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Moral Injury in Survivors of Domestic Violence

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Moral Injury in Survivors of Domestic Violence

By

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Accepted in Partial Completion
of the Requirements for the Degree
Master of Science

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Master's Thesis

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Camille A. Fogel

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A Thesis
Presented to
The Faculty of
Western Washington University

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Of the Requirements for the Degree
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Abstract

Many survivors of domestic violence experience persistent but invisible psychological wounds that cannot be photographed for evidentiary purposes. Coercive control refers to the network of subtle, structural, and culturally sanctioned tactics that subjugate victims and cause them existential and identity-based harm. In this paper I propose that moral injury, a trauma construct not yet applied to this context, provides an important and nuanced framework for understanding the impact of coercive control and the invisible aftermath of partner abuse. In a cross-sectional survey-based study (N = 292), I tested a novel path analysis in which physical violence and coercive control differentially predict PTSD and moral injury symptoms. The model additionally tested whether the strength of survivors' moral identity moderates the magnitude of the relationship between coercive control and moral injury. I found that coercive control was rampant, more common and predictive of both PTSD and moral injury than physical violence, and that survivors do indeed report symptoms of moral injury at rates that justify further exploration. This study has implications for how we understand and treat nuanced posttraumatic sequelae in highly stigmatized survivors of domestic violence.

Keywords: domestic violence, coercive control, moral injury, survivor

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Moral Injury in Survivors of Domestic Violence

Whether or not we see the bruises, victims of domestic violence (DV) walk among us, many with wounds that are not so easily healed. Victims of DV (interchangeably referred to as intimate partner violence, or IPV, throughout this manuscript) are at increased risk for negative health outcomes that are both physical (traumatic brain injury, sexually transmitted diseases, assault-related wounds, chronic pain; Campbell et al., 2002; Costello & Greenwald, 2022) and psychological (anxiety, depression, substance use disorder, and posttraumatic stress disorder; Trevillion et al., 2012). Although the harms of a physical assault may be obvious to bystanders and friends/family of IPV victims, less recognized and well-understood are the harms of experiencing prolonged domination, control, and humiliation by an intimate partner, known as *coercive control* (Stark, 2007). For instance, many IPV victims report that they are forced to act in accordance with their partner's expectations in order to preserve the relationship, and in some cases, retain access to their children, even when their partner's requests require them to violate their own deeply held moral, religious, or spiritual values (Herman, 1992). Moral injury is a phenomenon described among military service members who witness, fail to prevent, or commit acts that transgress their own values. As a result of these types of events, a profound and debilitating sense of *moral injury* can develop (Litz et al., 2009). However, the nature and extent of moral injury among victims/survivors of IPV is not yet known.

The purpose of this project is to present a formulation of moral injury that is specific to the context of domestic violence and to test, via a survey-based study with IPV survivors, the connection between coercive control, moral injury, and other aspects of moral identity.

Conflicting Accounts of Domestic Violence

Research on domestic violence has been and continues to be fraught with debate fueled by political agendas. Many foundational theories of domestic violence justify victim-blaming minimizations and outright denials (Delker, 2021). For instance, in the 1960's and 70's, batterers' wives were believed to have masochistic personality disorders which led them to instigate violence unnecessarily (Muehlenhard & Kimes, 1999), and psychologists construed men's violence against women as reactive and self-defensive rather than instigative (Moffitt et al., 2001). Family violence researchers have claimed that there is *gender symmetry* in domestic violence such that men and women are equally likely to physically aggress and be victimized in relationships, and that they are motivated to violence by similar reasons (Gelles & Straus, 1988). These conclusions are founded on a faulty operationalization of domestic violence as the literal sum of discrete instances of physical violence (i.e., a single slap or push). This act-based conceptualization of intimate partner violence fails to consider the context of the violence and the differential magnitude of its effects on women compared to men (Dobash & Dobash, 2004).

To introduce important nuance into academic conceptualizations of domestic violence, feminist philosophers and psychologists have focused their efforts on drawing out the non-physical qualities of intimate partner violence that could not be captured by family violence measures. When examined in totality, including psychological, sexual, economic, and social abuse in addition to physical violence, IPV can be seen clearly for what it is: a gendered form of violence (Dobash et al., 1992; Herman, 1992). Continuous and persistent coercive abuse is far more frequently suffered by women than men (Stark, 2007). Similarly, survey data that measures a more robust conceptualization of domestic violence found that 28.8% of women (compared to 9.9% of men) will be significantly impacted by psychological, sexual, or psychological IPV at

some point in their lifetime (Black et al., 2011). With this in mind, the scope of the subsequent investigation will be limited to cases of domestic violence with male perpetrators and female victims. This choice was not made to minimize the violence that exists in same sex relationships or that is perpetrated by non-male identified individuals, but instead to provide realistic limits to the current inquiry that are informed by national prevalence rates.

Coercive Control

Coercive control is a construct that fully represents the experiences of IPV victimization. It refers to a web of structural tactics that abusive partners impose on their victims in order to establish power and control (Stark, 2007). Control can be exerted in a variety of ways that together entrap an individual, most commonly a woman, in a state of domestic and interpersonal subjugation.

It can be difficult to communicate the totality of coercive control because it is complex and subtle, however, there are a number of patterns that exist across controlling relationships. Many abusive partners repeatedly insult their victims; they label them as unlovable and use derogatory words to describe them (Hamberger et al., 2017). Abusers may also force their partners (through physical violence or emotional manipulation) to engage in degrading activities that range from repeatedly cleaning the same item until the abuser is satisfied to participating in sexual acts that the victim finds humiliating (Herman, 1992). Over time a victim's confidence and sense of self-efficacy is diminished, and they are rendered less capable of leaving their partner (Crossman & Hardesty, 2018).

Another common tactic used in coercive control is to limit a victim's access to people and communities outside of the relationship. Abusive partners frequently spread rumors about their victims, humiliate them publicly, or ask them to break off contact with family members or

friends who voice their dislike of the abuser (Crossman & Hardesty, 2018). In the absence of social support, victims become more vulnerable to *monopolization of perception* (Biderman, 1957; Stark, 2007), in which an abuser's values, judgements, attitudes, and moods replace those the victim previously held. Both physical and technological surveillance are commonly used to communicate the omniscience of an abusive partner. Victims who know their emails are being read, their phones are being tracked, and their in-laws are reporting back on their activities are unable to act freely even when they are not in the physical presence of their partners. Verbal and symbolic threats are another effective form of coercive control. It is common for abusers to threaten not only the victim, but also her children, pets, or her treasured belongings in order to gain compliance or break the victim down (Stark & Hester, 2019). Abusive partners also report controlling what their victim is allowed to spend money on, wear, eat, and when they can sleep (Stark, 2007). In short, coercive control is an insidious and strategic type of behavior within an intimate relationship that entraps victims with or without the use of physical violence.

The violent, intimidating, isolating, and controlling tactics of coercion successfully restrict female victims because they are legitimized and enforced by larger patriarchal cultural values (e.g., traditional gender roles that dictate women should be financially dependent homemakers and sexually pure; Dobash & Dobash, 2004). Physical, sexual, and psychological assault within an intimate partnership can be conceptualized as culturally sanctioned methods used to procure the emotional, sexual, and domestic goods that a man is owed by his female partner (Manne, 2018). Victims of coercive control are bound like the rest of us to various cultural and personal obligations to be a good (moral) person. The difference is that victims of coercive control are not only bound by their own moral and cultural values, they are also forcefully obligated to adhere to their partner's values and explicit commands (Crossman &

Hardesty, 2018). Coercive control is restrictive and all-consuming, and it produces an internal conflict in the victim between what she believes is right and what her partner forces her to do and think. The depth of this conflict should explain some of the posttraumatic symptoms that victims of domestic violence report.

Trauma Theory and Post Traumatic Stress Disorder

Posttraumatic stress disorder (PTSD) is one of the most common psychiatric disorders diagnosed in victims of domestic violence. One study found that 57.4% of female IPV victims from a community sample met the criteria for a diagnosis of PTSD (Nathanson et al., 2012), while others have found that between 39% and 77% of female survivors report moderate to severe PTSD symptoms (Humphreys et al., 2001).

Trauma theory posits that psychiatric disorders like PTSD arise when an individual's ordinary capacity to cope is overwhelmed by a state of extreme terror (Substance Abuse and Mental Health Services Administration, 2014). The physiological arousal of the sympathetic nervous system that generally provides a burst of energy for effective threat response is rendered futile when an individual can neither fight nor flee. For individuals who have no option of escape, what begins as an intricately orchestrated stress response becomes maladaptive and continues long after the threat is gone (SAMHSA, 2014). This type of extreme disruption can also lead to a more profound disorganization in which one's memory of the traumatic event is fragmented and incompletely stored. The nervous system, in response to this suspended trauma, becomes activated at inappropriate times in amounts that are inappropriate for a given situation (van der Kolk, 1994). The posttraumatic symptoms described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) are believed to

result from these catastrophic emotional, physiological, and cognitive disruptions in business as usual.

The DSM-5 categorizes post-traumatic symptoms into four distinct clusters: re-experiencing, avoidance, negative cognition and mood, and hyperarousal. Traumatic re-experiencing, also called intrusive symptoms, manifest as flashbacks, uncontrollable and distressing thoughts, and nightmares. Avoidance is the natural consequence of such distressing intrusions. Traumatized individuals will often go to great lengths to avoid internal and external reminders of the trauma. These efforts can be observed in behavioral changes to facilitate the avoidance, numbing emotions that dull the intensity of triggers, restricted affect, and dissociation. Negative alterations in an individual's cognition and mood can include dissociative amnesia, harboring persistent and unflattering beliefs about oneself or the world, a loss of social connection, and anhedonia. Hyperarousal, the final symptom cluster, is characterized by a heightened awareness of one's surroundings, angry outbursts, and difficulties concentrating. To qualify for a diagnosis of PTSD, an individual must be distressed and impaired by these symptoms after being exposed to threatened or actual injury, sexual assault, or death (American Psychiatric Association, 2013).

Many survivors of IPV meet these exposure criteria, but others do not. Some victims do not experience physical or sexual assaults in their relationships but are traumatized nonetheless. Psychological aggression, intimidation, degradation, and other aspects of coercive control are more strongly associated with depression and anxiety in victims than physical violence is (Lagdon et al., 2014; Taft et al., 2006). Furthermore, survivors of coercive control report that they are most distressed by a persistent loss of autonomy that continues even after they have left an abusive relationship (Herman, 1992). So, while the DSM-5 provides a valuable account of

traumatization, it is clear that not all IPV-related traumatic events are included, and not all kinds of posttraumatic distress are accounted for.

A Parallel Between the Traumatic Conditions of Combat Veterans and Domestic Violence Survivors – Moral Injury

Many Vietnam War veterans deployed to combat zones returned home profoundly impacted by bearing witness to horrific cruelty but also by moral anguish they suffered in carrying out government-sanctioned atrocities (Shay, 1994). Previous conceptualizations of PTSD as a fear-based disorder born from physical threat only partially account for the suffering that veterans have reported (Nash, 2019). In addition to the distress caused by graphic flashbacks of physical trauma, Vietnam War veterans reported debilitating intrusions that were centered on experiences of being betrayed by their leadership, the moments of lifesaving luck they (but not their comrades) had experienced, and the civilians they injured (Shay, 1994). These non-life-threatening events haunted them with a vengeance. In fact, Vietnam veterans who reported perpetrating atrocities, compared to others who reported witnessing atrocities, experienced more severe and longer lasting psychiatric symptoms (Beckham et al., 1998; Fontana et al., 1992; Litz et al., 2009). The relationship between participating in a wartime atrocity and severe psychological impairment depended on the individual's subjective evaluation of their response to these stressors. In other words, the meaning (or lack thereof) that a veteran extracted from an atrocity they failed to prevent predicted the level of post-traumatic stress they experienced after homecoming, specifically re-experiencing and avoidance symptoms (Henning & Frueh, 1997; Laufer et al., 1985).

