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Building a Transdisciplinary Team to Prevent Intimate Partner Homicide: A Research Note

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Abstract

Intimate partner violence (IPV) and intimate partner homicide (IPH) are complex global problems. Transdisciplinary research approaches offer the potential to increase the understanding of these events and inform best practices for prevention. To encourage scholars to adopt transdisciplinary practices when investigating multifaceted problems, this note employs a case study approach to detail one such effort—The Preventing and Assessing Intimate Partner Homicide Risk (PAIR) Studies. The goal of the PAIR Studies is to improve the understanding of IPH to inform the development of best practices for prevention. The note concludes with a discussion of the benefits of transdisciplinary approaches.

Keywords

transdisciplinary; intimate partner homicide; anti-violence; case study

Intimate Partner Violence (IPV) and Intimate Partner Homicide (IPH) are global problems that transcend borders and cultures. According to the World Health Organization (2021), globally one in three women experience IPV during their lifetimes, which includes psychological, physical, and/or sexual abuse committed by an intimate or ex-intimate partner. In the United States (U.S.) approximately 5.7 million women and 3.3 million men annually report being victimized in an act of IPV that causes physical or psychological harm or results in the need for services (Leemis et al., 2022). In addition to disproportionately being the victims of IPV, women are also disproportionately the victims of IPH (also called Intimate Partner Femicide or IPF), with the majority (77.9%) of IPH committed by men against women (Fridel & Fox, 2019). Approximately 40% to 50% of women who are murdered are killed by a current or former intimate partner (Fridel & Fox, 2019; Jack et

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al., 2018). In heterosexual relationships, most female victims of IPH are killed by men who abused them and most male victims of IPH are killed by women that they abused (Campbell et al., 2003; Harden et al., 2019).

The effects of IPV and IPH are not confined to the focal victim, they also affect the victims' families and friends who may experience psychological distress and strain due to the abuse, injury, or death of loved ones (Armour, 2002). It is estimated that up to one in four children in the U.S. experience parental/caregiver IPV in their childhood (Finkelhor et al., 2015). Moreover, children are often secondary victims of IPH. Approximately 43% of multiple victim IPHs involve the death of children, and many victims of IPH are parents whose children suffer their loss (Abolarin et al., 2019). When a female parent is killed in an IPH, children may witness the homicide or find the body (Lewandowski et al., 2004). Children and youth who survive the IPH of a parent suffer multiple traumas and may experience adverse sequelae across psychological, social, physical, and academic domains (Aborisade et al., 2018, Alisic et al., 2017).

Given that IPV is the most common precursor to IPH, there are multiple potential intervention points across disciplines and professions that present opportunities to prevent these homicides. For example, Domestic Violence High Risk Teams work to intervene with high-risk IPV survivors, and domestic violence fatality review teams work to better understand the circumstances of IPH in order to make policy and practice recommendations to prevent future IPHs in their communities (Snider, 2019). Both teams generally include representatives from the criminal and civil legal systems, the health professions, the social service sector, and the community (Messing, Campbell, et al., 2020; Websdale et al., 2019). Similarly, when a fatal or near-fatal IPV occurs, multiple systems manage the aftermath—medical systems engage in lifesaving measures or autopsies if the violence was fatal and may treat physical and psychological injuries suffered by additional victims and surviving family. The criminal justice system has the authority to sanction IPH and IPV offenders. The civil legal system plays a role in the safety of IPV survivors through orders of protection (also called restraining orders) and makes determinations regarding families, for example about the custody of children. IPV survivors may seek the assistance of the social service sector at any point in the healthcare, civil, or criminal processes, or independently of these processes. If there is a fatality, those left behind (including children) may engage with healthcare and social service systems to manage their health and coping in the aftermath of the traumatic event.

IPH precursors, acts, and consequences transcend traditional disciplinary boundaries; therefore, transdisciplinary research is needed to increase understanding and develop best practices for prevention. To encourage scholars to adopt transdisciplinary practices when investigating similar multifaceted problems, this research note presents a case study that details one such transdisciplinary effort—The Preventing and Assessing Intimate Partner Homicide Risk (PAIR) Studies. The PAIR Studies are intended to improve the understanding of IPH risk to inform the development of innovative best practices for prevention. The Studies are led by a transdisciplinary team of researchers who have backgrounds in criminology, criminal justice, nursing, public health, and social work. This research note is a reflection and description of the PAIR Studies, highlighting the transdisciplinary nature

of the approach, which can serve as a model for addressing other complex public health problems.

