 19% (34) | 52% (111) |
| Missing intent (25%) | | | 29% (95) | 26% (47) | 18% (39) |
| Other motivations | Drugs/alcohol (3%) | 11.1 (2)** | 4% (12) | 6% (10) | 0% (0) |
| | Mental breakdown (3%) | 12.1 (2)** | 0.06% (2) | 4% (7) | 6% (12) |
| | Possible mercy killing (2.5%) | 36.8 (2)*** | 0% (0) | 0.06% (1) | 8% (17) |

* $p \leq .05$.** $p \leq .01$.*** $p \leq .001$.

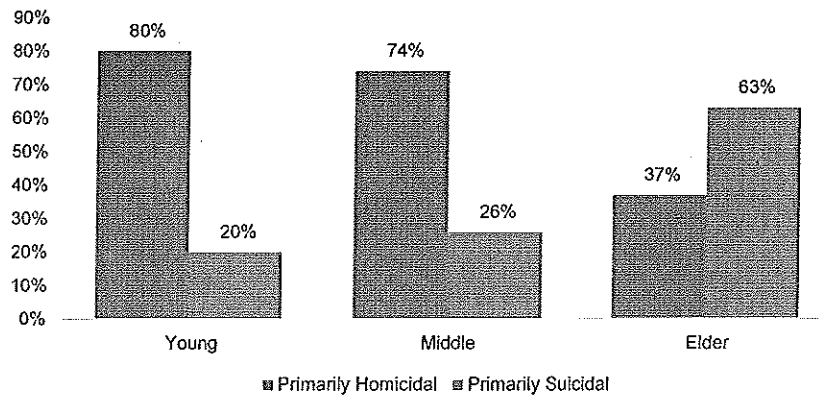


Fig. 2. Percentage of perpetrator primary intentions by age category, missing excluded ($n = 537$).

conform to CDC standards. These possible cases were very rare, but more commonly found among elders (8%).

When cases with missing motive were excluded, a pattern of primary intention by age group emerged (see Fig. 2). The vast majority of young (80%) and middle-aged (74%) perpetrators had primary HI, but it was a minority among elder cases (37%). The pattern reverses with 20% of young and 26% of middle-aged couples having a SI perpetrator, compared to 63% of elder cases.

HI intimate terrorist perpetrators were represented in 32% ($n = 171$) of the non-missing events in the study. Evidence of IT offenders was most common among young dyads (29%). Cases with middle-aged assailants were slightly less likely (25%) to be classified as such. There were 31 elder IT perpetrators, which represented a minority (14%) in that age category.

Logistic regression compared homicidal to suicide-intent perpetrators across age groups (see Table 2). For this bivariate analysis, only non-missing homicide-intent and suicide-intent cases were included ($N = 521$). Elder dyads were significantly less likely than young adults to have HI compared to SI motivations ($p < .001$). The results of Table 1 were reinforced with multivariate analyses, showing that elderly perpetrators were most likely SI, while young perpetrators were most likely HI. Perpetrators in estranged couples were four times more likely ($p < .001$) to have HI than SI.

4.2. Qualitative analysis

The qualitative research examined perpetrator types, within and between age groups, including those who had homicidal and suicidal primary intent. The role of substance abuse and mental illness were also explored. This section revealed the full richness of these data, by providing details about the human lives lost and tragic circumstances. We also utilized our qualitative findings to help determine

the parameters of the previously reported variables in the quantitative analyses.

4.2.1. Homicidal intentions and intimate terrorists

Dyads with known domestic violence history or police involvement more often had perpetrators with primarily homicidal intentions, and some were classified as IT. Particularly among young couples, there was recognition by law enforcement of IPHS pre-meditation. In a case with a couple in their early thirties, one officer said, "He planned to kill her, and he wasn't going to go to jail." In another case, the police stated, "Indications are (the perpetrator) had one thing in mind: his intent was to wipe out the family." In these cases, the predominant focus was to kill the victim(s), while the suicide was a secondary decision.

Often, HI offenders went to great efforts to locate and harm the victim, such as a case where he drove more than 700 miles to reach her. In the majority of cases the location of the crime was in or near her residence, making the home a dangerous setting for victims. Some perpetrators even stalked and waited outside for her arrival. In one case with a young estranged couple in their thirties, the apartment security guard reported, he caught the husband "trying to peek through the window". In another case where the victim (age 33) and children recently fled the family home, a police officer reported, "It looks like he tracked her down to this house...broke into the back door...shot her, then he shot himself."