To account for these alternative sources of trauma, clinical psychiatrist, Jonathan Shay (1994) introduced the construct of *moral injury*. This clinical construct was later

reconceptualized by Litz et al. (2009) into its current form. Moral injury is a type of distress that occurs when an individual witnesses, fails to prevent, or perpetrates a transgression of their deeply held moral beliefs (Litz et al., 2009; Litz et al., 2016). Since its introduction, moral injury has been applied to a limited number of non-military contexts like (but not limited to) police officers (Papazoglou & Chopko, 2017), health care providers (Borges et al., 2020; Mantri et al., 2020), and refugee populations (Nickerson et al., 2015; Hoffman et al., 2019). Despite the construct's apparent applicability to intimate partner violence, I am not aware of any research that has explicitly discussed moral injury within this context.

In a comprehensive review Griffin et al. (2019) detailed the presentation of moral injury in combat veterans. Experiencing a potentially morally injurious event (PMIE; i.e., an event in which one witnesses, fails to prevent, or commits a violation of a deeply held moral belief) was associated with an increased risk of psychiatric disorders, persistent suicidal ideation (Wisco et al., 2017), and social isolation due to feelings of contamination (Vargas et al., 2013). Individuals who violated their own values as opposed to those who witnessed others violate their values were more likely to report religious/spiritual struggles such as losing faith in God (for those who previously believed in a god), losing purpose or meaning, and feeling fundamentally unforgivable (Griffin et al., 2019). Moral injury may also entail an all-consuming distrust of authority figures, institutions, romantic partners, and friends. This distrust was either the product of experiencing chronic betrayal while in theater, or the product of feeling misunderstood by and alienated from civilians who had not experience such intense conflict. Negative moral emotions such as shame, guilt, and outrage were particularly strong in individuals who experienced morally injurious events (Evans et al., 2017).

Moral injury frequently co-occurs with PTSD and the two constructs share many features. An important difference between the two, however, is that moral injury arises from internalized moral conflict and causes more persistent existential/spiritual dysregulation while PTSD is a fear-based disorder that has a physiological basis (Barnes et al., 2019). A result of these etiological differences is that veterans with moral injury require different types of intervention than those with non-morally injurious PTSD (Nash, 2019). The moral conflict from which moral injury stems needs to be addressed with the goal of self-forgiveness and from an understanding of how military ethos affects and pre-disposes veterans to moral injury (Litz et al., 2016). Adaptive disclosure, an intervention for treating moral injury in veterans, highlights the importance of meaning making in the aftermath of trauma (also discussed in Smith, 2013) as opposed to seeking symptom relief through manualized CBT skills. So again, while the symptomology may be similar, it is necessary to acknowledge the source of the traumatic distress in order to intervene appropriately.

Towards a Model of Moral Injury in Domestic Violence

Like in veteran populations, it is important to understand the source of the posttraumatic distress that survivors of domestic violence experience. An individual who was repeatedly physically battered is more likely to experience physiological distress consistent with the fear-based model of PTSD, while an individual who experienced existential damage via isolation, deprivation, and humiliation may be more likely to experience distress akin to moral injury. And indeed, survivors of domestic violence do report many of the emotional, existential, and spiritual dysregulations characteristic of moral injury (Herman, 1992; Stark, 2007).

Similar to the isolation of veterans from their previous lives while in theater, women's access to their family and friends are restricted. Just how veterans are steeped in the warrior

ethos of the military (explicit and implicit codes of honor that demand bravery, devotion to duty, and honor; Siebold, 2001), female victims are consumed by duties assigned by their male partners to be loyal, modest, caring, and obedient. Case studies detailed in Stark (2007) demonstrate how explicit these "assignments" can be for victims of coercive control. For example, Laura Ferrucci's boyfriend gave her a written list of house rules that needed to be followed every day while he was at work. They included "always eat at the table, even when alone", and in the bedroom he required "telephone, answering machine, notepad, pencil, 1 book, 1 picture of Nick [himself] on the nightstand". No men were allowed in the house, or on the phone, and Laura was required to "be a good girl at all times" (pp. 318-320).

Not only are veterans' and survivors' moral expectations betrayed and compromised by once-trusted authority figures (chain of command for veterans and abusive partners for survivors), they are also forced to act in ways that violate their own moral values in order to uphold their duties or avoid punishment. In the military, a mid-ranking officer may be commanded to drive his team of soldiers through a mine field even though he knows some of his men may die as a result (Shay, 1994, pp. 79-80). And in a coercive relationship, a victim may be forced to abruptly and coldly cut-off all contact with her parents, lie to law enforcement to cover for her partner, engage in sexual acts with her partner's friends at his command, and in some extreme cases participate in the neglect of her children (Stark, 2007). As an outsider we may be able to dismiss these transgressions as necessary or not the victim's fault given the context of coercion in which they occurred. While many victims (and veterans) can similarly recognize the unique circumstance of their transgression, they still live with crippling guilt and shame as a result of these violations (Shay, 1994; Herman, 1992).

Moral conflict arises from coercive control because it is all-consuming. Herman (1992) asserts that victims of domestic violence live in state of captivity not unlike prisoners of war or political conflict (Herman, p. 74). In this state, victims are forced to make a series of concessions in order to remain safe. It can begin with sacrificing personal belongings, contact with the outside world, personal values, and in the end can escalate to a total loss of autonomy and decisional volition. Herman wrote,

> "But the final step in the psychological control of the victim is not completed until she has been forced to violate her own moral principles and to betray her basic human attachments. Psychologically, this is the most destructive of all coercive techniques, for the victim who has succumbed loathes herself. It is at this point, when the victim under duress participates in the sacrifice of others, that she is truly 'broken'." (p. 83)

Moral injury is of course, a consequence of extreme cases of coercive control, and yet even victims who may not reach such utter states of psychological damage will likely experience existential distress when faced with moral conflict due to their abusive relationship.

The extent to which an individual experiences distress due to moral conflict is most likely multiply determined. What is perceived as a moral violation of course depends on one's moral beliefs which are generally derived from societal, familial, and personal conceptions of what is right and what is wrong. Moral values are prescriptive in that they dictate what an individual *ought* to do and what personal features are valuable, honorable, and worth cultivating (Haidt, 2012; Turiel, 2006). For example, purity is a moral foundation that tends to be more valued by politically conservative individuals (Graham et al., 2009). Politically conservative individuals may be more likely than liberal individuals to perceive sex between teenagers as unchaste and a violation of the purity ethic. As a result, a teenager from a conservative family is likely to experience more moral conflict when deciding whether or not to have sex than a teenager from a

liberal family. In short, the perception that a *moral* value is at stake is necessary for moral conflict to exist (Kohlberg & Hersh, 1977).

Individuals with a stronger sense of moral identity, or those who internalize the importance of being moral to a greater extent (Aquino & Reed, 2002; Hardy & Carlo, 2005), may be more likely to perceive the nature of any given conflict as moral compared to individuals for whom moral values are less central to their identity (Verplanken & Holland, 2002). Evidence for this claim can be inferred when one considers that the majority of moral injury studies have focused on populations that have a strong set of ethical regulations and moral values associated with them (i.e., police officers, healthcare workers, veterans, etc.). This suggests that a strong sense of morality (regardless of what the specific values are; Aquino & Reed, 2002) is an important antecedent in sustaining moral injury.

The importance of moral identity will also likely influence whether or not victims of domestic violence experience moral injury as a result of the moral and identity-based compromises they were forced to make in their coercive relationships. A victim who considered her moral values central to her identity will likely experience far more distress when she is forced to relinquish them (temporarily to maintain her physical safety or more permanently in the extreme case described by Herman, 1992) than a victim who perceives her personal identity and worth as relatively independent of her moral values.

The Proposed Study

The aim of the current study is to test a number of claims that, if true, will provide converging evidence for the existence of moral injury within the context of domestic violence. In a survey-based study with female survivors of domestic violence, I will test a conceptual model that links moral injury to coercive control but not physical violence (see Figure 1 for full model).

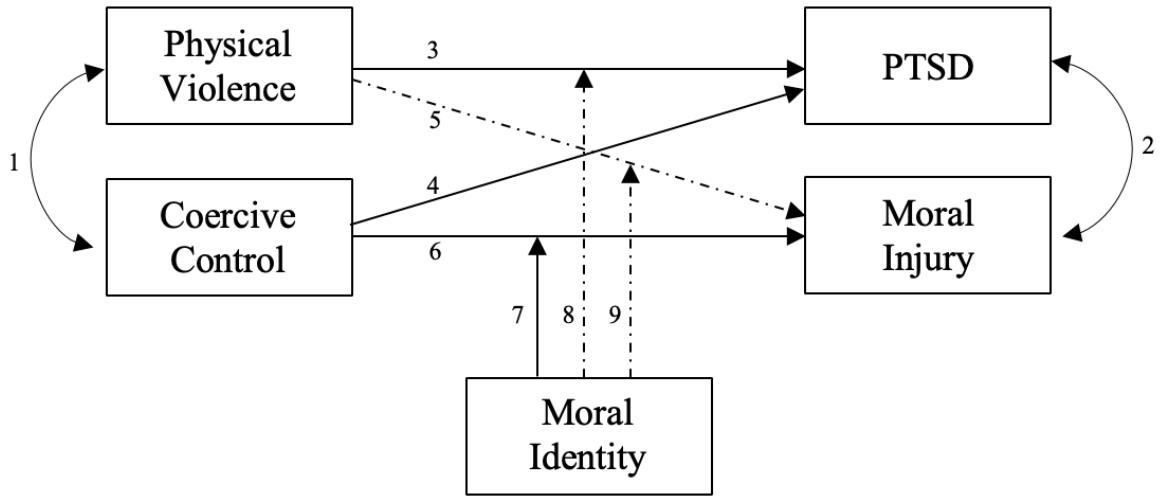
I also seek to demonstrate that a survivor's moral identity influences how vulnerable they are to experiencing symptoms of moral injury due to their abusive relationship. I will collect additional information to gain insight into the types of moral values survivors hold. In combination, I believe the results of this study will justify further investigation into moral injury and identity conflict as an explanation for the distress survivors of IPV experience.

Hypotheses

The following path model is hypothesized. This model presents a conceptualization of domestic violence-related moral injury, grounded in an integrative review of literature spanning the disciplines of military trauma psychology, intimate partner violence, and moral psychology. Hypotheses for each path in the model are specified below.[1]

Figure 1

Conceptual Model of Moral Injury in the Context of Domestic Violence



Note. The path numbers above correspond to the following hypotheses.

Hypothesis 1. Coercive control will be strongly associated with physical violence.

[1] A preregistration for this project is available on the Open Science Framework at https://osf.io/sy367

Hypothesis 2. PTSD symptom severity and moral injury will be significantly correlated.

Hypothesis 3. Physical violence will significantly and uniquely predict PTSD symptom severity.

Hypothesis 4. Coercive control will uniquely predict a significant amount of variability in PTSD symptom severity.

Hypothesis 5. After statistically removing the effect of coercive control, physical violence will not significantly predict variability in moral injury.

Hypothesis 6. Coercive control will uniquely predict variability in moral injury above and beyond the effect of physical violence.

Hypothesis 7. Moral identity will moderate the relationship between coercive control and moral injury such that the magnitude of the relationship between coercive control and moral injury will be larger for those with a stronger sense of moral identity.

Hypothesis 8. A strong sense of moral self will *not* moderate the relationship between physical violence and PTSD.

Hypothesis 9. A strong sense of moral self will *not* moderate the relationship between coercive control and PTSD.

Exploratory Analyses

Secondary to the path model detailed above, I will explore whether the presence of internal moral conflict, a sense of lost identity, and a loss of moral autonomy in a survivor during an abusive relationship will mediate the relationship between coercive control and moral injury. Towards a larger program of research on moral injury in survivors of domestic violence, I will also investigate the types of moral values survivors felt had been violated, shifts in identity they

may have experienced, and alterations in their moral reasoning that occurred because of their abusive relationship.

Method

Participants

There are various sampling considerations for path analysis, and unfortunately many are model dependent meaning they vary based on the number of parameters, the smallest anticipated effect size, and the proportion of manifest to latent variables. Recommendations also depend on the normality and missingness of the data, which of course cannot be assessed until all data has been collected. A priori sample size determinations are very rarely used in structural equation modeling due in part to this fact (Memon et al., 2020). However, when researchers do conduct an a priori sample size determination, many use Soper's (2020) online sample size calculator for SEM or G*Power. For our proposed model, Soper's calculator returned a minimum necessary sample size of 200 and G*Power indicated a sample size of N = 166. Given these estimates and other recommendations from Hair et al. (2018), Schreiber et al. (2006), and Kline (2005), I aimed to collect data from 300 participants.

