Revisiting a Multidimensional Model of Intergenerational Transmission of Child Maltreatment

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Although experiencing maltreatment in childhood is a risk factor for maltreating one's own children, this consequence is far from inevitable. Rates of intergenerational transmission of maltreatment (IGTM) range from 6.7 to 70% in the literature. Variability in estimated rates of IGTM mirrors the methodological heterogeneity of maltreatment research (e.g., retrospective vs. prospective designs, inconsistent maltreatment definitions, differing concordance calculation techniques) (see Dixon et al., 2005; Ertem et al., 2000, for review). In the absence of fully prospective investigations of IGTM (i.e., where both parent and child experiences are assessed longitudinally), the true degree of IGTM within and across maltreatment subtypes remains unclear. In the only critical review of prevalence estimates to date, Kaufman and Zigler (1989) estimated the rate of IGTM at ~30%. A recent meta-analysis by Madigan et al. (2019) revealed a combined effect size across 80 studies of parental maltreatment and maltreatment in the next generation of $d = 0.45$ (95% confidence interval [CI] = 0.37–0.54), which translates to an odds ratio of 2.26. However, this estimate may be inflated given the broad inclusion criteria for child maltreatment studies used in this meta-analysis. Ongoing variability in published IGTM estimates highlights the need for the careful evaluation of extant approaches to the conceptualization and investigation of IGTM, which we offer in this chapter.

In addition to varying estimates of IGTM, research points to an array of mechanisms underlying maltreatment continuity and discontinuity across generations. For example, younger parenting and parental psychopathology have been implicated in IGTM (Dixon et al., 2005, Egeland & Susman-Stillman, 1996), whereas, factors supporting desistance of maltreatment across generations include supportive relationships (e.g., Egeland et al., 1988), psychotherapy (e.g., Egeland et al., 1988), capacities for meaning making and experiential integration (e.g., Linde-Krieger et al., 2020), and reflective functioning (e.g., Berthelot et al., 2015). Moreover, these risk and protective factors interact, such that there is no single path to persistence or desistence for all individuals. Indeed, the most consistent finding across the sizable literature on manifestations and mechanisms of IGTM is its inconsistency.

In this chapter, we apply key concepts from the integrative paradigm of developmental psychopathology to inform a multidimensional model of IGTM that will simultaneously facilitate greater sensitivity and specificity in our understanding of patterns of maltreatment continuity and discontinuity across generations. First, we review key models of continuity and discontinuity within the broader framework of

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developmental psychopathology, and highlight the added value of extending this framework to IGTM research. Second, we revisit the phenomenology of IGTM with particular emphasis on the information provided by instances of persistence and desistence across different maltreatment subtypes. Third, we outline our multidimensional approach to understanding and investigating mechanisms underlying the etiology of IGTM within a developmental psychopathology framework. Fourth, we offer specific recommendations for future research on IGTM and discuss implications for ongoing efforts to prevent it.

A Multidimensional View of Continuity

Developmental psychopathology adopts an organizational view of development, which emphasizes the coherence of adaption over time (Sroufe, 1990; Werner, 1957). In this perspective, both continuity and discontinuity in adaptive organization reflect and follow from a fundamentally coherent course of development (Overton, 2007; Raeff, 2016; Rutter et al., 2006; Sroufe & Jacobvitz, 1989). As such, both continuous and discontinuous patterns of adaptation are deserving of study as both further our understanding of development broadly. In the first edition of this volume, we introduced a novel and multidimensional model of IGTM, which we revisit in this chapter to consider recent work that has advanced this framework, as well as ongoing gaps that remain to be examined. Guided by the tenets of organizational theory and developmental psychopathology, we offer this model to advance the clarity and consistency of theoretical and empirical efforts to understand and model IGTM.

Given the reciprocally informative relations between studies of continuity and discontinuity, we encourage research focused on processes by which maltreatment persists across generations, as well as on those that precipitate discontinuities and "break the cycle." Patterns of persistence and desistence occur within individual development, as well as across individuals and generations (Rutter, 1989). For example, maternal sensitivity is largely stable across development, yet parenting behavior is not explained fully by this continuity. Pianta, Sroufe, and Egeland (1989b) found that discontinuities in maternal sensitivity were equally important for understanding development because they revealed the influence of child and situational factors (e.g., marital relationship quality, child gender) on patterns of (dis)continuity. Extending across generations, attachment research also reveals meaningful patterns of both continuity and discontinuity. Verhage and colleagues (2016) found that, despite significant continuity in attachment across generations, valuable clarifying information was gained by examining heterogeneity among these effects. Specifically, risk status, biological relatedness, and parent gender influenced patterns of attachment discontinuity across generations, demonstrating how considering both continuity and discontinuity revealed important influences on attachment transmission. As applied to the study of IGTM, we assert that similar and reciprocally informing principles of continuity and discontinuity operate across generations, and encourage research that attends, not only to examples in which the cycle is perpetuated, but also to instances of "lawful discontinuity" (Belsky, 1993, p. 416) that break the cycle.

Additionally, we hold that the fundamental coherence of development rests at the level of function, despite potential variations in form (Peterson et al., 2020; Rutter, 1989; Sameroff & Chandler, 1975; Waddington, 1940). For example, the ability to seek care when distressed in early childhood engenders a capacity to manage distress independently in later development such that an apparent transition in form (i.e., dependence to independence) belies a fundamental continuity in function (i.e., the capacity to self-regulate in accordance with developmentally salient challenges and resources; Sroufe, 1979). Similarly, children with histories of avoidant attachment can display anger in early development and passivity in later development, yet this is not an example of inconsistency, but rather reflects changes in the form or expression of continuous maladaptation (Sroufe & Jacobvitz, 1989). Thus, in considering expressions of IGTM, we argue that, as with development

broadly, efforts to understand IGTM must attend to the multidimensional nature of continuity in terms of form *and* function. In *homotypic continuity*, both adaptive form and function are continuous, as when a history of child physical abuse predicts perpetration of child physical abuse on the next generation. In *heterotypic continuity*, the adaptive form may change while the function remains constant, as when a history of child physical abuse predicts perpetration of child emotional abuse on the next generation. With this developmentally-informed view of IGTM, we offer a conceptual and investigative framework within which both types of continuity are appreciated and acknowledged, but appropriately distinguished to accommodate information about persistence of form and/or function.