Transdisciplinary Approaches

Transdisciplinary approaches are guided by the principle that some societal problems are too large to be understood and solved by a single discipline (Carew & Wickson, 2010), so there is a need to connect various disciplines and approaches to solve these problems. Single discipline approaches, while offering ease and simplicity for the professionals utilizing them, are insufficient to address the complexity and scale of many public health problems. For example, employing only a criminal justice centered approach to address intimate partner violence, would not take into account trauma informed services to survivors and primary prevention efforts. As a result, funding calls increasingly emphasize the need for the development of research approaches involving multiple disciplines, including interdisciplinary, multidisciplinary, and transdisciplinary approaches (Mitchell, 2005).

In multidisciplinary efforts, researchers work independently and in parallel with other disciplines addressing problems from their own specific professional lens. In interdisciplinary work, researchers from different fields collaborate together, but still from within the confines of their own professional disciplines. Unlike interdisciplinary and multidisciplinary efforts (Gray, 2008), in transdisciplinary efforts researchers integrate their disciplines' theories and evidence base, work from a shared existing conceptual framework or create a novel one, and share resources in a manner where no single discipline dominates (Choi & Pak, 2006; Gehlert et al., 2015). Transdisciplinary approaches reconfigure epistemological divisions and integrate major concepts and approaches into a systematic integrated perspective, thus surpassing the boundaries of various fields. This approach focuses on alleviating and addressing complex social problems through collaboration, both across disciplines and between researchers and practitioners (Grigorovich et al., 2019; Messing et al., 2012). Moreover, unlike multi and interdisciplinary approaches, the goal of transdisciplinary research is to produce "useable knowledge" that is translatable into practice; hence, this approach integrates the perspectives of non-academics in a participatory manner to produce knowledge that is actionable and has practical "real world" applications (Carew & Wickson, 2010; Darbellay, 2015). In this way, transdisciplinary efforts address societal problems in a more cooperative and holistic manner (Darbellay, 2015). Transdisciplinary research—like this collaboration among nursing, social work, criminal justice, and public health researchers—focuses on the application of generated knowledge to solving problems that affect individuals, communities, and societies (Grigorovich et al., 2019).

There are four stages of transdisciplinary work: *development*, *conceptualization*, *implementation*, and *translation* (Gehlert et al., 2015; Hall et al., 2012). The development stage involves the identification of the problem to be examined and convening of experts from diverse backgrounds to advance scientific knowledge of the problem with a focus on intervention. In the conceptualization stage, collaborators work together to develop a theoretical framework, methodology, and research questions that integrate the disciplinary perspectives of the team members and are applicable across all engaged disciplines.

During implementation, team members collect and analyze data together. In the final stage, translation, researchers disseminate findings to inform the use of effective interventions at the primary, secondary, or tertiary levels.

Case Study of Transdisciplinary Research: The PAIR Studies

The PAIR Studies are an ongoing extension and replication of the foundational 11-city case-control study Risk Factors for Femicide in Abusive Relationships (“the femicide study”) that was led by Dr. Campbell and colleagues (2003). The original research compared a female IPH case sample with a control sample of women who experienced non-fatal IPV to establish risk factors for homicide. This research led to the development of the Danger Assessment, a risk assessment that has been instrumental in informing IPH prevention efforts within the nursing and social work fields, and has been adapted for use in criminal justice and multidisciplinary interventions across the U.S. as well as internationally (Messing, Campbell, et al., 2020). Although, to date, there has not been another study of its kind, subsequent research has continued to examine risk factors for re-assault, near fatal violence, and IPH (Messing & Thaller, 2013; Spencer et al., 2019).

The original femicide study was foundational for understanding IPH risk. Yet, there remain noteworthy gaps in knowledge, including the impact of firearm policies, ownership, storage, and use; the importance of specific risk factors among marginalized populations (e.g., foreign-born, Indigenous, and LGBTQ+ populations) and rural communities; and the impact of various forms of severe abuse, such as multiple non-fatal strangulation and technology-based abuse (Messing, Bagwell-Gray, et al., 2020). The original femicide study was conducted in mostly urban areas and, as data were collected over 20 years ago, research instruments did not assess more recently understood forms of abuse (e.g., technology-based abuse), nor consider contemporary firearm policies. Thus, the investigators set out to replicate, update, and expand the original femicide study to improve the understanding of understudied risk factors for IPH and risk factors for IPV-related homicides (e.g., corollary victims such as children or when an ex-partner kills a new partner). The original femicide study was an interdisciplinary effort led by nursing researchers with team members from the disciplines of public health, medicine, and criminology. The researchers collaborated with criminal justice practitioners (police departments) but there were no formalized attempts to develop a shared conceptual framework or methodologies.

Development

The replication effort was set in motion by Messing (a social worker) and Campbell (a nurse), both of whom have expertise in IPV and IPH. During the development phase, Messing and Pizarro collected pilot data in Arizona, funded by an internal grant from Arizona State University (Messing et al., 2021). To build a transdisciplinary team with expertise in the domains most relevant to understanding and responding to IPH—social work, health, public health, and criminal justice—Messing recruited a criminology and criminal justice expert with homicide expertise, Pizarro, who recruited Zeoli, a public health policy analyst focused on firearm policy and intimate partner homicide. During the initial study phase in Arizona, AbiNader, a social worker, was recruited as the study’s

post-doctoral scholar. The research team later expanded to integrate additional members, including Spearman, a pediatric nurse and PhD in nursing candidate.