Using Prolific, an online sampling pool, which has been found to return higher quality data than alternatives such as Amazon's MTurk (Peer et al., 2017), I recruited 1,018 adult women from the United States who reported English-language proficiency. Through a short screening survey, it was determined that 305 of these women had experienced at least one abusive relationship with a male partner and were invited to participate in the study (this proportion is consistent with the low end of the estimate from Black et al., 2011 that between 30.1 and 41.1% of U.S. women have experienced psychological abuse and/or battering within an intimate relationship). The final sample consisted of $N = 292$ women who reported experiencing

two characteristic features of coercive control[2] in an intimate relationship lasting at least two months with a man. Participants (M_{age} = 40.26) identified as white (84.59%), Black or African American (5.48%), multiracial (4.79%), American Indian or Alaskan Native (2.05%), and Asian (3.08%). The mean coercive relationship length was 4.03 years (*SD* = 1.38), and only 21.23% of participants reported still being in their coercive relationship during the last 12 months. Additional demographics are reported in Table 1.

Procedure

Ethical approval was obtained through Western Washington University's IRB. Special care was taken to disclose the sensitive nature of the survey to all participants. Informed consent was collected electronically before the short domestic violence screener, and again before the main survey for those participants who qualified to continue. As part of the informed consent process, participants were explicitly told that they could skip questions or quit the survey at any time. The screening and main surveys were administered on the online survey platform, Qualtrics.com. Participants were compensated with $0.14 for the one-minute screening survey and $3.20 for the main 20-minute survey. Both of these compensation rates ($8.40 and $9.60 per hour, respectively) were deemed fair by Prolific.

Participants who screened into the main survey were invited to participate in an additional survey about their experiences in a violent relationship. After providing informed consent, participants were asked to think about one specific relationship in which they were repeatedly belittled to the extent that they felt worthless and were frightened because their partner threatened to hurt them or someone close to them. Participants were asked to respond to

[2] Myhill (2015) argues that a history of coercive control can be assessed through two necessary and sufficient experiences in the relationship. Namely, being repeatedly belittled to the extent of feeling worthless, and frightening or threatening to hurt the individual or someone close to them.

the following questions with respect to only *one* "focal" relationship, in case they had experienced multiple. Free national resources for mental health support and advocacy services for domestic violence victims were provided on the debriefing page of the main survey.

Measures

All measures are included in the appendices of this document (A-H). There were also three Likert-type attention check items dispersed throughout the measures in the main study survey.

Screening Survey

Coercive Control Screening Items. Two screening items were used to assess a history of coercive control. Respondents were asked if they, at any point in their life, had been in a romantic relationship where their partner "Repeatedly belittled [them] to the extent that [they] felt worthless" and "Frightened [them], or threatened to hurt [them] or someone close to [them]". Respondents had to answer *yes* to both items in order to screen into the main study. These two items were taken from Myhill's (2015) secondary analysis of the Crime Survey of England and Wales. He argued that an affirmative response to both items is sufficient to infer the presence of coercive control based on Stark's (2007) conceptualization of coercive abuse as ongoing, denigrating, perceived as threatening, and causing a degree of fear.

Gender. Prolific recruited only female-identified respondents to participate in the study, but as an additional precaution, I asked respondents to confirm their gender identity in the screening survey. Only individuals who selected "woman" qualified for the main survey. Respondents were also asked to indicate the gender identity of their partner who did the above two actions. Only those who indicated their abusive partner was a man qualified for the main survey.

Main Survey

Physical Violence. Physical violence was measured using an adapted version of a physical violence subsection in a census-affiliated U.K. crime survey called the Crime Survey of England and Wales (CSEW; Myhill, 2015). The original survey was based on the Revised Conflict Tactics Scale (CTS-2; Straus et al., 1996) and contains similar items to the population-level IPV-related surveys that have been conducted in the U.S. and Canada (NVAWS and VAWS). Participants were asked to indicate whether or not (0 = *no*, 1 = *yes*) a romantic partner had engaged in 7 types of physical violence against them since the age of 16 and, separately, in the last year. Examples of physical violence include "kicked, bit, or hit you with a fist or something else, or threw something at you" and "used a weapon against you, for example, a stick or a knife". In the 2008 administration of the CSEW, this measure demonstrated adequate internal consistencies with $\alpha = .72$ (abuse since the age of 16), and $\alpha = .64$ (abuse in the last year). In order to best serve the purpose of the current study, two threat-based items (i.e., threat with a weapon and threat to kill) were removed because they fail to assess actual *physical* harm that was perpetrated in a relationship (and because threat of harm is central to the operant definition of coercive control).

For the remaining 5 items, I revised the scale from 2 sets of dichotomous responses (yes/no since the age of 16, and yes/no in the last year) to a single 5-point Likert-style frequency scale (0 = *never*, to 4 = *all the time*). Participants were asked how frequently their partner did five types of violent acts to them throughout the course of their focal relationship. Like in the original measure, higher scores represent more physical violence. A continuous measure was chosen to increase variability and maintain consistency with other scales in the survey. The

adapted version of this scale demonstrated good internal consistency and in fact had a higher Cronbach's alpha than that originally obtained with dichotomous response options (α = .79).

Coercive Control. Experiences of coercive control were assessed with the Revised Controlling Behaviors Scale (CBS-R; Graham-Kevan & Archer, 2005). It includes 24-items that assess non-physically violent coercive behaviors in relationships. The original measure asks participants to indicate how often (0 = *never*, to 4 = *always*) they behaved in a controlling manner toward their partner and how often (on the same scale) their partner controlled them. I administered only the portion of the survey that assessed the partner's controlling actions against the respondent and only during the focal relationship (as opposed to another abusive relationship). Items are sorted into five categories: economic control (e.g., "keep own money matters secret"), threatening control (e.g., "threaten to disclose damaging or embarrassing information"), intimidating control (e.g., "use nasty or rude gestures to make the other one feel bad or silly"), emotional control (e.g., "tell the other they were lying or confused"), and isolating control (e.g., "try to limit the amount of activities outside the relationship the other is engaged in"). Internal consistency of the scale in the current sample was good (α = .89) and was comparable to the original scale (α = .87).

Posttraumatic Stress Disorder (PTSD). Symptoms of posttraumatic stress disorder were assessed using the PTSD Checklist for the DSM-5 (PCL-5; Weathers et al., 2013). It is the most widely used non-population specific self-report assessment for PTSD and it has repeatedly demonstrated high internal consistency (α = .94), test-retest reliability (r = .82), and construct validities (Blevins, et al., 2015). In this sample, it maintained high internal consistency (α = .96). On a 5-point Likert scale, participants were asked to indicate how much they have been bothered by 20 different PTSD symptoms in the last month. For this study, participants were asked to

report only the stress responses they experienced in the last month that they could attribute to their involvement in their focal relationship. Response options ranged from 0 (*not at all bothered*), to 4 (*extremely bothered*). Two examples of PTSD symptoms that are included in the assessment are "Repeated, disturbing, and unwanted memories of the stressful experience," and "Feeling jumpy or easily scared". Responses to the 20 items were summed for descriptive statistics and mean scored to create a continuous measure of overall PTSD symptom severity that was used in hypothesis testing.

Moral Injury. Moral injury within the context of domestic violence was assessed using an adapted version of the Expressions of Moral Injury Scale – Military Version (EMIS-M; Currier et al., 2017). The original scale consists of 17 items that apply to the moral, psychological, social, and behavioral effects of witnessing or doing something in the military that violated a deeply held moral belief. Respondents were asked to indicate on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) the extent to which each item reflected their experiences and views. A higher mean score indicates more moral injury. I adapted the original scale by removing all phrases like "in my military service" or "while I was in the military" and replaced them with the phrase "in my relationship". When the original scale referred to "people" generally, I replaced it with "my partner" to remain within the scope of the abusive relationship. Some of the adapted items include, "Because of things I did/saw in my relationship, I doubt my ability to make moral decisions," and "Things I saw/did in my relationship have caused me at times to lose faith in the basic goodness of humanity". Participants were asked to respond to these items with respect to their focal relationship as opposed to another unrelated source of moral injury they may have experienced. The original EMIS-M demonstrated good internal

consistency across two samples (α = .84; Currier et al., 2019) as did the adapted measure in the current sample (α = .90).

Moral Identity. Originally, I had planned to measure moral identity, or the extent to which an individual holds their moral values central to their identity, with only the Internalization subscale of the Moral Identity Scale (MIS; Aquino & Reed, 2002). However, after examining the distribution of responses early on in data collection, the extreme negative skew was concerning enough to revise this plan and use the entire MIS which had a far more normal distribution in the current sample. Participants were presented with a list of 9 moral characteristics and were asked to imagine the kind of person who had all of these features and how they may think, act, or feel. Then, on a 5-point Likert scale (response options range from 1 = *strongly disagree* to 5 = *strongly agre*e), participants were asked how much they agreed with 10 statements. Items in the internalization subscale included "Being someone who has these characteristics is an important part of who I am," and "It would make me feel good to be a person who has these characteristics". The symbolization subscale included items like "The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics". After two reverse coded items were addressed, I took the mean score of all items to create a continuous measure with higher scores indicating a greater sense of moral identity. In the current sample, the MIS demonstrated good internal reliability (α = .79). For the first 60 participants who were surveyed prior to the measure change and were therefore lacking data on the symbolization subscale, full information maximum likelihood (FIML) was used to generate parameter estimates and standard errors in the regressions and path model.

Additional Items for Supplementary Analysis. The following items were not used in the a priori path models but were important for a series of exploratory path models that provided important and novel information about moral injury in the context of domestic violence.

Moral Conflict. Moral conflict was measured using three items inspired by the Moral Subscale of the Religious and Spiritual Struggles Scale (RSS; Exline et al., 2014). Participants were asked to indicate on a 5-point Likert scale (0 = *not at all*, to 4 = *a great deal*) how often they "wrestled with attempts to follow [their] moral principles", "worried that [their] actions were morally or spiritually wrong", and "were concerned that [they] didn't live up to [their] moral standards" while in their focal relationship. This scale had good internal consistency (α = .90).

Change in Identity and Loss of Moral Autonomy. While beyond the scope of the proposed path model, identity shifts connected to moral injury are important to consider. Two items indexing DV-related identity shifts were presented to participants: "While in my relationship I felt disconnected from the values I held before", and "While in my relationship I felt disconnected from the person I was before". Both items were presented on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*a great deal*) and addressed only participants' experiences in their focal relationship (α = .76).

Additionally, two items indexed the degree to which participants' sense of moral autonomy had been impacted by their DV relationship: "There were moments in my relationship when I could not tell what was morally right because of the influence of my partner," and "There were moments in my relationship when I could not do what I believed was morally right because of the influence of my partner". Both items were presented on a 5-point Likert scale ranging

from 1 (*strongly disagree*) to 5 (*strongly agree*), again only addressing the focal relationship (α = .81).

Open-ended Questions About Moral Values. In order to gain preliminary descriptive information about the specific moral values participants felt had been violated in their abusive relationships, the following two open-ended items were included: "What traits do you believe are morally good?" and "Why do you believe these traits are morally good? For example, does your family, religion, culture, etc. endorse these values?".

Demographics and Covariates. Additional information about each participant and her relationship was collected including her age, sexuality, level of education, race, ethnicity, annual income, employment status, and political orientation. Participants were also asked whether they had been in the focal relationship in the last 12 months and how long they had been in the relationship in total. See Appendix H for question specifics.

Analysis Plan

All data cleaning and visualization procedures in addition to analyses were conducted in RStudio. I had planned that bivariate correlations between all variables of interest would be examined and that this procedure would address hypotheses 1 and 2. Two separate simultaneous regressions were planned to test physical violence and coercive control as predictors of PTSD symptoms (hypotheses 3 and 4) and moral injury (hypotheses 5 and 6). Three separate moderation models were planned to test hypotheses 7 through 9 for interactive effects between moral identity and coercive control or moral identity and physical violence in predicting either moral injury (hypothesis 7) or PTSD symptoms (hypotheses 8 and 9). After examining univariate hypotheses, I planned to enter all five variables of interest into a multivariate path analysis. I planned to use Chi-square tests of independence, CFI, TLI, RMSEA, and SRMR to assess model

fit. For the exploratory analyses, I planned to run three separate simple mediation models, each with a different potential mediator (moral conflict, loss of identity, and loss of moral autonomy) in the relationship between coercive control and moral injury. Finally, I planned to conduct an exploratory factor analysis on the moral injury scale which I adapted to the context of relationship abuse.