Stalking was also evident in some cases with middle aged or elder adult perpetrators. In a case where a woman (age 49) moved to a secret location and was granted a restraining order one week before, her neighbor reported she "always looked around like she was being stalked". In another case, a woman (age 54) had dated an older man (age 65) for about a year after the partnership ended, and she had begun a new relationship. The offender stalked her workplace, then shot her in the back and face. This event caused a great deal of terror among her coworkers. Her current boyfriend reported that her attacker had threatened to kill her before. The victim's daughter said, "[The perpetrator] was obsessed with her. He would not leave her alone."

In HI cases, there was evidence that the primary motive was killing the partner. There was often an escalated fight, anger, or a delayed suicide preceding the IPHS. In some cases, the police were called out to the scene prior to the event and were later able to identify a motive. For example, police determined that the destination of a blueberry pie caused strife in a couple with no previously known violence. The victim intended to deliver the pie to neighbors and the perpetrator wanted to keep the pie himself. During a fight, the husband threw wine in the wife's face and she called 911. Police responded, then after they left, the husband continued the violence, and used a firearm to commit IPHS.

According to our coding, about half of HI cases had evidence severe enough to warrant classification as intimate terrorism. IT designation

Table 2
Logistic regression predicting primary intention (homicide versus suicide).

| Variables | Logistic coefficient (B) | S.E. | Odds ratio | EXP (B) | 95% C.I. for EXP (B) |
|-------------------------|--------------------------|------|------------|---------|----------------------|
| Middle age ^a | -.40* | .28 | .68 | 1.5 | .86 2.6 |
| Elderly ^a | -1.53*** | .25 | .22 | 4.6 | 2.8 7.5 |
| Estranged | 1.45*** | .24 | 4.25 | .24 | .15 .38 |
| Firearm | -.06 | .33 | .94 | 1.1 | .56 2.1 |
| At victim's home | -.28 | .29 | .75 | 1.3 | .75 2.3 |
| Constant | 1.14** | .43 | 3.13 | 1.4 | |

Reference category: suicidal primary intent; suicide pacts not included; $N = 521$.

^a Young adult reference category.

* $p \leq .05$.

** $p \leq .01$.

*** $p \leq .001$.

was conservative, so underestimation is possible. Intimate terrorists were qualitatively different from other homicidal perpetrators because they intentionally instilled fear in victims, and used control and isolation tactics. They often had previous domestic violence charges, along with lethal threats toward the victim. Power and control was a consistent and repeating theme. In one case, friends reported a “controlling relationship”, where the perpetrator “would check up on her at all hours with surprise visits and phone calls.” Elderly perpetrators were not immune from this behavior. Other people knew of anger issues, but often did not expect the fatal violence. In one IPHS with a 73-year-old victim and 61-year-old killer, a relative reported, “George had a hot temper that may have gotten out of hand and caused this tragedy.”

Intimate terrorists isolated victims by restricting visits with family or friends, and frequent residential moves kept partners from developing community ties. Neighbors sometimes reported that few knew the couple, or that the couple was quiet and “kept to themselves”. Through isolation tactics, victims were prevented from obtaining potential aid to escape the relationship. In one young-adult case, the daughter reported that her father “wouldn’t let my mom call my grandma, or her friends”. This theme of being isolated was evidenced in many IT cases. For another young dyad, a friend reported,

“When she married him, he cut her off from her family. He didn’t let her go to work or really anywhere. She wanted to get her life back free of [him], but he wouldn’t let her...”

This isolating behavior was found across age groups, even among the old partners. For example, a neighbor of a couple in their eighties reported that the husband “Wouldn’t let her talk with others. I tried to talk to her, she would smile and turn her face. She didn’t dare.”

In relationships with intimate terrorism, danger was typically recognized and the victim may have tried unsuccessfully to escape. According to police, one young woman (age 31) kept a lead pipe under her bed for self-defense. Also, family and friends often recognized the victim was in mortal danger prior to the murder. Some attempted to convince her to flee. One family member of a victim (age 31) stated,

“We kept telling her, ‘You need to leave, you need to leave.’ She would have to sneak to call us. He stalked her, accused her of unfaithfulness, isolated her, recorded her phone calls, and controlled the money. Every classic sign of abuse was there.”

Similarly, an account of an adult daughter noted that the middle-aged perpetrator, “Was very abusive, all he did was beat her up...we wanted her to get away.” The desire for separation combined with intense danger resulting in tragic outcomes in multiple instances.