Researcher-practitioner partnerships are essential to this research, and community engagement began with the Arizona pilot and was central to study development through the forging of partnerships with social service providers, state coalitions focused on IPV, medical examiners offices, and law enforcement agencies. Building on the project initially conceived in Arizona in 2018, the team extended the project to New Jersey (2019) with grant funds from Everytown for Gun Safety, Missouri and Oregon (2020) with grant funds from that National Collaborative on Gun Violence Research, and Maryland and Texas (2020) with grant funds from the National Institutes of Health. Because this study is a case-control study, the additional states were chosen to create pairs of states based primarily on contrasting firearm regulations, while accounting for population gun ownership, demographics, rurality, and IPH rates. Multi-state comparisons increase the diversity of the sample and allow for comparison of macro-level factors which are understudied in IPH research (Truong et al., 2022). The research team is comprised of professionals at multiple academic institutions located across the United States with expansive social networks, which has aided in building community partnerships nationally.

Conceptualization

During the conceptualization stage the researchers agreed that one of the primary goals would be to expand and build upon the existing body of research, particularly the original femicide study. As previously mentioned, the original study focused on only femicides, was conducted in mostly urban areas and, as data were collected over 20 years ago, research instruments did not assess more recently understood forms of abuse (e.g., technology-based abuse), nor consider contemporary firearm policies. Consequently, the conceptualization took into account these gaps and developed a plan to address them in the studies. The researchers also conducted an extensive review on the literature on IPH since the femicide study to identify important pending research questions (e.g., Messing et al., 2021).

Once the areas for research were identified, the team began by identifying a common framework and then progressed through methodological and measurement development, and team building considerations (e.g., vicarious trauma prevention, training). The researchers on the PAIR Studies team, although from multiple disciplines, share the common professional goal of increasing understanding of IPV and IPH to aid in intervention development. Further, although developed in social work, ecological models that focus on a holistic approach to research and intervention are common across the disciplines involved in the PAIR Studies. Thus, we shared a common framework that encouraged investigation across individual, relational, community, and societal levels. Due to these commonalities among the disciplines represented in the study, the research team adapted the public health model of the socioecological approach to IPV (Heise, 1998) for understanding IPH risk (Figure 1). According to this model, to fully understand IPH and IPV risk, one must examine it at multiple levels: ontogenic, micro-, exo-, and macro-levels. The ontogenic level consists of offender's and victim's personal histories and characteristics. The microlevel contains the dynamics and characteristics of their relationship, including abusive behaviors. The

exosystem consists of characteristics of the community in which the violence took place and institutions within the community. The macrosystem contains society's cultural norms and values, including the laws and institutions that represent an operationalization of these norms. Heise (1998) argued that it is the interplay of these factors that create contexts in which IPV, and by extension IPH, can occur.

During the conceptualization stage, multiple broad study goals were delineated to capture the multifaced nature of IPH identified in the literature. The *first* overarching goal was to collect comprehensive, statewide data on IPH from various sources to ascertain prevalence, as well as to capture varying social structures, geographic regions (e.g. urban versus rural), and populations. The *second* goal was to evaluate the relative strength of novel and known risk factors of IPH, including factors at the individual, relationship, community, and state-levels (see Figure 1). Overlaid across these broad goals is an intentional focus on examining IPH risk among under-researched populations such as Indigenous peoples; those in LBGQ+ relationships; male, non-binary, and trans victims; immigrant victims; and rural populations. Also integral to study conceptualization was the identified need to develop and sustain relationships with police departments, medical examiner's offices, prosecutor's offices, service providers, and other interested agencies throughout states to develop data sharing processes that created a more accurate and sustainable method of collecting data.

Methodology Development.—Researchers across the transdisciplinary team leveraged their expertise in their respective fields and worked together (e.g., sharing writing drafts, conducting literature searches, meeting as a team) to develop holistic methods and measurement. The research team sought to collect data across the ecological levels that are theorized to explain IPH, with parallel interviews for cases (IPH victims, where next of kin or friend serves as a proxy informant in the interview) and surveys for controls (non-fatal IPV survivors). Interview/survey development considered the diverse and complex life circumstances of IPH and IPV victims/perpetrators to capture risk across groups. Items for interviews/surveys are based on research-established risk factors and emerging topics. The research team used established items from prior nursing, social work, criminology, criminal justice, and public health studies (e.g., Campbell et al., 2003; Lewandowski et al., 2004; Spencer et al., 2019); validated risk assessment instruments (Hilton et al., 2004; Spencer & Stith, 2020; Stith et al., 2016; Williams 2012; Belfrage et al., 2012; Glass et al., 2008); and items developed based on team members' or their colleagues' expertise (Messing et al., 2022; Walling et al., 2022).