Results

All analyses were conducted in RStudio. Composite variables were calculated through mean scoring and were then assessed for univariate and multivariate normality. Only physical violence and moral identity had a small number of univariate outliers (above and below the means, respectively). Because it was determined that all univariate outliers represented important cases and did not change the results after being winsorized, all subsequent analyses are reported with outliers included. Despite moderate skew, no variables were transformed to maintain interpretability of the findings. No multivariate outliers were identified through Mahalanobis distance procedures. Bivariate correlations between all variables of interest can be found in Table 5.

Descriptive Information about Domestic Violence History

Means, standard deviations, percent endorsed, and ranges are reported for all following variables in Table 4. On average, participants reported low to moderate levels of physical violence in their focal relationships. The most common types included pushing, holding, and slapping (M = 1.49, SD = 0.92 on a scale from 0 *never* to 4 *all the time*) which was reported by 84.93% of participants and another type of force not specified in the survey (M = 1.50, SD = 1.00) which was reported by 80.14% of participants. The least commonly reported form of physical violence was the use of a weapon (20.55% of participants reported this occurring at

least once in their relationship). A total of 43.49% of participants reported being choked or strangled and 52.74% reported being kicked, bit, or hurt with a fist or other object at least once in their relationship. Overall, physical violence was positively skewed suggesting that the majority of participants experienced infrequent to moderate levels of physical violence while a smaller subset experienced much more frequent violence.

On the other hand, participants reported moderate to high levels of coercive control on average (M = 2.23, SD = 0.64 on a scale from 0 *never* to 4 *always*). The most commonly reported types of coercion were isolating control, economic control, and emotional control (means and percentages are reported in Table 2). There were up to five participants who reported never having experienced any given type of coercion but there were no items that zero participants endorsed. Overall, coercive control was normally distributed.

Participants reported low to moderate levels of PTSD related to their coercive relationships on average (M = 28.92, SD = 18.90, on a scale with a maximum possible sum of 80 and an obtained range of 0 to 74). Participants reported the highest levels of cluster C avoidance symptoms and the lowest levels of cluster B intrusive symptoms. Overall, PTSD symptom severity was slightly positively skewed with some individuals scoring in the low 70s. Notably, 42.47% of the sample scored at or above the threshold of clinically significant levels of PTSD symptoms (sum ≥ 33).

Participants reported moderate to high levels of moral injury (M = 3.07, SD = 0.75; means and percentages reported in Table 3). They on average, reported the highest levels of feeling disgust about things their partner did (M = 4.46, SD = 0.78 on a scale from 1 *strongly disagree* to 5 *strongly agree*) and feeling anger over being betrayed by their partner who they had once trusted (M = 4.08, SD = 0.97). On the other hand, participants reported the lowest

levels of no longer feeling worthy of love due to things they saw/did in their coercive relationship (M = 2.14, SD = 1.22) and feeling unforgivable because of things they did/saw in their coercive relationship (M = 2.18, SD = 1.21). See the exploratory factor analysis section of the results and Table 8 for additional detail about the prevalence and factor structure of moral injury.

A Priori Analyses

Univariate Hypothesis Testing

Hypothesis 1. Physical violence and coercive control were moderately positively associated, r = .43, 95% CI [0.33, 0.52], p < .001, such that people who experienced high levels of physical violence tended also to experience high levels of coercive control.

Hypothesis 2. PTSD symptoms and moral injury were strongly positively associated, r = .71, 95% CI [0.65, 0.77], p < .001, such that people who experienced high levels of PTSD symptoms tended to also experience higher levels of moral injury.

Hypotheses 3 and 4. Coercive control and physical violence together predicted 17.1% of variability in PTSD in a multiple regression. When statistically controlling for the effect of coercive control, physical violence did not predict PTSD symptoms (β = 0.03, p = .650). However, when the effect of physical violence was statistically removed, coercive control significantly and uniquely predicted PTSD symptoms (β = 0.40, p < .001). In short, individuals who reported more coercive control in their relationship tended to also report more PTSD symptoms controlling for the level physical violence. When considered alone, physical violence had a small bivariate association with PTSD (r = .20, p < .001), whereas when it was considered in the context of coercive control, physical violence did not predict PTSD. In other words, the

part of physical violence that is statistically independent of coercive control was not associated with PTSD.

Hypotheses 5 and 6. Coercive control and physical violence together explained a total of 14.0% of variability in moral injury when entered into a multiple regression. After statistically removing the effect of coercive control, physical violence did not significantly predict moral injury (β = 0.06, p = .338). On the other hand, when the effect of physical violence was statistically removed, coercive control significantly predicted moral injury such that individuals who experienced more coercive control tended to report more moral injury regardless of the level of violence they experienced (β = 0.35, p < .001). As with PTSD, it appears that despite the small but significant bivariate correlation between physical violence and moral injury (r = .21, p < .001), when considered in a larger context, the part of physical violence that was statistically independent of coercive control was *not* associated with moral injury. See bivariate correlations and beta weights for hypotheses 3 through 6 in Table 6.

Hypothesis 7. A moderation test was run to see if moral identity moderated the relationship between coercive control and moral injury. Both predictor variables were centered and together accounted for 16.3% of variability in moral injury. There was a main effect of coercive control (β = 0.38, p < .001) whereby individuals who experienced more coercion tended to report more moral injury, but there was no main effect of moral identity (β = -0.11, p = .052). Notably, the interaction between coercive control and moral identity was also statistically significant (β = 0.13, p = .020). Simple slopes were calculated and showed that the effect of coercive control on moral injury differed across levels of moral identity (-1SD, mean, and +1SD). The relationship between coercive control and moral injury was weakest for individuals who reported lower moral identity (β = 0.30, p = .001), slightly stronger for those reporting mean

levels of moral identity ($\beta = 0.45$, $p < .001$), and strongest for individuals reporting high moral identity ($\beta = 0.60$, $p < .001$). Notably, the relationship between coercive control and moral injury remained positive and statistically significant across all levels of moral identity. Figure 2 displays this interaction.

Hypotheses 8 and 9. Two additional moderation analyses were run to examine whether moral identity moderated the relationship between physical violence and PTSD or between coercive control and PTSD. In both models, predictor variables were centered. The model predicting PTSD from physical violence and moral identity accounted for a total of 4.7% of the variability in PTSD. There was a statistically significant main effect of physical violence on PTSD ($\beta = 0.18$, $p = .002$) such that those who experienced more physical violence tended to have more severe PTSD symptoms. However, there was not a significant main effect of moral identity ($\beta = -0.01$, $p = .879$). Most importantly, and in line with hypothesis 8, the interaction between moral identity and physical violence was not significant ($\beta = 0.09$, $p = 0.143$) meaning that the link between physical violence and PTSD symptom severity did not differ for individuals with differing degrees of moral identity.

The predictors in the second moderation model testing the interaction between coercive control and moral identity accounted for 17.9% of the variability in PTSD. As expected, while coercive control had a significant main effect on PTSD ($\beta = 0.42$, $p < .001$) such that individuals who experienced more coercive control tended to also experience more severe PTSD symptoms, neither the main effect of moral identity ($\beta = -0.05$, $p = .361$) nor the interaction between coercive control and moral identity ($\beta = 0.08$, $p = .123$) were statistically significant. In short, moral identity did not play a role in PTSD either directly or in combination with coercive control or physical violence.

Multivariate Path Analysis

The hypothesized path analysis was tested using the lavaan package in RStudio. Maximum likelihood estimation was used to estimate all parameters and model fit was assessed using the Chi-Square test, robust Comparative Fit Index (CFI), robust Tucker-Lewis Index (TLI), robust Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Residual (SRMR). All variables were treated as observed constructs and disturbance terms were added to all endogenous variables. Data for half of the moral identity scale (items 6 through 10) were missing completely at random for the first 60 participants due to a change in the survey (see method section for a more thorough explanation of this change). Full information maximum likelihood estimation was used to include all available data without unnecessarily excluding people with missing data on one or more variables.

PTSD symptoms were predicted by both physical violence and coercive control exposure, and moral injury was predicted by coercive control, moral identity, and an interaction term between coercive control and moral identity. Coercive control was allowed to covary with this interaction term, physical violence, and moral identity; however, covariation between moral identity and physical violence was restricted. The interaction term was also allowed to covary with physical violence and moral identity. Finally, PTSD symptoms and moral injury were allowed to covary. Fit indices for this model can be found in Table 7. Chi-Square, CFI, TLI, RMSEA, and SRMR all indicated good model fit. See path diagram with standardized path coefficients labeled in Figure 3. The only statistically significant causal paths involved coercive control. Namely, coercive control significantly predicted PTSD symptoms ($\beta = 0.42.$, $p < .001$) and moral injury ($\beta = 0.38$, $p < .001$), such that individuals who experienced more coercive control tended to report more PTSD symptoms and more moral injury. Notably, the moderation

that had been statistically significant when considered in a univariate context was no longer significant in the multivariate model ($\beta = 0.07$, $p = .096$).

Exploratory Analyses

Coercive Control to Moral Injury Mediations

Moral conflict ($M = 2.26$, $SD = 1.21$), identity loss ($M = 2.86$, $SD = 0.98$) – both measured on a scale from 0 *Not at all* to 4 *A great deal* – and loss of moral autonomy ($M = 3.58$, $SD = 1.06$) measured on a scale from 1 *Strongly disagree* to 5 *Strongly agree*, were all reported at moderate to high levels. In terms of experiencing moral conflict, 88.7% of the sample reported wrestling with attempts to follow their moral principles at least a little bit, 82.53% reported worrying that their actions were morally or spiritually wrong at least a little bit, and 88.7% reported being concerned that they didn't live up to their moral standards at least a little. The majority of the sample reported feeling at least a little disconnected from values they held before the relationship (93.84%) and feeling at least a little disconnected from the person they were before (98.29%). Finally, 58% of participants reported either agreeing or strongly agreeing with not being able to tell what was morally right because of their partner's influence and 70.20% either agreed or strongly agreed with not being able to do what they believed was morally right because of their partner. See Table 4 for means, standard deviations, and percentages endorsed.

Moral Conflict. A mediation model was used to test whether moral conflict mediated the relationship between coercive control and moral injury. Coercive control significantly predicted moral injury ($b = 0.44$, CI 95% [0.30, 0.57], $\beta = 0.37$, $p < .001$) and moral conflict significantly mediated that relationship ($b = 0.14$, CI 95% [0.08, 0.21], $\beta = 0.12$, $p < .001$). More coercive control predicted more moral conflict ($b = 0.54$, CI 95% [0.32, 0.75], $\beta = 0.28$, $p < .001$) which in turn predicted more moral injury ($b = 0.26$, CI 95% [0.20, 0.33], $\beta = 0.43$, $p < .001$). Even

after accounting for the indirect effect through moral conflict, coercive control remained a significant predictor of moral injury (b = 0.30, CI 95% [0.18, 0.42], β = 0.25, p < .001) suggesting a partial mediation (see Figure 4). Together, coercive control and moral conflict predicted 30.4% of the variability in moral injury. These findings suggest that individuals who experienced more coercive control are more likely to experience moral injury because of the moral conflict they experienced in their focal relationship. However, experiencing coercive control alone still contributed to rates of moral injury beyond what was accounted for by moral conflict.

Identity Loss. A separate mediation model was examined to test whether loss of identity during the focal relationship mediated the relationship between coercive control and moral injury. The total effect of coercive control on moral injury was statistically significant (b = 0.44, CI 95% [0.29, 0.57], β = 0.37, p < .001) as was the indirect effect through identity loss (b = 0.17, CI 95% [0.11, 0.24], β = 0.14, p < .001). Higher levels of coercive control predicted more identity loss (b = 0.61, CI 95% [0.45, 0.79], β = 0.40, p < .001) which in turn predicted higher levels of moral injury (b = 0.27, CI 95% [0.19, 0.36], β = 0.36, p < .001). The direct effect of coercive control on moral injury after removing the effect of the indirect effect remained statistically significant (b = 0.27, CI 95% [0.13, 0.40], β = 0.23, p < .001) suggesting a partial mediation (see Figure 5). Together, coercive control and identity loss explained 24.3% of the variability in moral injury. Overall, these findings suggest that individuals who experienced more coercive control tended to experience more moral injury because they felt a greater loss of identity during their focal relationship, though experiencing coercive control still was associated with severity of moral injury even beyond what was accounted for by identity loss.