There were cases where the victim had moved on to a new relationship, but the perpetrator seemed to refuse to acknowledge the conclusion of the previous relationship. Possessive ex-intimates threatened violence and some killed friends or family along with the victim. A co-worker said, “After the couple separated in August, he grew more and more menacing,” she said he threatened to “tear her apart.” A protective order petition cited a similar quote from another perpetrator (age 30). He said, “If I see you and Troy together, I’ll kill you both....I vision myself using an ax on you. I’ll tear you apart and show no remorse.”

4.2.2. Suicidal intentions

Qualitative analysis facilitates rich examination of narratives to show differences between HI and SI perpetrators. The latter category had assailants with many perceived personal or health problems, who may have suffered from depressive symptoms or previous suicidal ideation. They often seemed to be introverted and private. Occasionally, these partners had been motivated by financial problems such as job loss or a gambling debt. These relationships did not have an IPV history. Victims were often unaware of their fate as the perpetrator killed them from behind, as they slept or performed daily tasks. In these cases, terror did not appear to be the goal. Several of these IPHS events came as a

surprise to friends and family, because perpetrators were not previously violent, and were described as good people. One case where an athlete (age 23) committed IPHS, a friend reported,

“He was the kind of guy you thought would do something good for himself. He’s a good friend, a great wrestler, and had a real promising outlook. Ever since I’ve known him, he’s been a really nice guy. I never expected anything like this.”

In another case, acquaintances were shocked because the perpetrator and victim “were real nice folks” and the events were unexpected. Neighbors and friends often reported sentiments like this one where the husband (age 57) was described as an introvert.

“[He] was a real nice guy, a quiet guy. You know, he would speak to you as you went to the mailbox or out in his yard. But he was a stay at home guy, a stay to his-self kind of guy.”

An emerging theme was the unilateral decision to kill oneself and others. Although it is sometimes assumed – particularly in cases of elderly couples – that the suicide was a “pact,” this was rarely observed in our research. In fact, there was evidence that victims were not in agreement. In one case, the daughter indicated that the perpetrator (age 67) was recently diagnosed with cancer and made the decision with only his own interest in mind. He left a note asking her to make sure the couple’s puppy got his shots. She said, “That was it, there was no ‘sorry about your Mom’...He just took it upon himself to ‘take care’ of himself and my Mom.”

Victims were not suicidal; there was evidence many of them had plans for the future, and even wanted to survive the attack. An incident with a couple in their twenties was overheard by a neighbor: “It was terrible. I could hear [the victim] crying ‘Help me! I’ve been shot. I don’t want to die!’” Another case, the perpetrator (64) was recently diagnosed with Alzheimer’s disease, but the younger victim (age 47) had no intention of dying. She reportedly had future plans, anticipating a long awaited visit from her brother.

There was evidence perpetrators most often attacked without the consent or even the knowledge of the partner. In these cases, there was no perceived danger before the fatal incident. Individuals did not have an opportunity to escape as they were often killed from behind or in their sleep. In hindsight, previous suicide attempts could be considered warning signs. One perpetrator (age 31) told the victim (age 26) he was considering self-harm, and the victim’s friend had advised her not to go to him. The neighbor said, “He called her and told her he was going to kill himself, but never threatened her.” Another victim’s brother said the assailant, “was moody sometimes, but we would never believe that he would do this to his family.”

Contrary to popular belief, most SI events were not “mercy killings,” as CDC defined events were extremely rare. Instead, sometimes an ill perpetrator made the decision to kill a healthy (often much younger) spouse. One man (age 71) was reported to have “declining health,” but the victim (age 54) was 17 years his junior and described as “healthy.” She was known as “the life of the family,” but that life was cut short when he used a high powered rifle to kill them both. Interestingly, in that case, both members were memorialized with a joint obituary and funeral.

Cancer diagnoses were present for several elderly IPHS perpetrators, many with no mention of poor health for the spouse. In one such case, the husband (age 72) suffered from terminal cancer and had visited retirement homes with the victim. He was reportedly concerned about what would happen to her after his death. His solution was to shoot his wife (age 70) in the back of the head then kill himself. Witnesses conveyed she initially survived the attack and ran urgently to the neighbor’s house, rang the doorbell, with her head bleeding as she shouted her husband’s name. She was transported to the hospital but she later died of her injuries in ICU.

In another case, the perpetrator (age 75) had heart surgery with complications a few months prior to the IPHS, but there was no mention of poor health for the wife (age 74). Similarly, a perpetrator (age 68) with failing health called 911 after killing his wife (age 69). He left a note describing his own illness and depression, but there was no mention of his victim's health.