A Multidimensional View of Child Maltreatment

It is particularly important to consider possible differences in the form of IGTM continuity because child maltreatment represents a constellation of related, yet distinct, experiences. Most maltreatment subtypes involve acts of commission that inflict direct harm on a child. For example, child physical abuse (CPA) occurs when an adult inflicts physical harm on a child that is beyond the bounds of normative physical discipline, such as by beating or kicking the child (McGee et al., 1995). Child sexual abuse (CSA) occurs when an adult seeks sexual gratification from acts involving a child (e.g., molestation, forced viewing of explicit material; Pekarsky, 2020). Child emotional abuse (CEA) entails direct caregiver expressions that threaten the child's sense of self and safety, such as by insulting the child or threatening to abandon or withdraw love from the child (Slep et al., 2011).[1]

In addition to these direct examples, other forms of maltreatment involve acts of omission that deny a child's basic developmental needs. Child neglect (CN) can be emotional (e.g., ignoring the child, being unresponsive to their emotional needs) and/or physical in form (e.g., failure to provide adequate food, shelter, or medical care; Pekarsky, 2020). Moreover, even within these broader categories of maltreatment, there are important distinctions with respect to the target of injury (e.g., physical injury versus attack on sense of self; Socolar et al., 1995; Toth et al., 1997) and developmental effects on particular domains of adaptive functioning (e.g., CPA and conduct problems, Lansford et al., 2007; CN and impaired social relationships, Hildyard & Wolfe, 2002).

Individual maltreatment experiences also differ with respect to the severity of the event, the identity of the perpetrator, and ages of onset and offset. Despite robust differences across individuals' experiences of child maltreatment, however, researchers often proceed as though any childhood adversity at the hands of a caregiver is equivalent. Attention to each of these features is appropriately increasing in the maltreatment literature broadly (Warmingham et al., 2019), and in specific considerations of IGTM (e.g., Widom et al., 2015; Yang et al., 2018). However, studies that explicitly examine the heterogeneity of maltreatment experiences are still the minority in the IGTM literature. As detailed later, however, a handful of studies reviewed here offer strong evidence that the study of IGTM must include greater attention to the specific implications of maltreatment subtype to understand patterns of maltreatment (dis)continuity across generations.

Given considerable comorbidity across maltreatment subtypes (see Higgins & McCabe, 2001 for review), it is often difficult to identify unique effects associated with each type of exposure. Should one attempt the difficult task of obtaining a sample that has experienced a single

[1] CEA can also be situated within the overarching umbrella construct of psychological maltreatment (PM), which encompasses a broad range of actions by caregivers that communicate to a child that they are worthless or unwanted. CEA specifically refers to devaluing actions within reciprocal emotional interactions between children and caregivers (Hart et al., 2017). However, given the ambiguity with which these two constructs are interpreted and discussed, some CEA studies described in this chapter may also have measured elements of PM.

type of maltreatment, the sample would likely differ from typically maltreated children, who generally experience multiple subtypes in combination (Herrenkohl & Herrenkohl, 2009). Moreover, there are statistical challenges to obtaining information about individual subtypes in samples that have experienced multiple forms of maltreatment. The dominant unidimensional maltreatment model, which was largely born out of necessity, has generated a lot of useful information about overall patterns of child maltreatment. However, a shift toward greater specificity has begun to establish a new paradigm, one in which consideration of individual differences in maltreatment experience is paramount. Studies increasingly emphasize the importance of unique effects of single maltreatment subtypes, and, more recently, this work has been extended to successfully reveal unique effects of different combinations of multiple maltreatment subtypes (Berzenski & Yates, 2011; Warmingham et al., 2019; see Rivera et al., 2018, for review). Similarly, we propose that focusing on subtype specificity in patterns of IGTM will reveal that, just as subtypes of maltreatment have different correlates and consequences, the continuity of these experiences varies across generations as well.

A Multidimensional View of IGTM Phenomenology

Adopting a nuanced appreciation for meaningful distinctions across forms of continuity (Rutter, 1989) as well as forms of maltreatment (Briere & Runtz, 1990), this chapter revisits and refreshes the multidimensional framework we have outlined to guide IGTM research. Studies of IGTM generally classify caregivers as maltreated if they experienced one or more of any subtype of abuse or neglect, even when some participants experienced one type of maltreatment and other participants experienced different or multiple types. Likewise, researchers typically define maltreatment as continuous across generations if the children of these caregivers experience one or more subtypes of abuse or neglect. Although aggregated studies have been the norm, and were perhaps necessary to establish broad parameter estimates of IGTM, we advocate for a more nuanced focus on subtype-specific versus subtype-general processes to achieve a multidimensional model of IGTM that accounts for both continuity and discontinuity in form and function across generations. Nearly 30 years ago, Kaufman and Zigler (1989) argued that it was *not* important to separately examine subtypes (specifically CPA, CSA, and CN) in research on IGTM "because the intervention implications of these three forms of maltreatment are quite similar" (p. 130). However, in light of current information regarding the specificity of maltreatment experiences, consequences, and intervention effects (e.g., MacMillan et al., 2009; see Pecora et al., 2014 for a review of subtype-specific interventions), ongoing applications of this aggregated framework will inhibit progress toward a complete understanding of IGTM.

First, greater attention to maltreatment subtypes will contribute to increased clarity in the communication of research findings. Until recently, the majority of studies on IGTM have been done with participants who experienced CPA alone or in combination with other maltreatment subtypes. In fact, there are no known studies with aggregated samples of maltreatment that exclude CPA. Indeed, the entire literature on rates and mechanisms of IGTM might be more accurately described as a compendium on the intergenerational transmission of CPA. At times, even studies exclusively measuring CPA have referred to it simply as 'abuse,' with cursory acknowledgment of the specific type of experience restricted to the method section (e.g., Pears & Capaldi, 2001). In other studies, distinct maltreatment subtypes (e.g., CPA and CEA; CPA and CN) are combined into a homogenous construct (i.e., "maltreatment"), even when the heterogeneity of these experiences is acknowledged (e.g., Berlin et al., 2011; Cort et al., 2011; Dixon et al., 2005; Fuchs et al., 2015; Ni et al., 2018; Plant et al., 2013; Thornberry & Henry, 2013). Although some studies have investigated the continuity of particular maltreatment subtypes, certain experiences have been investigated more often than others (i.e., CPA and CSA more than

CEA or CN). Moreover, the field suffers from an ongoing lack of integration with respect to information learned from these individual studies. We must distinguish research studies that represent findings specific to one maltreatment subtype (usually CPA) from those that can be generalized across multiple maltreatment subtypes, just as it is equally important to integrate research on individual maltreatment subtypes beyond CPA and CSA into this corpus of work.