Creating the instruments was a collective endeavor and sought to include domains from across the individual, family, community, and societal levels. For example, the instruments include victim and perpetrator demographics, relationship characteristics, the role of children, prior physical violence, weapon access and use, sexual violence, substance use, controlling and stalking behavior, prior civil and criminal legal systems experiences, social services, and health care utilization. Additional supplements were created based on specific aspects of survivor identities, including Native American victims, victims born outside the US, LBGQ+ and gender expansive identities. In the creation of these instruments, each expert contributed and collaborated on areas of expertise. This collaboration allowed for the creation of comprehensive instruments that avoid discipline-specific oversights. For

example, when developing questions on system use, criminal justice, nursing, and social work perspectives were merged to develop items that captured the broad range of services that victim-survivors may access (e.g., medical, criminal legal, and advocacy) and a more holistic assessment of the barriers to accessing such services. The firearm policy expert developed a section on firearm access and use, including interactions with the justice system around firearm risk and implementation of any firearm restrictions. After development, the interview guide was reviewed by 64 IPV or IPH experts and practitioners across fields (e.g., fatality review board members, law enforcement, researchers, and culturally-specific service providers) to increase content validity, and was cognitively tested with six next-of-kin of IPH victims who were killed prior to 2016. As data collection concludes, where possible, it will be important to contextualize incident-level data obtained from case files and interviews with state- and county-level data on policies, practices, and characteristics.

While vicarious trauma prevention has been most often employed in social work practices with survivors (Levenson, 2017) and within some use in nursing and public health settings, a trauma-informed research approach is starting to gain momentum among researchers who study violence and other traumatic events (AbiNader et al., 2023). During conceptualization, AbiNader led efforts to expand the trauma-informed research approach to include attention to the impact of secondary traumatic exposure on researchers. Evidence-based policies and trainings aimed to prevent vicarious traumatization (i.e., negative feelings, behaviors, and changes to worldview due to secondary traumatic exposure) and promote vicarious resilience (i.e., positive feelings, behaviors, and changes) were implemented (Molnar et al., 2017). This self-facing emphasis on trauma laid the foundation for training the team in trauma-informed interview principles for use with participants.

Implementation

Implementation efforts are currently ongoing, and are at different stages depending on the state; case file data collection is expected to be completed in 2023. A key strategy of PAIR Studies implementation has been to continue the work done in the conceptualization stage to build and maintain collaborations with community partners—including law enforcement, medical examiners, and IPV advocacy organizations. Throughout data collection efforts, study team members who have knowledge and credibility within various practice spaces based on their disciplinary expertise, connected with community-based partners. For example, the criminologist and public health scholars focused on building relationships with law enforcement and other legal actors (i.e., prosecutors), while the social worker and nursing scholars were effective at relationship building with service providers and partners in the field of forensic pathology (i.e., medical examiners). To the extent possible, the researchers used their considerable networks, such as the relationships they already had with colleagues in state domestic violence coalitions, and local universities, to gain warm introductions to local agencies and governmental organizations.

One of the defining characteristics of transdisciplinary work is the encouragement of flexibility in methodology and implementation to address and accommodate the needs of community research partners (Carew & Wickson, 2010). This approach also recognizes the need for evolving methodologies to address the insight gained during the implementation

process (Wickson et al., 2006). The COVID-19 pandemic emerged and spread when the study was expanding across states. The pandemic resulted in major societal shifts, including a nationwide stay at home order, which affected crime rates and the manner in which research, prevention, and suppression efforts were conducted. To respond to these challenges, the PAIR Studies team has and continues to use a variety of approaches based on current social conditions and community partner needs (see AbiNader et al., 2022). Regardless of the specific approach in each state, all states' data collection procedures are anchored by three pillars: case file data, proxy informant interviews, and IPV control surveys (Figure 2).

Data Collection.—The first pillar of data collection involves the identification of IPHs and IPV-related homicides (IPVRHs), such as a current partner killed by an ex-partner, that occurred in the study states between 2016 and 2020. IPH cases were identified from medical examiner, police, and prosecutor data obtained after the forging of data use agreements (DUA) or through freedom of information act (FOIA) requests. Cases were also identified through media searches and service providers when formal data agreements with police departments proved difficult. In AZ, medical examiners' offices were chosen as initial data sources since they have larger jurisdictions than police departments. In the other states, the initial sources of data varied based on data accessibility. For example, in Maryland and Texas, most initial data came from statewide coalitions that track and publish IPH data annually. In these two states, researchers used the case file data to ascertain the number of homicides across participating states and abstract basic information about the incidents (e.g., cause of death, witness statements, prior criminal records of perpetrator and victim, toxicology information on victims, and toxicology information on perpetrators). Where possible, multiple sources of data were sought to triangulate information about a case across data types (i.e., media, medical examiner, and law enforcement).