Loss of Moral Autonomy. A third and final mediation model was run to examine whether loss of moral autonomy during a focal relationship mediated the effect of coercive control on moral injury. Overall, the total effect of coercive control on moral injury was statistically significant (b = 0.44, CI 95% [0.30, 0.56], β = 0.37, p < .001) as was the indirect relationship mediated by loss of moral autonomy in the focal relationship (b = 0.18, CI 95% [0.12, 0.25], β = 0.15, p < .001). Higher levels of coercive control predicted a greater loss of moral autonomy (b = 0.70, CI 95% [0.52, 0.86], β = 0.42, p < .001) which in turn predicted higher levels of moral injury (b = 0.26, CI 95% [0.18, 0.34], β = 0.36, p < .001). The direct effect of coercive control on moral injury remained statistically significant (b = 0.26, CI 95% [0.11, 0.39], β = 0.22, p < .001) suggesting a pattern of partial mediation (see Figure 6). Together, coercive control and loss of moral autonomy explained a total of 24.5% of the variability in moral injury. In sum, these findings are consistent with the idea that individuals who experienced coercive control tended to experience more moral injury due to losing their sense of moral autonomy, though coercive control was still associated with the extent of their moral injury even beyond what is accounted for by loss of moral autonomy.

Exploratory Factor Analysis on Moral Injury

The Expressions of Moral Injury Scale (EMIS-M) questionnaire that was designed for moral injury incurred during combat was adapted for the present study. All language that referred to combat, soldiers, and the military was replaced with the phrases like “my partner” and “in my relationship”. As such, I saw value in examining the factor structure and relevance of the original items in the context of relationship abuse. The 17 items used to measure moral injury in the context of participants’ focal relationships were entered into a bivariate correlation matrix. Factors were extracted using the minimum residual method and then obliquely rotated with

oblimin. Bartlett's test of sphericity was statistically significant (χ^2 (136) = 2155.53, $p < .001$) and overall KMO was very good (0.91) indicating there was a sufficient amount of common variability to justify factor analysis. A scree plot suggested a two-factor solution. Upon further examination, items 9 ("my experiences in this relationship have caused me to seriously doubt the motives of people in authority") and 15 ("Things I saw/did in my relationship have caused me at times to lose faith in the basic goodness of humanity") were removed because of cross loading.

The final two-factor EFA, without items 9 and 15, maintained a significant Bartlett's test (χ^2 (105) = 1768.04, $p < .001$) and good KMO (0.90). The highest uniqueness (0.77) belonged to item 6; however, the majority of items had a uniqueness between 0.34 and 0.69. Together, the two factors explained 44% of the overall variability in the remaining 15 items. Model fit was marginal with a RMSEA of .08 and TLI of 0.88.

Factor 1, labelled *self-directed* moral injury after the military version of the scale, explained 32% of variability in the overall model. It is composed of 10 items that describe negative behaviors and attitudes participants enacted and held toward themselves as a result of their experiences in their focal relationships (e.g., "I sabotage my best efforts to achieve my goals in life" and "I am an unforgivable person"). Factor loadings ranged between 0.44 and 0.84. A reliability analysis confirmed good internal consistency between the self-directed items (a = .90). Factor 2, labelled *other-directed* moral injury also after the military version of the scale, explained 12% of overall variability in the model and included factor loadings between .37 and .65. It is made up of five items that describe negative feelings directed toward their partner resulting from the focal relationship (e.g., "I feel disgusted by things that my partner did" and "I sometimes enjoy thinking about having revenge on my partner"). The other-directed subscale also demonstrated acceptable internal consistency (a = .69). Specific factor loadings, uniqueness

scores, and Cronbach alphas can be found in Table 8. Because an oblique rotation method was utilized, the two moral injury factors are correlated with each other (r = .33).

Notably, the two-factor solution mapped very well onto the original military version of the scale. Aside from the two items that were removed which both belonged to the other-directed scale in the military version, only item 3 ("My experiences in this relationship have taught me that it is only a matter of time before people will betray me") switched factors. In the military version it loaded onto the other-directed scale but in the current domestic violence version of the scale it loaded onto the self-directed factor. The mean and standard deviation of composite moral injury scores were not significantly altered by the removal of items 9 and 15.

Discussion

While the physical harms of domestic violence have become more widely acknowledged, the nuanced psychological, existential, and moral consequences of victimization remain misunderstood and underexplored. Pulling from counseling case studies, feminist philosophy, and military psychology, I proposed that moral injury (the harm incurred by witnessing, failing to prevent, or participating in the violation of one's own moral beliefs) may better account for the less visible but enduring consequences of coercive control. In order to explore the novel proposition that moral injury may apply to the context of domestic violence, I administered a cross-sectional survey to a large sample of female survivors of intimate partner violence. While specific results and their implications will be broken down in more depth, I found that coercive control was rampant, more common than physical violence, and associated with symptoms of both PTSD and moral injury. Additionally, coercive control uniquely predicted variance in PTSD and moral injury above and beyond physical violence, and in fact, the variance in both post-traumatic outcomes that appeared to be attributable to physical violence was shared almost

entirely with coercive control. Notably, the majority of survivors did report symptoms of moral injury. This finding in combination with the nuanced etiology described in the introduction provide strong evidence that further research on the role of moral injury in domestic violence is justified, and potentially very promising.

The Larger Picture: Coercive Control, Physical Violence, PTSD, and Moral Injury

As hypothesized, coercive control was significantly predictive of both PTSD and moral injury symptoms. These findings parallel the general pattern found in qualitative research with survivors of domestic violence who report that restriction of autonomy, degradation, and isolation have longer lasting and more devastating consequences than physical violence (Crossman & Hardesty, 2018; Yick, 2008). Considering that the majority of participants' focal relationships lasted over a year (86.6%), there was ample time for coercive dynamics to escalate and become internalized. Indeed, all types of coercive control were reported as occurring "often" or "always" by a minimum of half the sample.

While the hypothesis that physical violence would not predict symptoms of moral injury was confirmed, it was surprising to find that physical violence also did *not* predict PTSD symptoms after accounting for the effect of coercive control. While it is probable that shared variance between coercive control and PTSD was responsible for this finding (suggested by the significant bivariate correlation and insignificant regression coefficient), this finding could potentially be indicative of a more theoretically rich puzzle. Namely, if PTSD is a fear-based disorder resulting from experiences of actual or threatened physical injury or death, and if participants report physical injury in a way that doesn't predict PTSD, then either the physical violence they experienced must not have provoked necessary and sufficient levels of fear to

develop PTSD, or PTSD isn't as exclusively tied to life-threat as criterion A of the DSM-5 might suggest.

This pattern of coercive control but not physical violence predicting both PTSD and moral injury held true in the path analyses as well as in simpler simultaneous regressions. Of course, coercive control and physical violence were significantly and positively correlated which was to be expected. Many survivors of domestic violence experience coercive control but not physical violence in their abusive relationships, however, it is rare to see physical violence in a relationship without the presence of coercive tactics (Dichter et al., 2018; Nevala, 2017). Like isolation, humiliation, and surveillance, physical violence can be thought of as a tool of abuse designed to gain compliance rather than as an end goal. For example, in the same way that an abusive partner might hide his victim's car keys in order to serve the larger purposes of making her feel crazy and keeping her isolated at home, an abuser might hit his partner to establish his physical dominance, to punish perceived disobedience, or to leave a mark so that his victim feels too embarrassed to interact with people in public. In this way, violence is distinct from coercive control and yet they are often perpetrated in tandem. This picture is supported by the degree of association between coercive control and physical violence in the present study – they were significantly associated but not to an extent which suggests they are one and the same. This moderate sized correlation is important because it demonstrates a distinction that will impact the type of assistance survivors will require when leaving abusive relationships, and potentially the kind of healing they will need to engage in once they are safe.

Nuances of Moral Injury in Survivors of Domestic Violence

As expected, symptoms of moral injury were reported commonly among survivors of domestic violence and were positively associated with experiences of coercive control. I

hypothesized that survivors' moral identity, or the degree to which they see their moral values as core to their identity, would moderate the relationship between coercive control and moral injury. Full-blown coercion renders victims unable to act in accordance with their moral values as the network of restrictions on their autonomy strengthen over time. It felt intuitive that victims who derive worth from their moral values or who experience them as more central to their self-concept would be more affected – experience more distress – when forced to compromise their morals. While a simple moderation model confirmed the expected pattern that individuals with a greater sense of moral identity would experience more moral injury as a result of coercive control, the interaction term in a more complex path model failed to reach significance. These conflicting results are difficult to reconcile and should be investigated further. While this moderation remains intuitively promising, the inconsistent results caution that the moderation may not be robust and therefore should not be interpreted without additional confirmation. However, the question continues to be important because it could mean that intervention targeted toward symptoms of moral injury (generally structured around radical self-forgiveness and meaning making) should be of a higher priority for individuals with a greater sense of moral identity. The ability to predict effective intervention prior to treatment trial-and-error could prove essential for survivors who are discouraged from seeking treatment for fear of failure or further disempowerment.

The inconsistent analyses of moral identity as a moderator may be due to problems with the moral identity survey used in this study. Items that asked participants whether they felt that moral characteristics (e.g., being caring, compassionate, honest, and kind) were important to them were subject to a significant response bias. Whether the strong endorsement of these characteristics across the board was due to social desirability or genuine belief in the importance

of these traits, these questions (the internalization subscale of the MIQ) suffered from very low variability that potentially masked an interactive effect when examined in combination with coercive control. Additional items, namely the symbolization subscale of the MIQ, improved the variability of moral identity in the sample, however they also sacrificed some construct validity. These additional questions in essence assessed how respondents outwardly expressed their adherence to morally good traits, for example by wearing clothing or consuming media that signaled their virtue. While potentially important, these questions failed to assess the type of moral identity that I theorized would impact the severity of moral injury incurred from coercive control. Despite the fact that we all experience our moral values as important, it is intuitively clear that there are differences in how often and to what extent individuals reflect on their moral values in a meaningful way, and similarly, that there are important differences in how much distress individuals experience when their actions deviate (by choice or not) from these values. The measure utilized in the present study failed to assess these constructs, and to my knowledge, this conceptualization has yet to be captured in a survey measure that produces unbiased results. It would be valuable to pursue a measure building project around moral identity, not only because of its potential relationship to the impact of coercive control but also because of its relevance to moral injury in contexts aside from domestic violence. It is a theoretically promising addition to military moral injury too, especially because of the rigidity of military moral code and the explicit expectation that service members embody virtues throughout all areas of their lives.

Given that this study was the first to apply the construct of moral injury to the context of domestic violence, I felt that it was important to clarify the underlying mechanisms or processes by which survivors of domestic violence come to experience moral injury. I explored the

possibility that the relationship between coercive control and moral injury would be mediated by (i) moral conflict, (ii) loss of identity, and (iii) loss of moral autonomy. All three of these constructs partially mediated the relationship between coercion and moral injury. The mediator of moral conflict served to confirm my assumption that a definitional feature of moral injury was present in survivors of domestic violence, specifically that coercive control is in fact associated with moral conflict in its victims. It was apparent from case studies that this premise was true, but no empirical data demonstrated the fact that victims of coercive control are asked, or forced, to compromise their own values in order to preserve their relationship with an abuser or maintain their physical safety. This finding is a step toward empirical confirmation.