Second, greater specificity regarding the specific types of maltreatment under study may help to interpret extant variability in published rates of IGTM across studies and samples. Confounding single and multiple maltreatment experiences may contribute to confusion when trying to compare IGTM rates across studies. Indeed, comparing separate studies in which different experiences of maltreatment are treated as equivalent (e.g., one study in which participants experienced CPA and CN, and one in which they experienced CPA and CEA) may cause findings to appear inconsistent due to methodological, rather than actual, differences. Parsing experiences of multiple versus unitary maltreatment, and of different maltreatment subtypes, may uncover previously indistinguishable information about each experience and clarify rates of IGTM.

Third, type-specific investigations may reveal important information about mechanisms by which specific maltreatment experiences are transmitted. Certain types of maltreatment may be more vulnerable to particular mechanisms of transmission than others and/or specific mechanisms may operate differently in the context of particular maltreatment subtypes. Although it is less common to experience one type of maltreatment than multiple types, findings regarding independent subtypes may nevertheless shed light on basic developmental processes that underlie the phenomenon of IGTM as a whole. Eventually, this understanding can inform discussions of IGTM patterns and suggest how various mechanisms may interact in the context of each individual's unique experiences. Therefore, in the following sections we provide updated reviews of IGTM research with respect to both undifferentiated IGTM studies, which aggregate at the level of second generation maltreatment, and to type-specific IGTM studies, that can reveal shared and unique phenomenological and etiologic features of IGTM.[2]

As discussed previously, *homotypic IGTM* occurs when a parent who experienced a particular type of maltreatment has a child who experiences the same type of maltreatment (e.g., CPA for the parent and for the child, irrespective of perpetrator). *Heterotypic IGTM* occurs when a parent who experienced a particular type of maltreatment has a child who experiences a different type of maltreatment (e.g., CPA for the parent and CEA for the child). Despite variation in form, heterotypic IGTM is functionally continuous in that both parent and child are maltreated, albeit in different ways. Of note, studies that aggregate different subtypes of maltreatment experienced by the parent, the child, or both, preclude identification of the specific form of continuity and thus constitute instances of *undifferentiated IGTM*.

Homotypic and Heterotypic IGTM

In presenting our multidimensional view of IGTM in the first edition, we encouraged consideration of two core questions: First, is homotypic

[2] We examine CPA, CSA, CEA, and CN in this chapter. While exposure to interpersonal violence (IPV) is a pernicious form of child maltreatment, and argued by some to be a component of CEA, there is a vast literature on IPV transmission across generations that falls beyond the scope of this review. Indeed, the entirely separate literature on IPV illustrates our concern that research on IGTM has been constrained by a lack of integration between research on unitary experiences. Moreover, in this chapter, we focus our review on transmission patterns from mothers' histories of maltreatment. Although some research considers fathers as perpetrators of maltreatment, this extra dimension is ancillary to our main focus on maltreatment subtypes in our current discussion. Therefore, when we discuss type-specific transmission of CSA, for example, we will be referring to mothers who experienced CSA and their children who have experienced CSA, even though mothers do not typically perpetrate this type of maltreatment. Finally, we largely examine CN as a unified construct including emotional and/or physical elements because very few studies distinguish between emotional and physical CN.

continuity more prevalent than heterotypic continuity? Second, are particular types of maltreatment more vulnerable to homotypic continuity than others? A few studies have examined type-specific IGTM to evaluate the hypothesis that homotypic continuity is more common than heterotypic continuity. However, these studies yielded mixed results, which may be due to their varying methodological approaches. For example, some comparisons used control groups or otherwise accounted for base rates of maltreatment subtypes (Kim, 2009; Ney, 1988; Widom et al., 2015), yet others did not include these directed comparisons, and subsequently reported less evidence for type-specific IGTM (Pianta Egeland and Erickson 1989a). Adopting the multidimensional framework proposed in our original chapter, Madigan et al. (2019) conducted a new meta-analysis which, importantly, provided effect size estimates for homotypic and heterotypic continuity of all four maltreatment subtypes. We summarize their results throughout this section. However, it is important to note that their aggregated figures do not account for methodological differences, such as whether base rates were considered, and, in several instances, include studies which focus on broad parenting constructs, such as verbal aggression, rather than on substantiated maltreatment. Although maltreatment in the second generation is often measured as a composite of multiple types, the studies mentioned above, as well as key examples of single-subtype investigations, have begun to shed light on the phenomenology of type-specific IGTM.

Child Physical Abuse Studies of CPA reveal moderate consistency of transmission rates. Pears and Capaldi (2001) investigated CPA in a sample of at-risk boys and found that 23% of mothers who had experienced CPA had physically abused their sons, while 10% of mothers who had not experienced CPA had physically abused their sons. They concluded that CPA increased the odds of second-generation CPA by a factor of two. Even more striking, Kim (2009) found that CPA in the first generation increased the odds of CPA in the second generation by a factor of five, with 15.7% of CPA mothers' children experiencing CPA, compared to 3.6% of non-CPA mothers. Moreover, Kim was one of only a few investigators to compare rates of homotypic CPA transmission to those of heterotypic CPA transmission while taking base rates into account. In this sample, 17.6% of CPA mothers had children with histories of CN, which was similar to the 15.7% rate of homotypic CPA transmission; however, when compared to the base rate incidence of CN among *non-CPA* mothers, which was 13%, CPA in the first generation did not significantly increase the likelihood of CN in the second generation. More recently, Yang et al. (2018) examined maternal history of CPA and its association with CPA and CN in the second generation. They found that 19.6% of CPA mothers had children with a history of CPA, which was significantly higher than the base rate of 8% CPA among children of non-CPA mothers. However, diverging from Kim (2009), Yang and colleagues found that this homotypic association was comparable (OR = 2.81, $p < 0.001$) to the increased odds of CN among mothers with histories of CPA (OR = 2.59, $p < 0.001$), with 24.1% incidence of CN among CPA mothers compared to 10.9% incidence of CN among children of non-CPA mothers. In contrast to both the Kim and Yang studies, Widom et al. (2015) found that a parental history of CPA did not result in significantly higher rates of CPA in the second generation as compared to children of non-maltreated parents. Interestingly, these researchers did find that a parental history of CPA was associated with increased odds of CSA in the second generation (OR = 3.90, $p < 0.001$). Pianta Egeland and Erickson (1989a) found a 17% homotypic transmission rate of CPA by age 6, but this number was not compared to rates among non-CPA mothers. Although Pianta Egeland and Erickson (1989a) interpreted their findings as not supporting type-specific continuity because the same percentage of CPA mothers had children with CN (17%), their findings cannot be interpreted fully in the absence of a base rate comparison. Similarly, Ney (1988) found that