The case file data collection took different forms depending on the needs and resources available to the agencies providing data. In agencies that allowed in-person data collection, we had our trained research assistants, go through required background checks, then visit the agencies and collect the data in person. In other agencies, we have trained interns who were already working at the agency, collect the necessary data. Finally, some agencies preferred to share data electronically by giving our researchers access to their secured systems, or sharing the information via secured encrypted hard drives. When this occurred, the research team provided the hard drives and covered all related costs for the data transfer. Once the data were in hand, the research team confirmed that cases were IPH or IPVRH. Eligible cases were abstracted using a Qualtrics survey that had been developed by the PIs during the conceptualization stage to identify and quantify situational and relational risk factors.

The temporal relationship between case file data collection and engagement in the interview and survey process has varied by state. Initially, the PAIR Studies were designed with a sequential data collection process (Figure 3), beginning with the analysis of case file data, using those data to identify proxy informants, and following this with proxy informant interviews (cases) and survey data collection (controls). Given the COVID-19 pandemic and the strain that this placed on our community partners, as well as some departmental reluctance to provide next-of-kin information, this sequence was modified to a parallel

data collection approach (Figure 3). In this approach, case file data collection and proxy informant recruitment are happening concurrently. Proxy informants are being recruited through partnerships with social service, law enforcement, and public health agencies (e.g., asking them to refer eligible participants), as well as through community-based recruitment strategies (e.g., flyers, social media, and presentations). Proxies are offered a choice of participating in-person or by phone/Zoom. Data collection is conducted in a structured interview format, recorded, transcribed, and subsequently abstracted into Qualtrics by the person who conducted the interview. The interview process is trauma informed (all interviewers are trained in trauma informed interviewing and data collection), and participants receive a list of state and national IPV and mental health resources before and after the interview. According to the proxies who have participated, they were highly motivated by the opportunity to tell their loved one's story.

Surveys with IPV survivors (controls) will occur concurrently with other data collection procedures once the number of IPHs per state are identified through case files. Population-based random sampling in the study states will be supplemented with purposeful sampling of controls to ensure inclusion of subpopulations often missed by random sampling due to small population sizes, such as gender-diverse populations. Multiple sampling procedures will be tested, including web- and telephone-based procedures and address-based sampling. Sampling will be stratified to ensure a mix of rural areas and areas where populations of interest live, using data from the US Census. Survivors will be able to complete the survey on the web or have the option of speaking to a trained research assistant.

Translation

Transdisciplinary work focuses on knowledge generation with the goal of advancing real-world change to policies and practices. The PAIR Studies research team has never wavered from its overarching goal of the prevention of IPH. Part of the philosophical underpinning for this research is a dedication to partnering with organizations and providing them with research products in recognition of the effort they spent on partnering with us. Indeed, when the team meets to forge collaborations with community partners, one of the first things communicated is that this is not a research study where data is taken from communities, with no return of researchers to discuss findings and implications. During the team's initial meetings with partners, we always ask and offer to provide analyses and technical assistance to answer questions that are most relevant to their agency. We are committed to working collaboratively with local providers, law enforcement, and government officials to help them address IPH in their communities. In this vein, we have given presentations to partner agencies on issues related to intimate partner homicide and our research. We have also collaborated with community partners (e.g., medical examiner and police officer) to publish preliminary findings and give presentations to broader professional audiences. The research team has also provided data analysis and reports of data upon request, tailored to the specific needs of the agency (e.g., Pizarro et al., 2021). For example, in Arizona we have also provided our community and law enforcement partners with content for social media campaigns and IPH trends analyses.

Once the studies are complete, we intend to provide partner agencies with community-, region- or state-level results, depending on their interests and the number of cases (i.e., using large enough data sets to avoid identification). We will continue to ask our practitioner partners across disciplines to help us interpret the results and to invite those who are interested to become co-authors and contribute to manuscripts disseminating results, especially those manuscripts meant for practitioner communities. In addition to providing important access to data, communities, and feedback, our close relationships with community partners helped create site-specific data collection procedures that varied based on jurisdiction and community partner needs.

The research team also plans to create webinars and other materials for partner organizations, as well as other practitioners and Technical Assistance providers. In an effort to reach all audiences working to prevent IPV and IPH, the research team routinely post/link documents (e.g., white papers) summarizing this research on social media using our personal and department accounts. The data will also be used to update existing risk assessment tools which can then be used by practitioners in the field. These combined efforts aim to disseminate the findings of these studies available to all interested audiences.