SI offenders sometimes made final arrangements or left notes expressing their desire to die. Preparations included funeral plans, instructions on how to contact loved ones, care for pets or distribution of property. Prior to one IPHS, the perpetrator (age 75) left a package in his front yard with a note that said "for law enforcement only," and included instructions to give the enclosed gun to a neighbor. The assailants in these cases seemed to discount the autonomy and desires of the victims. As with HI, some suicidal perpetrators had a difficult time dealing with relationship termination, and addressed this in suicide notes or prior conversations with others. Occasionally, records revealed turmoil and confusion over transitions and loss associated with the relationship. In one case where the perpetrator (age 41) left a suicide note, it described marital problems and made a request "Take care of the kids because things just didn't work out."

Suicide pacts were rare, and the specifics of these cases can be examined here in the qualitative data analysis. As an example, one couple was distraught over the prognosis of a husband (age 72) with terminal brain cancer. Not wanting to cause an incident in their exclusive neighborhood, they checked into a hotel with a suitcase containing only a gun. There he shot his wife (age 78) and then himself. Upon discovery, the hotel staff found several hand written documents with instructions for cremation among other details. Also enclosed, was an apology and a check for \$200 for cleanup. Joint suicide notes and other indicators signaled knowledge or consent of the lethal plan.

4.2.3. Perpetrators with substance abuse or mental illness

In our data, approximately 3% of perpetrators had reported evidence of a current or previous drug or alcohol problem. Substance abuse was not seen as a primary motive, but may have intensified the situation. In one HI case with a protective order, the perpetrator (age 28) had methamphetamine in his system at the time of the homicide-suicide. A neighbor stated, "They had a restraining order and didn't want him around. They told me if I ever saw him or his car to call the police."

In another case with a couple in their early forties, a sheriff reported:

"From the information we have, it appears to be a classic domestic homicide. It's a parent's worst nightmare when your daughter develops a relationship with a man who has a propensity towards violence. He'd battered her before...friends and family were concerned about ... his behavior, his conduct, and his violence... Early toxicology reports we have on him indicate that he had marijuana, cocaine, and amphetamine in his system."

The police recognized the previous IPV, but also pointed to a positive toxicology report. Substance abuse was blamed by friends or relatives for causing the event, even when there was a history of violence.

It was expected that psychotic breakdown would be evident in many cases, but from the media reports examined, only 3% ($n = 21$) of perpetrators showed such evidence. The societal expectation of insanity as a motive was not common in this research. Previous records of mental instabilities were virtually absent in these data. In one case, neighbors reported that the perpetrator was normal until recently where he began acting strange. He became suspicious that police were watching him, and he threatened to kill himself. In addition to mental illness, dementia was noted as a potential contributing factor. However, perpetrators with known dementia were rare.

5. Discussion and implications

5.1. Discussion

In recent years, IPV research has drawn attention to distinctions among perpetrator types, noting that motivations differ, as do the mechanisms of prevention (Johnson, 2008). Intimate partner homicide-suicide represents the most severe form of family violence, with lasting effects on families, children and communities. Using a large sample, ours was the first to identify within-group distinctions in IPHS perpetration across young, middle and elder adult categories. Our study determined the assailants' intentions are not all the same and these motives varied by age group. Classifying distinctions among IPHS perpetrators is a goal of this research, with the hope it will contribute to a better understanding of how to recognize and prevent fatal family violence in the future.

Homicide-intent (HI), with previous IPV history, threats and/or crimes against the victim, were found in the vast majority of young and middle-aged events. That motive was present for a minority (about a third) of elder assailants. Almost half of those HI cases exhibited additional intimate terrorist (IT) characteristics, including stalking, isolation, intentional provocation of fear and controlling behavior. While IT was present in all age categories, young couples had over twice the rate compared to elder adults. When homicide-intent assailants committed IPHS, we found evidence that suicide was a secondary decision and related to control, as an alternative to punishment in the criminal justice system.