the correlations between mothers' CPA and CPA in the next generation were comparable to correlations between CPA and CEA in the next generation, and higher than nonsignificant relations between CPA and second-generation CN or CSA. However, here again, in the absence of base rate comparisons, it is difficult to evaluate the relative magnitude of homotypic versus heterotypic IGTM. In their meta-analysis, Madigan and colleagues found considerable homotypic continuity of CPA (d = 0.41, 95% CI: 0.33–0.49), as well as similarly large heterotypic associations between a parental history of CPA and second-generation CEA (d = 0.40, 95% CI: 0.32–0.47; consistent with Ney, 1988, as described above). Moreover, though higher, these associations did not differ significantly from the heterotypic associations between parental CPA and second-generation CN (d = 0.30, 95% CI: 0.20–0.41) or CSA (d = 0.30, 95% CI: 0.03–0.56). On the whole, research suggests that there is significant homotypic continuity of CPA, perhaps at around 15–25%. Further, some studies suggest homotypic CPA IGTM may be higher than heterotypic CPA IGTM, but the literature remains inconclusive as to this distinction. Although the recent meta-analysis (Madigan et al., 2019) is a huge step forward toward drawing conclusions about these rates, ongoing variability in both methodology (e.g., base rate comparisons) and sampling (e.g., documented vs. reported maltreatment; clinical vs. community samples) precludes definitive comparative statements about rates of homotypic and heterotypic CPA IGTM.

Child Sexual Abuse Most studies examining CSA IGTM do not compare CSA to other forms of abuse. Although several studies have published rates of homotypic CSA transmission, findings are complicated by the notable discontinuity between victims and perpetrators across generations. While male victims of CSA are often studied as potential perpetrators of CSA in the next generation, female CSA victims may not perpetrate CSA, but still may have children who experience CSA at the hands of their partners or other adults who have access to their children (Glasser et al., 2001). Maternal behaviors that contribute to CSA in the next generation may be better classified as neglect due to failure to protect the child, which makes it difficult to talk about type-specific CSA transmission in consistent terms. As discussed earlier, this review focuses on specific maltreatment experiences of parents and their children irrespective of perpetrator identity. Thus, we define instances when parents with a history of CSA have children who experience CSA as homotypic IGTM of CSA.

In general, studies of homotypic CSA transmission put rates between 20 and 30% (Beltran, 2010), but it is even more difficult to compare these studies methodologically than the aforementioned challenges of doing so with CPA studies. For example, most studies of CSA are retrospective, drawing on samples of sexually abused children and inquiring about the maltreatment history of their parents (see Collin-Vezina & Cyr, 2003, for review). This method of IGTM estimation provides inflated rates compared to prospective or quasi-prospective studies because children of CSA parents who do not experience CSA are necessarily omitted from these studies. Moreover, as noted previously, these studies often do not include control groups with which to look at odds ratios or make base rate comparisons. Three studies on samples of sexually abused children have included control groups, and each find increased rates of CSA among the children of CSA mothers (58% compared to 12.5% of controls, Borelli, et al., 2019; 57% compared to 44.7% of controls, Leifer et al., 2004; 74% compared to 25.8% of controls, Oates et al., 1998). Still, even with the inclusion of a control group, these studies are not comparable to those adopting quasi-prospective designs to investigate other types of maltreatment because sampling is inherently biased in retrospective studies of samples recruited for CSA. One study that recruited families for IPV, rather than CSA, found an increased risk of CSA of 3.6 times for girls whose mothers had experienced CSA (McCloskey & Bailey, 2000). Finally, Widom et al. (2015), found a 10.6% rate of second-

generation CSA among mothers with a history of CSA (odds ratio = 4.49, $p < 0.001$), which was higher than the odds of heterotypic CN or CPA IGTM among CSA mothers, though the risk of second-generation CN was significantly elevated among CSA mothers (odds ratio = 3.40, $p < 0.001$). A recent systematic review of parenting outcomes in studies of maternal CSA (Lange et al., 2019) documented a wide range of homotypic continuity rates, with lower estimates in studies that used objective measures of second-generation CSA, such as validated questionnaires or CPS records. Madigan et al.'s (2019) meta-analysis reported a moderate effect size for homotypic CSA continuity (d = 0.39, 95% CI: 0.24–0.55), a similar effect size for heterotypic continuity from parental CSA to second-generation CN (d = 0.34, 95% CI: 0.17–0.51), and small effect sizes for heterotypic continuity of CSA to CPA and CEA. Overall, biased sampling approaches, such as patients who are currently in therapy (Glasser et al., 2001), and the absence of prospective designs limit our understanding of CSA transmission. Indeed, some research suggests that, though moderate homotypic continuity of CSA may exist, rates may be lower than, or comparable to heterotypic relations between CSA and CN (Madigan et al., 2019, Ney, 1988), which may be consistent with the categorization of second-generation CSA as a "failure to protect" the child in wake of parental CSA.

Child Emotional Abuse There is a very small literature on CEA IGTM. This dearth of information is particularly concerning amidst increasing evidence that CEA may be the most pernicious form of maltreatment (Berzenski & Yates, 2010, 2011; Kent et al., 1999; McGee et al., 1997; Spertus et al., 2003; Yates & Wekerle, 2009). Ney (1988) found that CEA correlated most strongly with CEA in the next generation, with smaller but significant relations with CPA and a non-significant relation with emotional CN in the next generation. Haapasalo and Aaltonen (1999) found that maternal CEA correlated with parent-reported child CEA ($r = 0.48$, $p < 0.05$) among *non*-CPS referred families, but there were only small, non-significant correlations between maternal CEA and either mother-reported or CPS-reported child CEA among CPS-referred families.