Discussion

Due to the multiple facets of IPH and the complexities of the various intervention avenues, siloed approaches are not sufficient to prevent these tragedies. Interventions are needed that can be used across sectors and that integrate sector responses through collaborative intervention. Single sector responses to IPV and IPH do not allow a holistic approach that addresses the multifaceted individual and environmental precursors of this violence across ontogenic, micro-, exo-, and macrosystems. For example, in a siloed approach, when addressing the influence of systems on individual experiences, nurses may focus primarily on health system responses, social workers on social services, criminologists on criminal justice systems, and public health on community- and population-level interventions without an integrated understanding of how other systems respond to intimate partner violence and homicide. In a transdisciplinary approach, these sectors work together to respond to the needs of victims and perpetrators, using their expertise to collaborate on effective interventions across systems, thus decreasing the burden on those seeking services from otherwise divergent systems. Siloed professional foci limit our understanding of the complex web of services and system interactions that affect couples and families experiencing IPV before it escalates into an IPH.

The PAIR Studies are an innovative, transdisciplinary research effort. We are comparing the life and relationship histories of IPH victims with IPV survivors to identify risk factors for IPH. Thus, this series of studies addresses current gaps in the literature by using multiple sources of data, including interviews; updating risk factors; and attending to subgroup differences (e.g., military, LGBTQ, and Indigenous) largely overlooked in previous research (Messing et al., 2021). The collection of data from loved ones of homicide victims to represent the “voice” of the victim is especially noteworthy since it allows us to capture information about the relationship that may not come to the attention of the police and service providers and, thus, is not captured in other datasets. The addition of an appropriate

control group (IPV survivors) is also innovative since it allows the team to examine the risk and preventative factors that differentiate between IPV and IPH. The addition of a control group, gathering of large amounts of homicide data, and integration of data from multiple states distinguishes this work from local and state-wide fatality review boards. Finally, these studies meld criminal justice, criminology, nursing, public health, and social work disciplines into an integrated framework to inform best practices for the amelioration of a major societal problem.

This note exemplifies the promise of transdisciplinary frameworks for the understanding and preventing societal problems such as IPV and IPH. The integrated collaboration of various disciplines and community partners allows for a holistic understanding and prevention approach that targets the various precursors of this violence. Moreover, the PAIR Studies focus on practical applications and solutions to complex social problems, allowing scientific inquiry to work toward social progress rather than being confined to the ivory tower of academia. This approach is not without difficulties, however. Disciplinary egos can get in the way of the work, if a team member is not open to treating team members from other disciplines equally or is not flexible on methodological approaches. Working with partner agencies and focusing on dynamic problems can also cause unexpected challenges to the design and implementation efforts. As a result, transdisciplinary approaches require that one discipline is not prioritized or considered superior to others, thus team members must be united, open to new ideas, and willing to put their discipline biases aside to work toward broad-based solutions to social problems. When developing transdisciplinary teams, it is important that team members agree to and embrace the transdisciplinary nature of the scholarship during the initial stages of team development.

Given interconnections with community partners and the emphasis on practical intervention strategies, transdisciplinary work requires flexibility. Societal factors beyond the researchers' control, such as the COVID-19 pandemic that impacted the PAIR Studies, may affect the research design and implementation. Our research approach changed to accommodate the distancing due to the pandemic, as well as the overwhelming increase in service demand and changes in practice modalities that our partners were faced with (AbiNader et al., 2022). Without flexibility, sudden changes may halt research endeavors indefinitely or permanently. Transdisciplinary teams should plan for last-minute changes and, during conceptualization, consider alternate or back-up plans in the event that research or community partners need alternatives, such as our shift to gathering information from publicly accessible sources and FOIA requests during the pandemic.

In conclusion, transdisciplinary work is challenging, but the benefits outweigh the costs. Developing transdisciplinary research is in its nascent stages compared to other forms of investigation. Yet, this approach allows for a holistic understanding of society's most pressing problems and the tailoring of practical solutions to these problems. It puts research into action and has the potential for bettering society. This research note detailed one such effort, the PAIR Studies, which focus on preventing IPH. In providing this example, we detailed the development, conceptualization, and implementation stages of the study, as well as our initial translation approaches, in the hopes that it will assist other researchers who are interested in transdisciplinary research. This is a promising approach for tackling the social

problem of intimate partner lethal violence, and has potential to address complex societal problems in other realms of research and practice with multilevel causes. For example, other persistent societal problems such as firearm related homicides, gang homicides, youth homicides, and other pressing social problems such as homelessness, food insecurity, child malnutrition maternal mortality, substance use could benefit from transdisciplinary approaches. Researchers must evolve from examining problems from their own professional silo, and approach complex social problems through a transdisciplinary lens, modeling the techniques and approaches outlined here to develop best practices for solving pressing social problems.