The mediators of loss of identity and loss of moral autonomy were novel additions to my conceptualization of moral injury in the context of domestic violence. I anticipated that both would be unique to the circumstances of coercive control. The phenomenon of monopolization of perception described in the introduction, in which a victim's values, judgements, and attitudes are replaced by those of their abuser, should in effect create a sense of loss of identity or a feeling of disconnection from the person the victim was prior to their focal relationship. Similarly, coercive techniques like isolation, surveillance, and humiliation disable a victim's sense of agency to the point that they may actually lose their ability to act autonomously in daily tasks like cleaning, working, or socializing, especially in morally loaded situations (e.g., in the face of conflicting duty to their partner versus family of origin). The loss of both identity and moral autonomy should – and do according to the mediation findings – contribute to the development of moral injury. While moments of discrete emotional harm to the victim are involved in coercive control, it is the cumulative disabling of victims through these two losses

that facilitate an environment in which the abuser's power can flourish and the victim is further exposed to additional, and perhaps more chronic, existential, and moral injury.

Moral Injury in the Context of Domestic Violence Compared to the Military

The application of moral injury had previously been bound to career-specific populations, primarily the military, law-enforcement, and medical personnel during the COVID-19 pandemic. To our knowledge this was the first inquiry into the legitimacy of moral injury as an explanation of posttraumatic distress in survivors of domestic violence. As such, I had to adapt a military scale to measure moral injury in this population. The adapted scale appeared to perform very well in this novel context. Most of its items were reported with moderate to high frequency, and overall, the measure had good variability following a relatively normal distribution. When an exploratory factor analysis was conducted to extract potential latent constructs, I found that items were grouped in a structure that was very similar to the one reported in the original military version with self-directed and other-directed subscales.

Only two of the original items were removed from the measure of moral injury in the context of domestic violence – that participants' experiences in their focal relationships caused them to doubt the motives of people in authority and caused them to lose faith in the basic goodness of humanity. Interestingly, between 43 and 51% of participants responded *agree* or *strongly agree* to both items suggesting that they were common experiences even if not congruent enough with the other items in the scale. As with the military version, other-directed moral injury symptoms (i.e., resentment, disgust, anger, and the desire for revenge on their partner) were reported at higher rates than self-directed symptoms in the present sample. Survivors, like military members, are involved in complex hierarchical relationships in which an individual (the perpetrator), an institution, or both (in the case of the military) deserve blame for

putting the individual in a position of moral compromise. However, it is worth noting and further unpacking the qualitative differences between blaming an individual and blaming an institution. For survivors of domestic violence there will always be at least one perpetrator to whom we can easily point, however, for service members, their other-directed symptoms may or may not have a similarly obvious target – rather their outrage may be appropriately directed at the government or anonymous entities higher in the chain of command. These other-directed symptoms of moral injury that are focused on systems as opposed to persons may have meaningful overlap with the unique impacts that institutional betrayal has on survivors of sexual violence (Smith & Freyd, 2014). It may be a fruitful future direction to compare and contrast the similarities in moral injury caused by witnessing a trusted system like the military violate a shared moral value with the unique types of psychological fall out caused by an institution failing to protect an individual from sexual violence within its walls.

While beyond the scope of the current study, future research should investigate events or relationship dynamics that survivors perceive as being particularly morally injurious. Ideally through interviews and qualitative analysis, we can come to better understand the specific sources of moral injury in domestic violence in order to compare them to morally injurious events experienced by members of the military. It is natural impulse to assume that military service members are more likely to engage in morally injurious acts of commission (violating their own values) as opposed to acts of omission (witnessing others violate shared values) because American military presences in foreign countries are strong and often controversial. On the other hand, one might assume that survivors of domestic violence are more likely to experience morally injurious acts of omission because in many cases they are being acted upon by a perpetrator. However, this assumption cannot not be made without additional testimony

from survivors as to what circumstances actually caused them moral conflict in their relationships. This assumption is reductive in a further sense because it downplays the stakes that are often involved in domestic violence and the frequency of serious acts of commission such as the abuse or neglect of children. It is also true that the magnitude of moral violation cannot be measured by the degree of an atrocity alone but must also be determined by the pervasiveness of the constraint on an individual's autonomy and personhood. Future research should explore the range of morally injurious experiences that survivors endure in their relationships and should pay careful attention to the frequency and cumulative effect of lower-level moral violations in order to avoid overlooking the invisible but harmful impacts of coercive control.

Limitations and Future Directions

I have addressed some limitations and future directions throughout the discussion, however, in this section I will describe larger scale limitations that resulted from the study design and solutions that could be implemented in the future to address them. I administered a cross-sectional survey that asked for retrospective accounts of physical violence, coercive control, and the posttraumatic impacts of those specific events. Repeated victimization is common for survivors of interpersonal violence, so to ask participants to filter their distress so that they only reported what could be attributed to one focal relationship may have underrepresented their distress. Furthermore, the cross-sectional nature of the study limits our ability to report with certainty the causal relationships between coercive control, physical violence, PTSD, and moral injury.

While I collected information about the length of participants' focal relationships and whether they were intact during the last year, I did not preregister these pieces of information as covariates. For this inaugural investigation, I was interested in the applicability of moral injury to

survivors generally, not differentially based on characteristics of their abusive relationships. However, the recency and length of an individual's abusive relationship could very well impact their symptoms of moral injury. If an individual has not yet left the influence of their abusive partner, they may not be capable of or willing to reflect on the magnitude of harm their partner subjected them to, or any harm they personally may have caused others. Given the nature of coercive control, it is possible that other relationship characteristics could influence the extent of moral injury a survivor suffers. For example, the presence of shared children, pets, property or individual characteristics like immigration status, identity, and shared community could increase the avenues of control available to the perpetrator, the number of people impacted as collateral damage, and ultimately the severity of moral injury that the survivor experiences. As a post hoc exploratory check, I re-ran the two multiple regressions predicting PTSD and moral injury from coercive control and physical violence with focal relationship length as a covariate. Relationship length did significantly predict PTSD, but not moral injury, however, in both regressions, coercive control continued to significantly and uniquely predict both posttraumatic consequences above and beyond the effects of physical violence *and* relationship length. Nevertheless, future research should endeavor to examine the impact of multiple abusive relationships, their length and recency, and other features that differ between them.

Furthermore, in the future, similar studies and related qualitative investigations should be conducted with community samples recruited from local shelters, clinics, and support groups. This type of sampling would increase the likelihood that all participants experienced a level of distress from their relationships that would warrant help-seeking. This would address concerns that the levels of relationship violence reported in the current sample did not reach a sufficient level to incur moral injury or PTSD. Finally, a community-based approach to research on

domestic violence carries the additional meaning-making opportunity for survivors to contribute their stories to larger efforts to understand and end domestic violence. Of course, participant recruitment of this kind in the amount required for a complex quantitative investigation would require more financial and community resources than I had available to me.

Conclusion

Domestic violence, and coercive control more specifically, harm victims in a multitude of ways, visible and invisible. In an effort to honor and restore the dignity of survivors it is important for researchers and clinicians to understand the many nuances that exist in abusive relationships. In many cases, there is not only violence and control, there is also love. Similarly, there is not only a perfect victim being passively acted upon. In many cases questions of agency are more complex. To gloss over this uncomfortable reality in a well-intentioned effort to support and heal survivors, we end up further robbing them of autonomy over their narratives and invalidate the nuggets of truth that can exist in their shame and guilt. Rather, we should strive to meet survivors with a willingness to accept their grief and regret over the pain they may have caused others *and* with a willingness to acknowledge the restriction of liberty that pushed them to act in those ways. The fact that survivors of domestic violence are sometimes forced to violate their own values under coercion speaks to the sheer magnitude of their victimization. Applying moral injury to the context of domestic violence affords us a framework through which to hold both of these perspectives simultaneously and it names the cultural and interpersonal forces that impact survivors' experiences of coercion, which often go unseen. Ultimately, in order to facilitate justice and healing for victims, we must acknowledge the *full* scope of what they suffered and be indignant on their behalf. Understanding moral injury in this context allows us to do just that.

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Table 1

Demographic Characteristics of Participants

Characteristic	*N*	Percent
Race		
White	247	84.59
Black or African American	16	5.48
Asian	9	3.08
American Indian or Alaska Native	6	2.05
Native Hawaiian or Other Pacific Islander	0	0.00
2 or more races	14	4.79
Latinx	32	10.96
Sexual Orientation		
Straight or Heterosexual	216	73.97
Bisexual	54	18.49
Pansexual	10	3.42
Lesbian or Gay	6	2.05
Asexual	2	0.68
Queer	2	0.68
Preferred to self-describe	2	0.68
Political Orientation		
Liberal leaning	180	61.64
Conservative leaning	51	17.47
Neither	61	20.89
Focal Relationship in Past Year	62	21.23
Focal Relationship Length		
A couple of months to 1 year	39	13.36
1 to 2 years	69	23.63
3 to 4 years	66	22.60
5 to 10 years	67	22.95
More than 10 years	51	17.47
	Mean	SD (range)
Age	40.26	12.63 (19-73)

Note. Political orientation was measured on a 7-point scale with lower values indicating more liberal beliefs, and higher values indicating more conservative beliefs.

Table 2

Descriptive Statistics for Coercive Control Items

Item	M	SD	% Often or Always
Economic Control			
Kept their own money matters secret	2.68	1.29	66.44
Made it difficult for you to work or study	2.53	1.00	55.14
Refused to share money with you/pay fair share	2.29	1.36	48.97
Controlled your money	1.92	1.41	38.36
Threatening Control			
Threatened to leave the relationship	2.17	1.28	44.86
Threatened to harm you	1.95	1.10	32.19
Threatened to disclose damaging or embarrassing information about you	1.71	1.29	30.48
Threatened to harm themselves	1.40	1.31	22.60
Intimidating Control			
Used nasty looks and gestures to make you feel bad or silly	2.61	1.04	60.27
Tried to make you do things you didn't want to	2.52	0.99	55.48
Vented their anger on pets	1.82	1.14	9.93
Was nasty/rude to your friends or family	1.80	1.22	29.45
Smashed your property when they were annoyed/angry at you	1.57	1.25	24.66
Emotional Control			
Told you that you were lying, or you were confused	2.57	1.00	56.16
Called you unpleasant names	2.56	0.98	54.79
Tried to put you down when you felt good about yourself	2.55	0.98	52.40
Told you that you were going crazy	2.47	1.18	55.48
Showed you up in public	1.73	1.17	26.71
Isolating Control			
Acted suspicious and jealous of you	2.85	1.21	68.49
Wanted to know where you went and who you spoke to when you were not together	2.79	1.27	63.36
Tried to limit the amount of activities outside the relationship that you engaged in	2.62	1.29	57.88
Checked up on your movements	2.59	1.24	59.59
Tried to restrict the time you spent with your family or friends	2.51	1.28	54.11
Tried to make you feel jealous	2.28	1.21	43.49

Note. All questions had a possible and actual minimum of 0 (Never) and maximum of 4 (Always). Sorted by most common within sub-types of coercive control.

Table 3

Descriptive Statistics for Moral Injury Items

Item	M	SD	% Agree or Strongly Agree
When I look back on my relationship, I feel disgusted by things my partner did	4.46	0.78	91.44
I feel anger over being betrayed by my partner who I had trusted while I was in my relationship	4.08	0.97	83.22
No matter how much time passes, I resent my partner who betrayed my trust during my relationship	3.86	1.16	72.60
The moral failures I witnessed during my relationship left a bad taste in my mouth	3.82	1.04	75.34
I am ashamed of myself because of things that I did/saw in my relationship	3.54	1.22	64.38
My experiences in this relationship have taught me that it is only a matter of time before people will betray my trust	3.23	1.21	46.58
Things I did/saw in my relationship have caused me at times to lose faith in the basic goodness of humanity	3.21	1.26	51.03
I feel guilt about things that happened during my relationship that cannot be excused	3.16	1.30	49.32
I sometimes feel so bad about things that I did/saw in my relationship that I hide or withdraw from others	3.03	1.36	46.92
My experiences in this relationship have caused me to seriously doubt the motives of people in authority	2.98	1.33	43.15
Sometimes I enjoy thinking about having revenge on my partner who wronged me in my relationship	2.75	1.38	39.38
Because of things that I did/saw in my relationship, I doubt my ability to make moral decisions	2.51	1.24	27.05
Because of things that I did/saw in my relationship, I sabotage my best efforts to achieve my goals in life	2.51	1.26	24.66
I sometimes lash out at other because I feel bad about things I did/saw in my relationship	2.40	1.25	24.66
In order to punish myself for things that I did/saw in my relationship, I often neglect my health and safety	2.32	1.28	22.95
I am an unforgivable person because of things that I did/saw in my relationship	2.18	1.21	18.15
Because of things that I did/saw in my relationship, I am no longer worthy of being loved	2.14	1.22	16.78

Note. All questions had a possible and actual minimum of 1 (*Strongly disagree*) and maximum of 5 (*Strongly agree*). Items are sorted by most to least reported.