Perhaps more than any other subtype, research on CEA is complicated by a lack of definitional clarity, and an underrepresentation of CEA reports in documented maltreatment cases. Therefore, it may be useful to begin studying CEA IGTM by examining relations between CEA in the first generation and rejecting or verbally hostile parenting in the second generation. Studies of this nature provide some support for homotypic CEA transmission (Fujiwara et al., 2010; McCullough, et al., 2014; Whitbeck et al., 1992). Likewise, Madigan et al. (2019) documented a moderate effect of parental CEA on second-generation CEA (d = 0.57, 95% CI: 0.43–0.71), higher than effects on other maltreatment types, though these studies focused mainly on second-generation negative parenting broadly. At present, there remains insufficient research to determine homotypic and heterotypic rates of validated CEA IGTM.

Child Neglect As discussed previously, CN differs from other maltreatment types, in that it consists of acts of omission, rather than commission. Therefore, the IGTM of CN may differ from other types of maltreatment. Failure to protect a child by exposing them to other types of maltreatment is one way that CN overlaps with other reported instances of maltreatment, but several other forms of neglect exist. CN may take on physical, supervisory, and/or emotional forms, but the field has not yet parsed the IGTM of CN across those specific categories. Kim (2009) found that 21.1% of parents who experienced CN had children with CN histories, compared to 9.3% of parents who did not experience CN (odds ratio = 2.61, $p < 0.001$). Among parents with a history of CN, 9.9% physically abused their children, compared to 5.1% without such histories (odds ratio = 2.03, $p < 0.001$). However, although both homotypic and heterotypic

transmission rates were significant, only mothers' CN (and not mothers' CPA history) predicted CN in the second generation when other factors (e.g., ethnicity, number of children in the household) were controlled. Similarly, Yang et al. (2018) found that 22.6% of mothers with a history of CN had children with a history of CN, which was significantly higher than the base rate of CN among non-CN mothers (11.06%). This homotypic association (odds ratio = 2.35, $p < 0.001$) was higher than the increased odds of second-generation CPA among mothers with histories of CN (12.2%) as compared to mothers without a history of CN (8.8%; odds ratio = 1.45, $p = 0.22$). Bartlett et al. (2017) reported similar rates, with 23.5% of mothers who had a history of CN having children with substantiated CN reports, compared to 11.8% among mothers who did not experience any type of maltreatment. Finally, Widom et al. (2015) reported significantly increased rates of second-generation CN among parents with a history of CN, compared to non-maltreated parents (odds ratio = 1.96, $p < 0.001$). Moreover, these odds were higher than those of CPA among CN parents (odds ratio = 1.30, $p > 0.05$), though not higher than those of CSA among CN parents (odds ratio = 2.20, $p < 0.05$).

A handful of studies have examined more specific distinctions among experiences of CN. For example, Ney (1988), found that mothers' own *physical* CN was most strongly related to physical CN of their own children and second-generation CSA, and only very weakly to emotional CN of their children. However, although these relations were consistent with a model of failure to protect, none of the correlations attained significance. In contrast, Ney (1988) found that mothers' own history of *emotional* CN was significantly correlated with their child's emotional CN, as well as with CEA and CPA in the next generation, but it was not significantly correlated with physical CN or CSA in the second generation. Focusing on *infant* neglect, Bartlett and Easterbrooks (2015) found a non-significant association (OR = 1.77, $p = 0.062$) between maternal history of substantiated CN and infant neglect in the second generation. Overall, Madigan et al. (2019), in their meta-analysis, reported a small effect of parental CN on second-generation CN (d = 0.24, 95% CI: 0.11–0.37), similar in size to effects of parental CN on second-generation CPA (d = 0.20, 95% CI: 0.06–0.33), CSA (d = 0.25, 95% CI: 0.04–0.46), and CEA (d = 0.15, 95% CI: −0.07–0.37).

Summary Taken together, these findings suggest that homotypic continuity of IGTM is more prevalent than heterotypic continuity of IGTM, although the extent and details of this phenomenon remain unclear, particularly for CEA. In most studies that used odds ratios and base rates, the experience of a type of maltreatment was more likely to relate to that same type of maltreatment in the second generation (i.e., homotypic IGTM) than to other types (i.e., heterotypic IGTM), but, importantly, other types of maltreatment remain more likely to occur than no maltreatment at all. Instances of type-specificity (i.e., higher rates of homotypic IGTM relative to heterotypic IGTM) were most pronounced in studies of CPA, though CN also displayed consistent homotypic continuity of a smaller magnitude, and studies of CSA and CEA also suggested strong homotypic continuity (though methodological issues impede confidence in the estimates for these subtypes). Although Madigan et al.'s (2019) meta-analysis provides significant support for these relations, the effects reported by these authors were based on broad inclusionary criteria for child maltreatment, and were not limited to studies of validated, substantiated, maltreatment reports. The inclusive approach used by these authors has significant advantages in terms of identifying the largest collection of reports and prioritizing sensitivity in effect detection, particularly in areas where there is likely reporting ambiguity (e.g., CEA). However, it is important to also distinguish these estimates from those that prioritize specificity of substantiated and/or validated instruments, because clarifying information about rates may be gained from this comparison.