Another motivation included those who are primarily focused on self-harm, but then make the decision to also kill others. Suicide-intent (SI) perpetrators didn't fit the preconceived profile of killers and were most commonly found among elder adults. Overwhelming circumstances were present for many, such as poor health, depressive symptoms, caregiver burden, or financial stress. In these cases victims may not have sensed danger and were not actively trying to escape a recognized violent relationship. In IPHS, suicidal individuals posed a significant risk of harm to themselves and others. Prevention strategies require obtaining professional help, rather than relying on informal assistance by untrained partners (who could end up fatally wounded). A person who is willing to self-harm may have few inhibitions from killing another person first (although most do not). The typical social sanctions against homicide (criminal justice response) are not effective in this population who sees no future of their own. When someone has lost everything, there is a greater danger of IPHS. Other than the fatal act itself, very few assailants in our study exhibited outward signs of substance abuse, suicidal ideation, or psychotic episodes. These issues may have been present, but were not obvious to those who were familiar with the perpetrator. Professionals who work with despondent individuals realize the need for direct questioning, and an offer of hope, to keep entire families safe.

Typical IPHS offenders were male and used a firearm, and the most common setting was the victim's residence (especially for those with an SI partner). While 'leaving' is well known as a very dangerous time, it varies as an IPHS predictor across age categories. We found the volatility of this process especially dangerous for those under age 45. Nearly half of young adults were estranged from the partner, yet this was relatively rare among elders. Relationship termination was more often a risk factor with HI and IT assailants, compared to those with suicide-intent. Especially for older women, risk of IPHS appears higher within the intact marriage. The suicidal husband who unilaterally decided to kill in the process of his own self destruction represented the most lethal domestic situation for these women.

It is often assumed that IPHS among older adults, represent "suicide pacts" or "mercy killings," but we found both of these motives to be extremely rare. There was ample evidence that in most cases, the perpetrator made a lethal decision without the consent of the victim. Overall, CDC mercy killings represented less than 3%, of total cases

(rates higher among elder adult dyads (8%)). Salari (2007) utilized the older IPHS sample and concluded that poor health was overemphasized as a motive by the media. In cases where health problems were indicated, it was often an ill perpetrator who decided to end the life of a healthy partner. In addition, consent should not be implied in a scenario where the victim was sick. People with disabilities are not willing IPHS participants simply by virtue of their condition. The classification of CDC defined “mercy killing” (with victim consent and hopeless or terminal condition) or “suicide pact” may apply in rare cases where knowledge and agreement was present. States with legalized assisted suicide (OR, WA and MT) under doctor supervision offer a better option than IPHS mercy killing. Otherwise, hospice and palliative care could help those with terminal conditions who desire more pain relief and control in the end of life. Suicide is an increasing trend, with devastating results and the potential for contagion (See Salari, 2011).

We view all IPHS cases to be a form of intimate partner violence, without exception. Rich details of the IPHS characteristics and dynamics were provided by qualitative analysis of our data. We propose terms which reflect themes based on the iterative process, related to the dynamics of IPHS perpetration across the age categories. *Danger clarity* describes HI cases, where friends, family, and victims sensed danger, but were unable to deter or escape the lethal act. Intimate terrorists isolated and controlled victims through various tactics, and the subsequent suicide maintained control to the end.

In contrast, SI cases usually indicated perceptions of *minimal lethality*, where victims, friends and family did not recognize impending harm from the assailant. Particularly among elderly couples, reports subscribed to “altruistic motives,” where the assailant was somehow concerned about the well-being of the victim(s). However, our analysis revealed these perpetrators more often had self-absorbed intentions. Rather than altruistic, we believe *egocentric homicide-suicide* is a more fitting term, since there is nothing benevolent about killing a partner. The murder often represented a selfish act, perpetrators did not recognize the autonomy of their victim, as her fate was controlled by their actions.

5.2. Research implications

This research directs prevention efforts by including a recognition that protecting victims and deterring future violence is dependent on an understanding of perpetrator motive. IPHS distinctions carry practice implications for law enforcement, medical professionals, victim's advocates, communities, and families. We recommend an emphasis on community interventions to reduce isolation (i.e., shelters, legal protections, enforcement) and provide protection to those with HI partners. In this category, future violence could be prevented by increasing security, recognizing the need for well targeted arrests, and services for victims.

However, such measures may not help when potential perpetrators are primarily suicidal or do not fit the “criminal” stereotype. These perpetrators and victims could be assisted by programs to prevent suicide, along with interventions for addressing depressive symptoms, caregiving needs, and end of life care. Societal recognition of the danger suicidal individuals pose for themselves and others is essential.

Another important issue worth noting is related to the common availability of guns, since the vast majority of IPHS events in our study was carried out by firearm. The United States has the highest per capita gun ownership and a high rate of deaths by firearm. Victims of gunshot(s) had little or no chance of escape or survival and these lethal events could claim more family members in a short period of time, when compared to other methods (see Violence Policy Center, 2012). We found that in 16% of cases ($n = 115$) more than two victims were lost at the hands of a “family annihilator.” The likelihood of additional household deaths declined with age, as the couples in later life were more likely to be living without others in residence.