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Jill T. Messing, MSW, PhD is a Professor in the School of Social Work and the Director of the Office of Gender-Based Violence at Arizona State University. Dr. Messing specializes in the development and testing of intimate partner violence risk assessments. As a social worker, she is particularly interested in the use of risk assessment in collaborative, innovative interventions, and as a strategy for reducing intimate partner violence and homicide.

Millan AbiNader, PhD, LMSW is a mixed-methods researcher who seeks to understand the structural factors and social ecology of gender-based violence, with particular attention to intimate partner violence-related fatalities and gender-based violence in rural communities. Before entering academia, Dr. AbiNader worked as a community victim services advocate with survivors of sexual violence, intimate partner violence, family violence, and commercial sexual exploitation/trafficking. She delivered primary prevention interventions in schools, facilitated support groups in the community and carceral settings, and delivered advocacy services to incarcerated women. Dr. AbiNader is currently an Assistant Professor at University of Pennsylvania's School of Social Policy and Practice.

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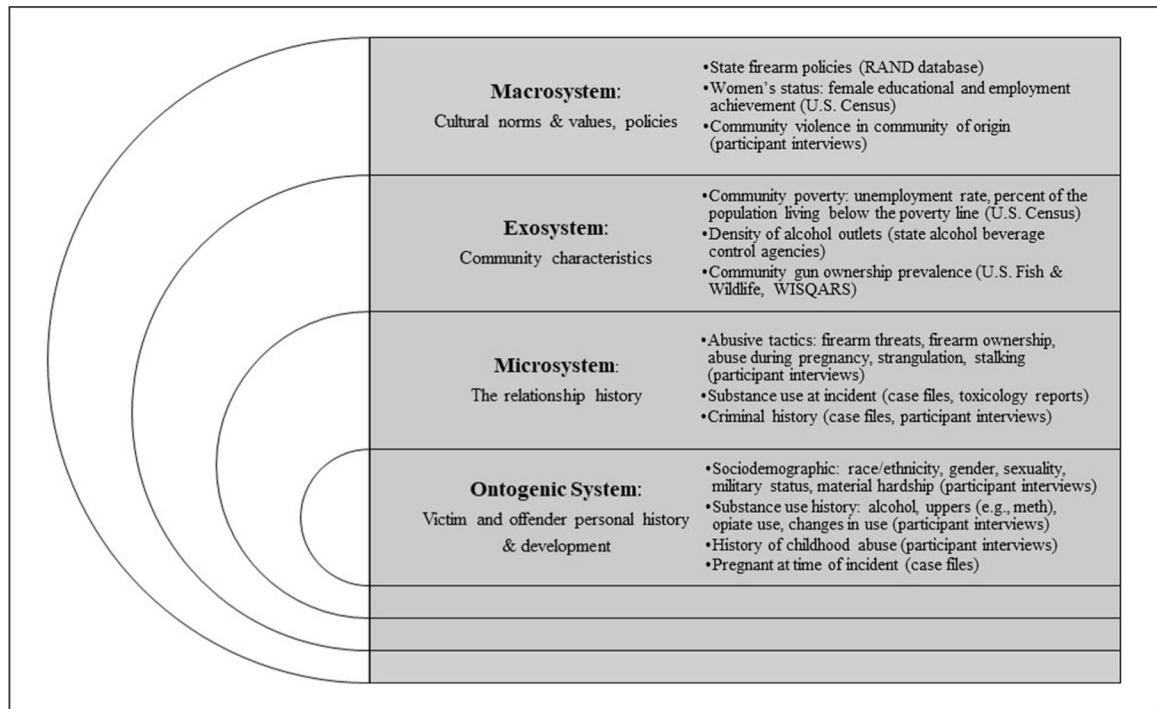


Figure 1.
Social ecological approach to IPV.