Undifferentiated IGTM

Beyond the form of continuity and the relative prevalence of type-specific transmission, a third question informed by a multidimensional model of IGTM asks whether certain subtypes of parental maltreatment are more vulnerable to IGTM in general than others. Studies measuring undifferentiated IGTM wherein experiences in the second generation are aggregated across maltreatment subtypes are best suited to address this third question. In one sample of maltreated mothers, for example, those who had specifically experienced CPA had children who had been maltreated 68.1% of the time, compared to 61.7% of non-CPA mothers, while mothers who had experienced CSA had maltreated children 71.6% of the time compared to 59.1% of non-CSA mothers, and mothers who had experienced CN had maltreated children 63.7% of the time, compared to 64.2% of non-CN mothers (Zuravin et al., 1996). Although these rates of undifferentiated IGTM are fairly comparable, particularly for CPA and CSA, the authors note that there was a trend for CSA to increase the risk of second-generation maltreatment marginally more than the other two types of maltreatment. Similarly, Pianta Egeland and Erickson (1989a) found a rate of 60% transmission from mothers with a history of CPA to any type of maltreatment by age 6, a 69.2% rate in mothers with a history of CSA, and a 44.4% rate in mothers with a history of CN. Spieker et al. (1996) compared odds ratios in a logistic regression predicting aggregated second-generation maltreatment effects and found that CPA and CSA had similar weights, with CSA yielding an odds ratio of 2.6 ($p > 0.05$) for second-generation maltreatment, while CPA was slightly lower with an odds ratio of 2.3 ($p > 0.05$). Berlin et al. (2011) found that 16.7% of mothers who had experienced CPA had maltreated children, compared with 7.1% of controls, whereas 9.4% of mothers who had experienced CN had maltreated children, which was a non-significant difference when compared to 7.7% of controls with maltreated children. Additionally, although Ney (1988) analyzed subtypes of maltreatment independently, he found overall higher correlations between mothers' own CPA, CEA, and *emotional* CN experiences with second-generation maltreatment, than of mothers' own history of *physical* CN or CSA with second-generation maltreatment. St. Laurent and colleagues (2019) found the highest rate of undifferentiated IGTM among mothers experiencing *physical* CN (50.8%, compared to 32.3% among non-maltreated mothers, and 40–43.8% among mothers who had experienced other maltreatment subtypes). In a recent meta-analysis of IGTM by Assink et al. (2018) that did not examine type-specific transmission, maltreatment subtype in each generation was found to be a significant moderator of overall IGTM effect size. Specifically, effect sizes for undifferentiated IGTM were highest among mothers who experienced CPA, followed by CEA, with CSA and CN showing notably smaller effects.

Summary Evidence as to whether specific types of maltreatment in one generation differ in their likelihood of predicting any maltreatment type in the next generation remains equivocal. There seems to be trend suggesting that CSA may evidence slightly higher rates of undifferentiated continuity, followed by CPA, and then CN. However, the varied methodological and definitional challenges researchers face when studying any particular maltreatment type may contribute to ongoing lack of clarity in these patterns. Importantly, other aspects of the maltreatment experience, such as severity and age of exposure, may also affect IGTM rates. Moreover, these features may differ systematically between subtypes. For example, severity of maltreatment is associated with higher rates of IGTM (Collin-Vezina & Cyr, 2003; Crouch et al., 2001; Leifer et al., 2004; Spieker et al., 1996; St-Laurent et al., 2019; Zuravin et al., 1996), and certain types of maltreatment may average higher severity rates than others. Further, Thornberry and Henry (2013) found that individuals who experienced maltreatment in adolescence were significantly more likely to perpetrate maltreatment in the second generation than those who experienced maltreatment in

childhood, perhaps, in part, because adolescent victims had a higher proportion of CPA and CSA experiences than child victims. Lastly, certain forms of maltreatment may evidence greater comorbidity with other maltreatment types, and comorbidity has been associated with higher rates of IGTM (Kim, 2009). Albeit mixed, extant evidence highlights the need for ongoing research efforts, and illustrates how the proposed multidimensional model of continuity can continue to advance our understanding of IGTM.

A Multidimensional View of IGTM Etiology

As with rates of transmission, the mechanisms by which maltreatment in the first generation influences the prevalence and form of maltreatment in the second generation may vary by subtype. In studies that have examined specific maltreatment subtypes, it is possible to examine the mechanisms associated with each type to inform an integrated view of if and how these IGTM mechanisms may vary across different forms of maltreatment. Given the lack of clarity in aggregated research studies, we focus our discussion of IGTM etiology on studies of specific maltreatment subtypes.

Mechanisms of IGTM fall into three categories when viewed from the multidimensional perspective: those that are specific to particular subtypes (e.g., only explain transmission of CPA, but not other types of maltreatment), those that appear to be common to all subtypes, and those that are present across multiple types of maltreatment but operate differently depending on the subtype. A final group of mechanisms may be unique to instances when IGTM involves a transfer from a parent victim of childhood maltreatment to maltreatment in the second generation that is perpetrated by a partner, rather the parent directly. Although we do consider this case in instances of CSA (e.g., when a mother with a CSA history has a child who also experiences CSA, but it is not perpetrated by the mother), we encourage ongoing work to explore these patterns in other maltreatment subtypes (e.g., when a parent with a history of CPA selects a partner who physically abuses their children).

Subtype-Specific IGTM Mechanisms

Several subtype-specific mechanisms for IGTM have been identified, with the bulk of this research centered on studies of CPA. First, research indicates that consistency of parental discipline in the second generation can explain CPA IGTM, such that lower levels of disciplinary consistency are associated with higher rates of homotypic IGTM (Pears & Capaldi, 2001). Second, social learning theory suggests that parents' aggressive behavior toward their children may be a learned behavior stemming from observing their own parents' aggressive disciplinary styles, and has been invoked to understand homotypic IGTM in the related domain of corporal punishment (Muller et al., 1995; Ni et al., 2018). Third, Crouch et al. (2001) suggest that social support may influence CPA transmission. For example, assessing mothers' retrospective perceptions of early social support in their own childhood, they found that mothers' own CPA experiences were associated with less perceived early support, less current social support, and increased risk of CPA for their own children. These findings illustrate the power of social relationships as a potential buffer against IGTM, and are consistent with well-supported models of undifferentiated IGTM showing that social isolation contributes to IGTM (Berlin et al., 2011), whereas stable adult relationships are a key factor in breaking the abuse cycle (Egeland et al., 1988; see Schofield et al., 2013 for review).

Mechanisms that have been specifically linked to other types of maltreatment include a high rate of substance abuse with homotypic CSA transmission (Leifer et al., 2004; McCloskey & Bailey, 2000), low marital quality with rejecting parenting behaviors in parents who experienced CEA (Belsky et al., 1989), and empathy deficits in patterns of homotypic CN continuity (Bartlett & Easterbrooks, 2015). Research on the sequelae of CN also suggests that it predicts social

withdrawal (Hildyard & Wolfe, 2002), and that social withdrawal is a risk for perpetrating CN (Coohey, 1996). Although these associations suggest that social isolation may be a mediator of CN IGTM, this link has yet to be tested directly.

Genetic models have been advanced in recent studies of epigenetic mechanisms of intergenerational trauma transmission (e.g., Yehuda & Lehrner, 2018), but only one study has extended this approach to examine IGTM. Drawing a large multi-generational sample of grandparents, parents, and (grand)children, and using validated self-report assessments of maltreatment, Pittner and colleagues (2019) documented a significant genetic effect on CEA IGTM, but effects of the common environment were not significant. In contrast, IGTM of CPA and *emotional* CN demonstrated significant common environmental effects, but no significant genetic effect. This new evidence is exciting and encouraging, as investigations of genetic factors in IGTM, particularly if applied by subtype, could confirm and clarify established information about undifferentiated child maltreatment antecedents, such as aggressive tendencies (Ni et al., 2018) and autonomic nervous system functioning (Van Ijzendoorn et al., 2020).