Table 4

Descriptive Statistics and Reliability for All Variables

Subscale/Item	M	SD	Min, Max	% Endorsed	α
Physical Violence (*M* = 0.95, *SD* = 0.65)					0.79
Pushed, held, or slapped	1.49	0.92	[0, 4]	84.93	
Other kind of force	1.50	1.00	[0, 4]	80.14	
Kicked, bit, or hurt with object	0.82	0.93	[0, 4]	52.74	
Choked or strangled	0.66	0.88	[0, 4]	43.49	
Attacked with weapon	0.27	0.58	[0, 4]	20.55	
Coercive Control (*M* = 2.23, *SD* = 0.64)					0.89
Isolating control	2.61	1.02	[0, 4]	98.29	
Economic control	2.36	0.96	[0, 4]	99.32	
Emotional control	2.33	0.78	[0.50, 4]	100.00	
Intimidating control	1.86	0.72	[0.20, 4]	100.00	
Threatening control	1.81	0.80	[0, 4]	99.66	
PTSD (*M* = 1.45, *SD* = 0.94)					0.96
Criterion B	1.25	0.98	[0, 4]	90.75	
Criterion C	1.95	1.25	[0, 4]	90.41	
Criterion D	1.52	1.08	[0, 4]	91.78	
Criterion E	1.36	1.03	[1, 3.67]	86.30	
Moral Injury[†] (*M* = 3.07, *SD* = 0.75)					0.90
Self-directed	2.64	0.92	[1, 5]	31.85	
Other-directed	3.55	0.75	[1, 5]	71.23	
Moral Identity (*M* = 4.08, *SD* = 0.65)					0.79
Internalizing	4.60	0.47	[2.80, 5]	98.63	
Symbolization	3.26	0.74	[1, 5]	49.78	
Moral Conflict (*M* = 2.26, *SD* = 1.21)					0.90
Concerned about moral standards	2.37	1.33	[0, 4]	88.70	
Wrestled with following moral compass	2.34	1.26	[0, 4]	88.70	
Worried that actions were wrong	2.08	1.38	[0, 4]	82.53	
Loss of Identity (*M* = 2.86, *SD* = 0.98)					0.76
Disconnected from prior self	3.17	0.98	[0, 4]	98.29	
Disconnected from prior values	2.56	1.20	[0, 4]	93.84	
Loss of Moral Autonomy (*M* = 3.58, *SD* = 1.06)					0.81
Unable to do what was morally right	3.73	1.11	[1, 5]	70.21	
Uncertain about what was morally right	3.42	1.20	[1, 5]	58.22	

Note. Physical violence, coercive control, PTSD, moral conflict, and loss of identity were measured on a 0 (never/none at all) to 4 (always/extremely/a great deal) Likert scale. Moral

[†] Following an exploratory factor analysis reported in the results section, the overall mean remained the same and the standard deviation increased slightly (*SD* = 0.74). The self-directed sub-scale changed slightly (*M* = 2.70, *SD* = 0.90) as did the other-directed sub-scale (*M* = 3.79, *SD* = 0.72). Percent endorsed decreased to 24.66% for self-directed moral injury and increased to 82.88% for other-directed moral injury.

injury, moral identity, and loss of moral autonomy were measured on a 1 (strongly disagree) to 5 (strongly agree) Likert scale. % endorsed refers to the percent of participants who endorsed the item/subscale at least a little.

Table 5

Correlation Matrix for All Variables

Variable	1	2	3	4	5	6	7	8
1. Physical Violence	-							
2. Coercive Control	0.43***	-						
3. PTSD	0.20***	0.41***	-					
4. Moral Injury	0.21***	0.37***	0.71***	-				
5. Moral Identity	0.07	0.11	0.00	-0.06	-			
6. Moral Conflict	0.12*	0.28***	0.39***	0.50***	0.07	-		
7. Loss of Identity	0.17**	0.40***	0.41***	0.45***	0.10	0.66***	-	
8. Loss of Moral Autonomy	0.22***	0.42***	0.35***	0.45***	0.10	0.62***	0.63***	-

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6

Multiple Regression Models Predicting PTSD Symptoms and Moral Injury

Predictor	*B*	*β*	*SE*	*r*	R^2
Predicting PTSD Symptoms					0.17
(Intercept)	0.09	-	-	-	
Coercive Control	0.59***	0.40***	0.09	0.41***	
Physical Violence	0.04	0.03	0.09	0.20***	
Predicting Moral Injury					0.14
(Intercept)	2.10***	-	-	-	
Coercive Control	0.41***	0.35***	0.07	0.37***	
Physical Violence	0.07	0.06	0.07	0.21***	

Note. *** $p < .001$.

Table 7

Fit Indices for Path Models

Fit Indices	RMSEA	SRMR	TLI	CFI	Chi-Square		
					χ^2	*df*	*p*
Model 1 *With Moderation*	0.039	0.031	0.979	0.994	6.090	4	0.193

Note. All fit indices reported here are robust.

Table 8

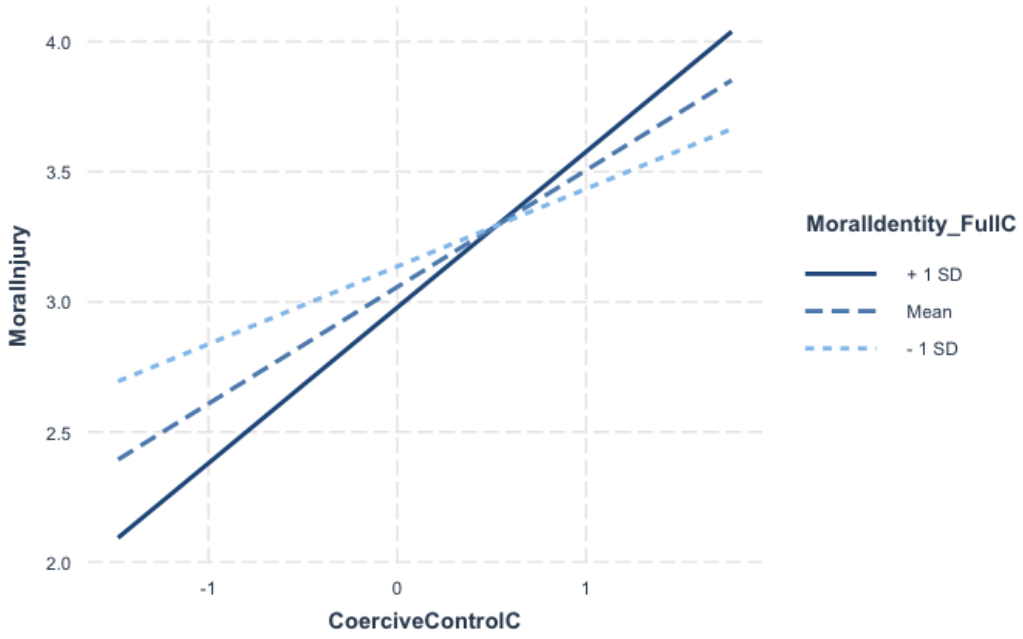
Factor Loadings for Exploratory Factor Analysis on Moral Injury

Item	Factor		Uniqueness
	Self-Directed	Other-Directed	
Self-Directed Moral Injury (α = 0.90)			
Because of things that I did/saw in my relationship, I am no longer worthy of being loved (8)	**0.84**	-0.10	0.34
Because of things that I did/saw in my relationship, I sabotage my best efforts to achieve my goals in life (12)	**0.80**	-0.07	0.39
In order to punish myself for things that I did/saw in my relationship, I often neglect my health and safety (5)	**0.75**	-0.07	0.46
Because of things that I did/saw in my relationship, I doubt my ability to make moral decisions (4)	**0.75**	0.02	0.43
I sometimes feel so bad about things that I did/saw in my relationship that I hide or withdraw from others (11)	**0.70**	0.14	0.42
I am an unforgivable person because of things that I did/saw in my relationship (14)	**0.64**	-0.05	0.61
I sometimes lash out at other because I feel bad about things I did/saw in my relationship (16)	**0.60**	0.11	0.58
My experiences in this relationship have taught me that it is only a matter of time before people will betray my trust (3)	**0.55**	0.20	0.59
I feel guilt about things that happened during my relationship that cannot be excused (7)	**0.54**	0.16	0.63
I am ashamed of myself because of things that I did/saw in my relationship (1)	**0.44**	0.23	0.69
Other-Directed Moral Injury (α = 0.69)			
When I look back on my relationship, I feel disgusted by things my partner did (17)	-0.18	**0.65**	0.62
No matter how much time passes, I resent my partner who betrayed my trust during my relationship (13)	0.04	**0.59**	0.64
I feel anger over being betrayed by my partner who I had trusted while I was in my relationship (2)	0.09	**0.54**	0.67
The moral failures I witnessed during my relationship left a bad taste in my mouth (10)	0.29	**0.51**	0.56
Sometimes I enjoy thinking about having revenge on my partner who wronged me in my relationship (6)	0.21	**0.37**	0.77

Note. Minimum Residual extraction was used with oblimin rotation. Bolded factor loadings indicate factor membership. Item numbers from the appendix are reported here in parentheses.

Figure 2

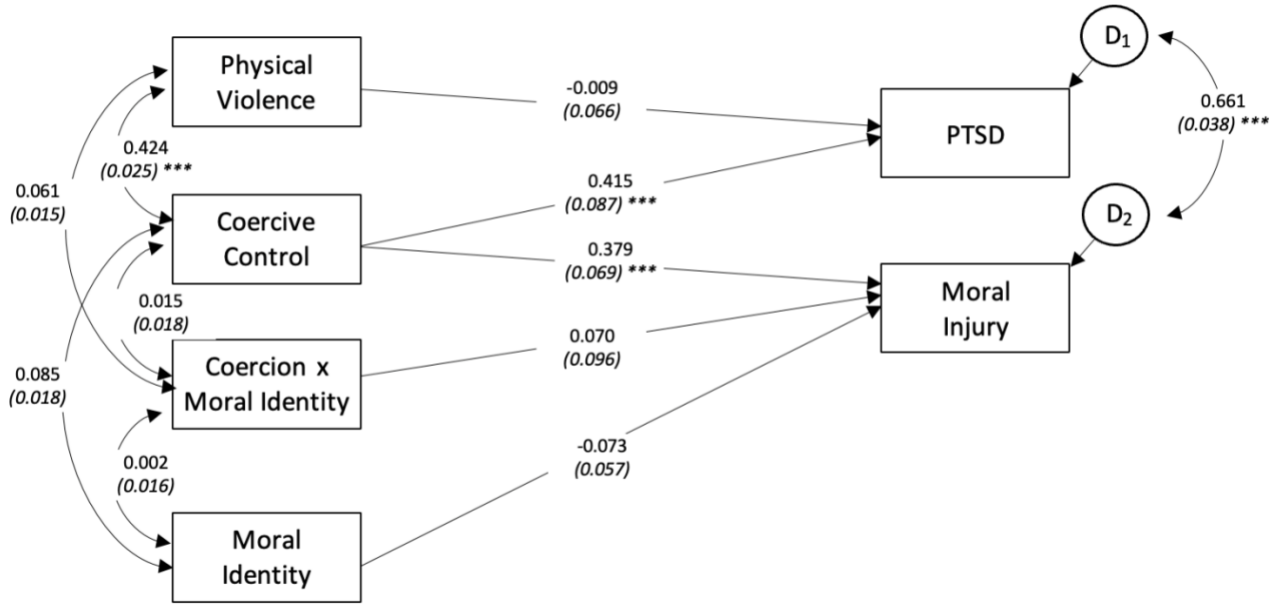
Simple Slopes for Moral Identity Moderating the Relationship Between Coercive Control and Moral Injury (Centered)



Note. The solid blue line represents the regression line predicting moral injury from coercive control for individuals one standard deviation above the mean on moral identity. The long-dashed line represented the regression line for individuals with mean level moral identity and the short-dashed line represent the regression line for individuals one standard deviation below the mean on moral identity.