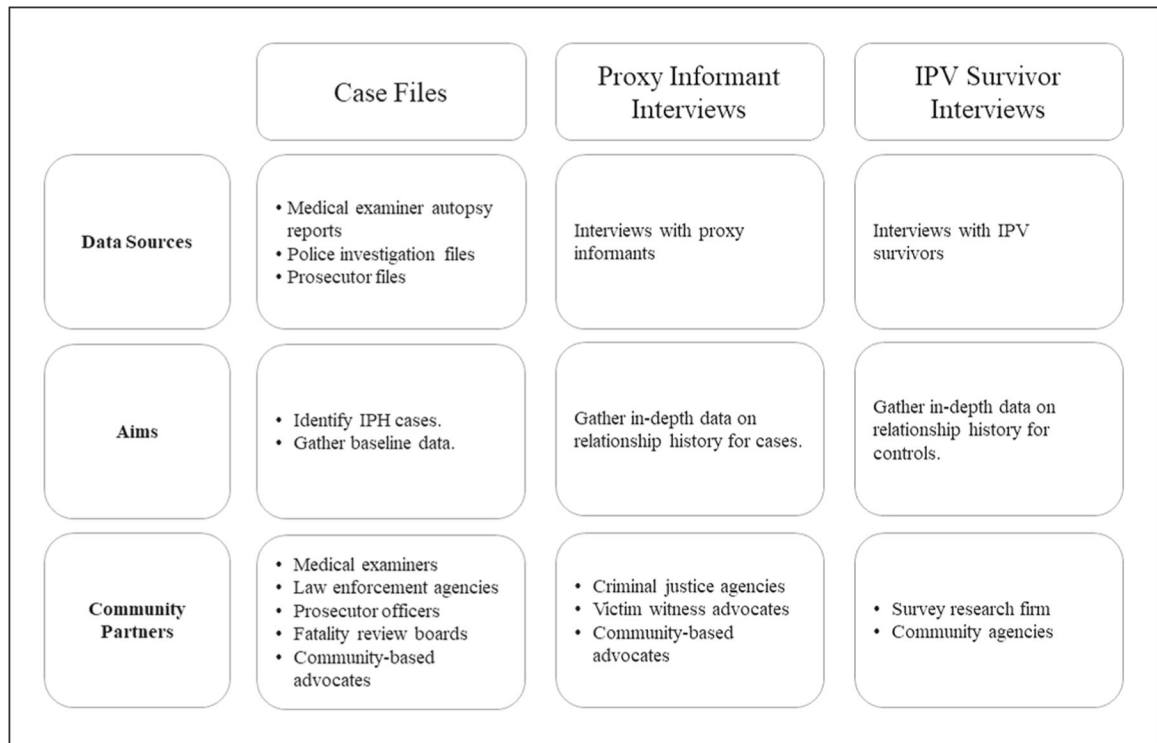
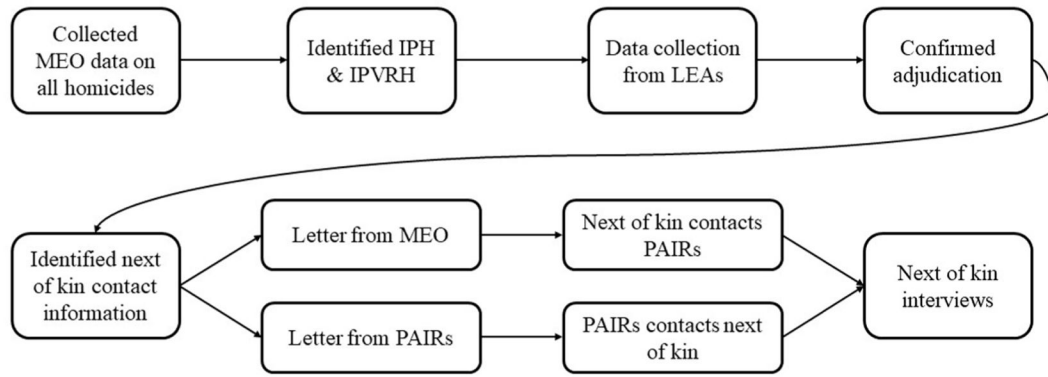


Figure 2.
Data collection pillars.

Sequential Data Collection



Concurrent Data Collection

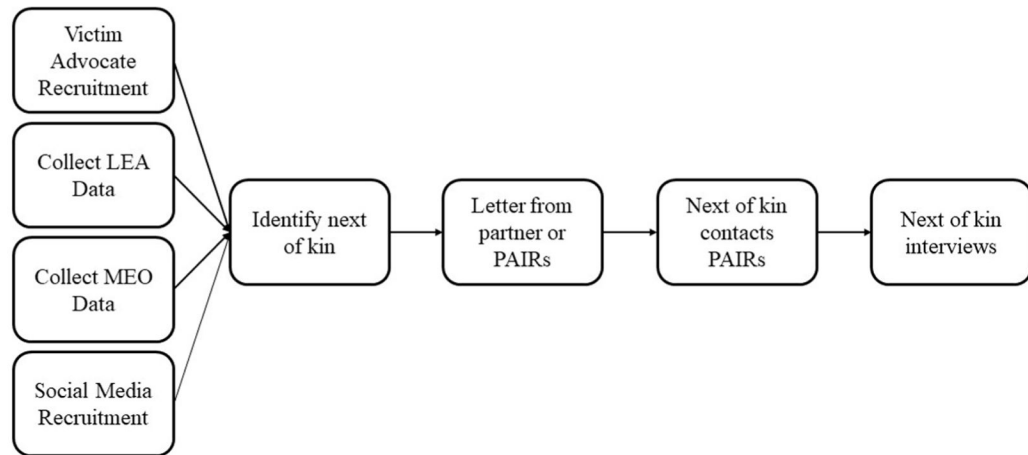


Figure 3.
Data collection methods.