Subtype-General IGTM Mechanisms

Insecure attachment has been implicated in the IGTM of several maltreatment subtypes, including CPA and CSA, as well as in studies of undifferentiated continuity (Collin-Vezina & Cyr, 2003; Egeland et al. 1988, 2002; Leifer et al., 2004; Rodriguez & Tucker, 2011; Zuravin et al., 1996). Difficulty forming healthy attachments has been identified as a consequence of multiple types of child maltreatment, as each type interferes with the perception of caregivers as reliable sources of security and support. Given the pernicious impact of malevolent caregiving on attachment, it is not surprising that insecure and/or disorganized attachment organizations are a shared mechanism underlying IGTM across multiple maltreatment types. Difficulties forming and maintaining positive relationships are also implicated in undifferentiated IGTM (Egeland et al., 1988; Jaffee et al., 2013; Leifer et al., 2004; Lunkenheimer et al., 2006). Indeed, a meta-analysis of undifferentiated IGTM identified stable relationships as a significant moderator of the continuity of IGTM (Schofield et al., 2013). The identification of stable relationships as a clear protective factor against IGTM further supports the salience of attachment organization as a subtype-general mechanism.

A small body of research points to the potential role of empathy as a candidate subtype-general IGTM mechanism. Although this supposition has not been explicitly tested across multiple subtypes of IGTM, research suggests that difficulties with empathy can be a consequence of multiple types of maltreatment experiences (Mielke et al., 2016), and empathy deficits have been associated with child abuse potential (Rodriguez et al., 2016). As noted earlier, Bartlett and Easterbrooks (2015) found that impaired empathy mediated pathways from parents own CN to second-generation CN (i.e., homotypic continuity), but additional replication and empirical tests of this hypothesis with other maltreatment types are needed. Relatedly, accumulating evidence that interventions to promote parents' reflective functioning can prevent maltreatment further implicates empathy as a subtype-general mechanism underlying IGTM (Byrne et al., 2019). A capacity to recognize and empathize with one's own childhood experiences of maltreatment and vulnerability both enables a parent to acknowledge and forgive their child's own missteps and motivates action in the service of protecting their child.

Importantly, in the last 5–7 years, a growing body of research points to interpersonal violence (IPV) a potential mechanism underlying undifferentiated IGTM. Among mothers, those with a history of maltreatment who experience IPV are significantly more likely to abuse or neglect their children than those who do not have a relationship characterized by IPV (Adams et al., 2019). Importantly, IPV appears to undergird IGTM above and beyond other correlates, such as substance use, antisocial personality, and depression (Jaffee et al., 2013), as well as parenting stress

and residential instability (St-Laurent et al., 2019). IPV also emerged as a robust predictor of child maltreatment perpetration in a recent meta-analysis of its antecedents (Van Ijzendoorn et al., 2020). This mechanism also aligns well with the consistently identified protective factors described above of secure attachment and safe stable relationships, and may explain one potential pathway by which those factors break down when the cycle is maintained. As yet, prior studies have only examined the role of IPV in undifferentiated continuity. However, IPV may be differentially salient across maltreatment subtypes, with particularly robust relations expected to underly CPA IGTM given known overlap between multiple types of violence victimization and perpetration (Grych & Swan, 2012).

Finally, parental psychopathology has been consistently implicated in the IGTM of multiple types of maltreatment, though evidence suggests it may operate in unique ways to foster or hinder the transmission of a particular maltreatment subtype. In the case of CPA, one study found that both depression and posttraumatic stress disorder (PTSD) *reduced* the likelihood of CPA IGTM (Pears & Capaldi, 2001), yet, in another study, depression *increased* the likelihood of homotopyic CPA IGTM as well as the heterotypic transmission of CN to CPA (but with no significant effects on the likelihood of CN in the second generation; Yang et al., 2018). Further, Leifer et al. (2004) found that depression and PTSD *increased* the likelihood of homotypic CSA IGTM, and Choi et al. (2019) similarly found that depression predicted undifferentiated second-generation maltreatment among mothers with a history of either CSA *or* CEA. Evaluating yet another type of psychopathology, research has shown that dissociation predicts increased IGTM of *both* CPA and CSA (Collin-Vezina & Cyr, 2003; Leifer et al., 2004; Narang & Contreras, 2000), as well as undifferentiated IGTM (Egeland & Susman-Stillman, 1996). Further, studies that aggregate across subtypes of parental maltreatment have yielded particularly conflicting results. For example, in a study that aggregated parents' experiences of CPA and CN, psychopathology did not emerge as a significant mediator of IGTM, which may reflect countervailing effects for CPA and CN (Berlin et al., 2011). However, in another study that aggregated across all types of maltreatment, prenatal depression predicted increased likelihood of perpetuating maltreatment in the second generation. Research on psychopathology and IGTM offers additional evidence that aggregated studies may obscure meaningful differences in processes underlying IGTM that are specific to individual maltreatment subtypes. Thus, as with phenomenological studies, we argue that mediation analyses of IGTM effects should be specific, both to types of maltreatment and to types of psychopathology.

Future Directions and Recommendations

Growing evidence suggests there is a significant degree of homotypic IGTM. However, there is a need for ongoing research, both in comparative studies across multiple maltreatment subtypes and in specific studies of individual subtypes, to solidify the interpretations offered here. Particularly in the case of CPA, where the most work has been done, a parental history of CPA appears to be associated with an increased risk of CPA in the next generation (i.e., homotypic IGTM), though CPA is also (less robustly) linked with other types of second-generation maltreatment (i.e., heterotypic IGTM). Definitional and methodological issues pervade all maltreatment research, but these concerns are particularly prominent in studies of CEA and likely contribute to the pronounced gap in research on this maltreatment subtype. Although we do not propose that IGTM is by any means exclusively homotypic, the preponderance of evidence suggests that there is at least a modicum of type-specific IGTM such that, by and large, rates of homotypic IGTM exceed those of heterotypic IGTM across maltreatment subtypes.