Figure 3

Moderation Path Diagram

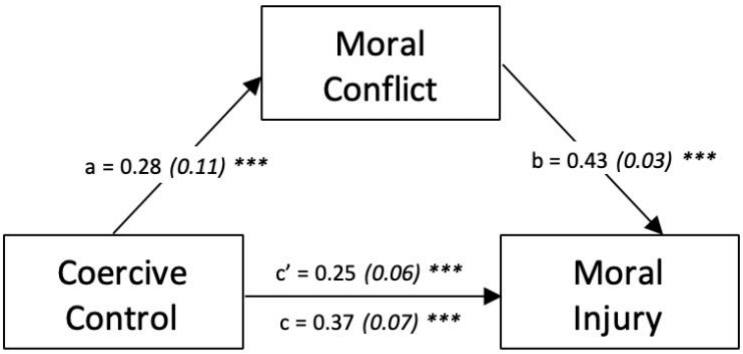


Note. Standardized regression coefficients are reported with standard errors in parentheses.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 4

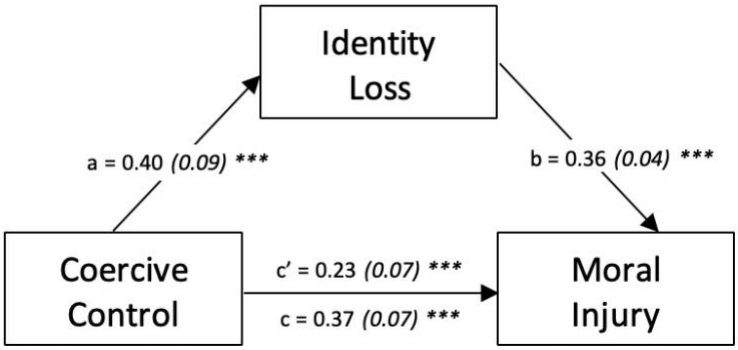
Moral Conflict Mediating the Relationship Between Coercive Control and Moral Injury



Note. Standardized regression coefficients are reported with standard errors in parentheses.
*** $p < .001$.

Figure 5

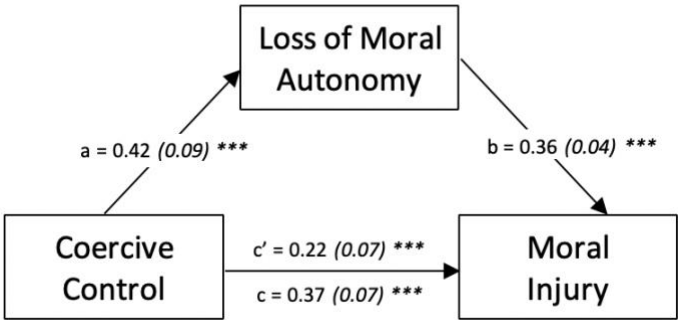
Loss of Identity Mediating the Relationship Between Coercive Control and Moral Injury



Note. Standardized regression coefficients are reported with standard errors in parentheses.
*** $p < .001$.

Figure 6

Loss of Moral Autonomy Mediating the Relationship Between Coercive Control and Moral Injury



Note. Standardized regression coefficients are reported with standard errors in parentheses. *** $p < .001$.

Appendices

Appendix A

Screening Survey (Coercive Control and Gender Items)

Scale	Items	Response Options
Coercive Control Screening Survey *Instructions: At any point in your life have you been in a relationship where your partner has…*	1. Repeatedly belittled you to the extent that you felt worthless? 2. Frightened you, or threatened to hurt you or someone close to you?	0 = No 1 = Yes
Gender Identity	2. What was the gender identity of the partner you who did these things to you? a. Woman b. Man c. Nonbinary or Genderqueer d. Something not listed here 1. What is your gender identity? a. Woman b. Man c. Nonbinary or Genderqueer d. Something not listed here	

Appendix B

Adapted Crime Survey for England and Wales

Instructions: Indicate whether or not a romantic partner has done the following things…

0	1	2	3	4
Never	Rarely	Sometimes	Often	Always

1. Pushed you, held you down, or slapped you
2. Kicked, but, or hit you with a fist or something else, or threw something at you
3. Choked or tried to strangle you
4. Used a weapon against you, for example a stick or a knife
5. Used some other kind of force against you

Appendix C

Revised Controlling Behaviors Scale (CBS-R)

Instructions: Here is a list of things you and your partner may have done during your relationship. Taking the previous year, or last year of the relationship, indicate how frequently your partner did each of you did the following to you. Using the following code, circle the number which best describes your partner's actions toward you.

0	1	2	3	4
Never	Rarely	Sometimes	Often	Always

1. Made it difficult to work or study
2. Control the other's money
3. Keep own money matters secret
4. Refuse to share money/pay fair share
5. Threaten to harm the other one
6. Threaten to leave the relationship
7. Threaten to harm self
8. Threaten to disclose damaging or embarrassing information
9. Try to make the other do things they didn't want to
10. Use nasty looks and gestures to make the other one feel bad or silly
11. Smash the other one's property when annoyed/angry
12. Be nasty or rude to other one's friends or family
13. Vent anger on pets
14. Try to put the other down when getting 'too big for their boots'
15. Show the other one up in public
16. Tell the other they were going mad
17. Tell the other they were lying or confused
18. Call the other unpleasant names
19. Try to restrict time one spent with family or friends
20. Want to know where the other went and who they spoke to when not together
21. Try to limit the amount of activities outside the relationship the other engaged in
22. Act suspicious and jealous of the other one
23. Check up on other's movements
24. Try to make the other feel jealous

Note. Items 1–4 are economic control, 5–8 are threatening control, 9–13 intimidating control, 14–18 emotional control, 19–24 isolating control.

Appendix D

Adapted Expressions of Moral Injury Scale (EMIS)

Instructions: Indicate the extent to which each statement reflects you experiences and views.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

1. *I am ashamed of myself because of things that I did/saw during my relationship.*
2. I feel anger over being betrayed by my partner who I had trusted while I was in my relationship.
3. My experiences in this relationship have taught me that it is only a matter of time before people will betray my trust.
4. *Because of things that I did/saw in my relationship, I doubt my ability to make moral decisions.*
5. *In order to punish myself for things that I did/saw in my relationship, I often neglect my health and safety.*
6. I sometimes enjoy thinking about having revenge my partner who wronged me in my relationship.
7. *I feel guilt about things that happened during my relationship that cannot be excused.*
8. *Because of things that I did/saw in my relationship, I am no longer worthy of being loved.*
9. My experiences in this relationship have caused me to seriously doubt the motives of people in authority.
10. The moral failures that I witnessed during my relationship have left a bad taste in my mouth.
11. *I sometimes feel so bad about things that I did/saw in my relationship that I hide or withdraw from others.*
12. *Because of things that I did/saw in my relationship, I sabotage my best efforts to achieve my goals in life.*
13. No matter how much time passes, I resent my partner who betrayed my trust during my relationship.
14. *I am an unforgivable person because of things that I did/saw in my relationship.*
15. Things I saw/did in my relationship have caused me at times to lose faith in the basic goodness of humanity.
16. *I sometimes lash out at others because I feel bad about things I did/saw in my relationship.*
17. When I look back on my relationship, I feel disgusted by things that my partner did.

Note. Italicized items belong to the first factor called Self-Directed Moral Injury (SD-MI) and the non-italicized items belong to the second factor called Other-Directed Moral Injury (OD-MI). The subscales can be scored separately or together. All changes made for the purpose of this study are in green.

Appendix E

Posttraumatic Stress Disorder Checklist for the DSM-5 (PCL-5)

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

0	1	2	3	4
Not at all	A little bit	Moderately	Quite a bit	Extremely

1. Repeated, disturbing, and unwanted memories of the stressful experience?
2. Repeated, disturbing dreams of the stressful experience?
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?
4. Feeling very upset when something reminded you of the stressful experience?
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?
6. Avoiding memories, thoughts, or feelings related to the stressful experience?
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?
8. Trouble remembering important parts of the stressful experience?
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?
10. Blaming yourself or someone else for the stressful experience or what happened after it?
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?
12. Loss of interest in activities that you used to enjoy?
13. Feeling distant or cut off from other people?
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?
15. Irritable behavior, angry outbursts, or acting aggressively?
16. Taking too many risks or doing things that could cause you harm?
17. Being “super alert” or watchful or on guard?
18. Feeling jumpy or easily startled?
19. Having difficulty concentrating?
20. Trouble falling or staying asleep?

Appendix F

Moral Identity Scale (MIS)

Instructions: Listed below are some characteristics that may describe a person [Caring, Compassionate, Fair, Friendly, Generous, Hardworking, Helpful, Honest, and Kind]. The person with these characteristics could be you or it could be someone else. For a moment, visualize in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this person would be like, answer the following questions.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

1. It would make me feel good to be a person who has these characteristics.
2. Being someone who has these characteristics is an important part of who I am.
3. I would be ashamed to be a person who has these characteristics. (R)
4. Having these characteristics is not really important to me. (R)
5. I strongly desire to have these characteristics.
6. I often wear clothes that identify me as having these characteristics.
7. The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.
8. The kinds of books and magazines that I read identify me as having these characteristics.
9. The fact that I have these characteristics is communicated to others by my membership in certain organizations.
10. I am actively involved in activities that communicate to others that I have these characteristics.

Note. Items 1-5 belong to the internalization subscale and items 6-10 belong to the symbolization subscale.

Appendix G

Supplementary Items

Type	Items	Response Options
Moral Conflict *Instructions: During your relationship, how often did you…*	1. Wrestle with attempts to follow your moral principles? 2. Worry that your actions were morally or spiritually wrong? 3. Feel concerned that you didn't live up to your moral standards?	1 = Not at all, 5 = A great deal
Identity *Instructions: While in your relationship, how often did you…*	1. Feel disconnected from the values you held before. 2. Feel disconnected from the person you were before.	1 = Not at all, 5 = A great deal
Moral Autonomy *Instructions: Indicate the extent to which you agree with the following statements about your relationship.*	1. There were moments in my relationship when I could not tell what was morally right because of the influence of my partner. 2. There were moments in my relationship when I could not do what I believed was morally right because of the influence of my partner	1 = Strongly disagree, 5 = Strongly agree
Open-Ended Moral Values *Instructions: Respond carefully in writing to the following questions:*	1. What traits do you believe are morally good? 2. Why do you believe these traits are morally good? For example, does your family, religion, culture, etc. endorse these values?	Open-ended

Appendix H

Demographics and Covariates

Demographic	Item
Age	1. How old are you? ___
Race	2. What is your race? (Select all that apply) a. Black or African American b. White c. American Indian or Alaska Native d. Asian e. Southwest Asian or North African (SWANA) f. Native Hawaiian or Other Pacific Islander g. Prefer not to say
Ethnicity	3. Are you of Hispanic/x, Latino/a/x, or Spanish Origin? a. Yes b. No c. Prefer not to say
Sexual Orientation	4. Do you consider yourself to be a. Straight or Heterosexual b. Lesbian c. Gay d. Bisexual e. Pansexual f. Asexual g. Prefer not to say
Political Orientation	5. How would you describe your political attitudes? [1 = extremely liberal to 7 = extremely conservative]
Education	7. What is the highest level of education you completed? a. Some high school b. High school or GED c. Associates degree d. Bachelor's degree f. Master's degree g. Ph.D. or higher

	h. Trade school
Income	What is your annual household income? a. Less than $25,000 b. $25,000 - $50,000 c. $50,000 - $100,000 d. $100,000 - $200,000 e. Prefer not to say
Employment	What is your current employment status? a. Employed full-time b. Employed part-time c. Unemployed d. Retired e. Prefer not to say
Timeframe of Relationship	Were you in this relationship during the last 12 months? a. Yes b. No How long were you in this relationship (if you are currently in the relationship indicate how long it has been since the relationship began)? a. A couple of weeks b. A couple of months c. About a year d. 1-2 years e. 3-4 years f. more than 5 years

Note. The timeframe of relationship questions will be presented directly after the physical violence, coercive control, moral injury, PTSD, moral conflict, identity, and moral autonomy questions. In other words, after all of the questions that refer to this particular relationship.