More so for female than male victims, homicidal assailants are primarily current or former partners (See Salari, 2015). Due to the

disproportionate female victimization in domestic situations, IPHS is very much a women's issue (whether SI or HI). With the increased suicidal tendencies of the baby boom generation, IPHS could come to play a larger role for women's health and public health in general.

5.3. Limitations

One challenge of IPHS research is to obtain an accurate representation of the events as they are reported in news media. Using news surveillance, we triangulated data performing both quantitative and qualitative content analysis. News reports often included quotes from investigations, friends, surviving family and neighbors near where the attack took place. Gaps in relevant details were filled with information obtained by use of state fatality reports, police blotters and obituaries, when available. One limitation of news surveillance is access to all records was not possible for all cases. Every attempt was made to utilize all available data.

Additional limitations of this methodology revolve around missing data for some cases, such as demographic variables and information about the specific “trigger” that led to the IPHS. Due to the nature of injuries, follow up interviews with subjects are not an option. Knowledge of the relationship history was often dependent upon witness accounts and other records left behind. For improved data quality, authors would encourage media outlets to provide greater attention in reporting demographic characteristics including race, ethnicity and socioeconomic status of those affected by IPHS.

Missing from these data are details about clinical health and mental health status of victims and perpetrators. It is not possible to conduct clinical assessments of mental illness or report official toxicology findings, in the case of a completed IPHS. Previously diagnosed mental illness may go unreported or be underreported by news media. The same may be true of assessing cognitive conditions such as Alzheimer's disease.

IPV research often necessitates victims and/or perpetrators to self-report, which is problematic as they may be difficult to locate, remain silent (privacy norms), misreport or omit relevant information (Salari, 2015). IPHS does not require such self-disclosure. The clues from the crime scene are recognized as newsworthy and provide a unique opportunity for study. Unlike other domestic homicides, IPHS fatalities include a perpetrator suicide. Due to his own death, the offender is not attempting to flee or hide incriminating evidence that would be used for a criminal conviction, so the scene remains undisturbed.

The vast majority (75%) of cases were identified as either homicidal or suicidal primary intent. The remaining (25%) had an unclear or missing motive. We were intentionally conservative with coding to enhance the quality of cases assigned to each motive category. It is not unusual for IPV research to have higher non-response rates or missing cases, when compared to other research, because of social desirability bias. Guthrie (2010) suggested an ideal rate of non-response at lower than 20%, however several well-known studies of IPV have reported in excess of that amount. Two national studies (Black et al., 2011; Tjaden & Thoennes, 1998) reported rates closer to one third (27.5% to 33.6%, and 28% respectively). Although the information gathered is only the “tip of the iceberg,” the sample size of this research is among the largest to date.

We acknowledge the proportions of cases within each age category are not necessarily representative of homicide-suicide events in the larger population. For example, search techniques may have discovered more young adult cases in the news media, since there was a greater chance children were involved as victims or witnesses. Similarly, a search for “elderly murder-suicide,” may have been more effective than methods used to discover middle-aged IPHS cases. Because there are no official national statistics linking homicides and suicides that occur together, we cannot be sure our data collection methods yielded proportions true to those existing in the age categories represented here. As a result, we do not attempt to answer questions of prevalence

in this manuscript. Rather, we are using a large sample to determine distinctions in the various motivations perpetrators may have as they commit IPHS. The goal of this work is to identify distinctions in primary motives and promote a greater understanding of severe family violence as opposed to identifying prevalence of IPHS.

5.4. Directions for future research

This IPHS research identifies differences in perpetrator motives and across age groups. While it fills gaps in prior findings, future research holds promise to provide a greater understanding of this severe family violence. Additional studies could examine recent trends through the economic recession which began in 2007, as well as public policy modifications affecting gun control, assisted suicide, access to mental health parity, and end of life care.

We recommend that incidence and prevalence of IPHS be tracked in combined statistics at the national level. A linked tracking system could help researchers uncover information about IPHS that is currently unknown due to data limitations. State fatality review reports have come a long way to improve the understanding of domestic violence homicide events, but they are not conducted in all 50 states. We believe prevention efforts will be further enhanced by rich details of incidents in media surveillance studies that triangulate quantitative and qualitative research methods.

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