In terms of undifferentiated IGTM, studies that aggregate across maltreatment subtypes in the second generation suggest that each subtype of parent's own maltreatment is more likely to lead to some form of maltreatment in the second

generation as compared to not being maltreated. Although modest, extant evidence suggests that these rates of undifferentiated IGTM may be most pronounced in the wake of parent's own histories of CPA or CSA, relative to histories of CEA or CN. As discussed previously, however, it is possible that this evidentiary base reflects the relatively greater corpus of research on CPA and CSA, relative to that on CEA and CN, as well as the possibility that as-yet-unmeasured comorbid CEA and/or CN may be missed in studies of CPA and CSA.

Regarding the etiology of IGTM, select mechanisms may be specific to particular types of IGTM. For example, disciplinary actions and attitudes may be uniquely related to CPA transmission, whereas genetic mechanisms may be especially salient for CEA IGTM. Other mechanisms may be common to all types of maltreatment IGTM, such as attachment difficulties. Finally, although psychopathology is a common factor undergirding IGTM of all types, it appears that specific forms of psychopathology may be differentially salient across maltreatment subtypes. The clarity afforded by a multidimensional approach to understanding IGTM may counter or explain the null or inconsistent findings that have been obtained in undifferentiated studies of maltreatment (e.g., Berlin et al., 2011; Dixon et al., 2005).

When we first proposed this multidimensional model of IGTM, we believed the field was ready to implement new ideas and efforts in the study of IGTM, and we are heartened to see significant advances to this end (e.g., Madigan et al., 2019; Yang et al., 2018). However, there remains a need for ongoing progress in this effort, which will be facilitated by the resolution of several specific challenges. Foremost among these challenges is the noted comorbidity of maltreatment types, which makes subtype-specific investigations important, but also makes it difficult to draw conclusions about specific types of maltreatment in isolation. In addition, other features of maltreatment that make individual experiences distinct (e.g., severity, perpetrator identity, chronicity) also deserve attention to enact this new specificity-oriented framework. We continue to advocate for a paradigm shift toward an emphasis on maltreatment subtype to support increasingly specified investigations and foster our ability to address each and every feature of an individual's experience of IGTM. Similarly, environmental characteristics that covary with maltreatment (e.g., risky neighborhoods, poverty) also persist across generations and may contribute to IGTM. As such, broader contextual influences of risk (and protection) need to be integrated into fully specified models of IGTM. Our focus continues to center on maltreatment subtypes because they represent the broadest level at which we can begin to examine and understand specific experiences. However, we support and encourage a more thorough evolution in how we think about IGTM, in terms of greater attention to specificity wherever appropriate and whenever possible. In light of these ongoing challenges, we offer recommendations that detail successive increments by which this paradigm can be practically applied in research and practice.

First, more work needs to be done examining independent subtypes of maltreatment, their potential for type-specific IGTM, their transmission to aggregated measures of child maltreatment (i.e., undifferentiated IGTM), and mechanisms of transmission that may be specific to each subtype, general across types, or operate in potentially distinct ways across types. In particular, we highlight CEA and CN as virtually untouched areas of study, especially in terms of etiology. Despite the difficulties inherent in measuring these types of maltreatment, it is imperative that we focus more attention on these areas, perhaps by initially attending to related constructs, such as parental rejection (e.g., Belsky et al., 1989). Just as the overall maltreatment literature has acknowledged an increased need for research on CEA and CN, so, too, does the literature on IGTM demand their due consideration.

Second, studies that already measure several types of maltreatment must put forth greater effort to explicitly compare them, rather than simply aggregating or ignoring the existence of subtypes. Although aggregation may be appropriate and informative for some analyses, as well as a

necessity given statistical power considerations, it would be helpful to include comparative analyses, or at least descriptive results, along with more traditional, main-effect models. Providing descriptive information when a given study lacks the power to appropriately test differences would provide invaluable information to future meta-analysts who could eventually combine the information from several small studies of this type. As comparative studies begin to converge on common rates of transmission and estimates of homotypic continuity, intervention and prevention efforts can be more appropriately allocated and structured.

Third, as more evidence becomes available in these areas, meta-analytic studies must move toward more refined approaches to summarizing and clarifying this information. The available evidence already provides fertile ground for this type of investigation, and multiple meta-analyses of IGTM have emerged in the last 5 years (e.g., Assink et al., 2018), including one critically important effort which identified homotypic and heterotypic transmission rates by subtype (Madigan et al., 2019). However, persistent methodological differences across these areas make it difficult to close the book on these questions. In particular, when more subtype-specific studies of CEA and CN emerge, there will be a need to conduct new meta-analyses to determine their rates and forms of IGTM. Finally, no meta-analysis exists that evaluates mechanisms of transmission across subtypes. Given the inconsistencies in this domain, once sufficient research has been conducted, meta-analytic studies will be extraordinarily helpful.

Fourth, there is need for more prospective longitudinal studies of IGTM, particularly drawing on multiple sources of data to ascertain maltreatment experiences within and across generations (e.g., administrative data, multi-informant reports). Use of multi-reporter data is essential to provide the most sensitive and flexible estimates of IGTM for future aggregation efforts. As described in Schelbe and Geiger (2016), a gold standard study of IGTM would involve recruiting participants to form a nationally representative sample, enrolling children prior to their birth, and following them for multiple generations. Particular care must be taken when using retrospective studies in which participants are recruited for child maltreatment histories, as these types of samples can over-estimate the prevalence of IGTM. Similarly, studies focused on particular subtypes of maltreatment can stymie efforts to identify and compare heterotypic and homotypic IGTM. Finally, we offer a universal recommendation for researchers to exercise caution when discussing these constructs and framing interpretations. Part of the danger in extant research approaches rests in their lack of clarity about definitions of maltreatment. In addition to definitional clarity, interpretations must be approached carefully in the absence of replication and within the confines of the research design. If aggregated maltreatment groups are used, conclusions should not be drawn about single subtypes. Similarly, in examinations of single subtypes, generalizations about mechanisms of transmission of maltreatment broadly should not be made. To the extent that we fail to adopt greater specificity in our dissemination efforts, we risk overlooking important implications for practice at best, and misinforming prevention and intervention efforts at worst.

A multidimensional model of IGTM has the potential to yield new findings to inform evidence-based prevention and intervention efforts. For example, by identifying mechanisms of IGTM that are robust across subtype, we can focus applied efforts on those processes that are apt to yield the greatest gains in prevention of IGTM. Fortunately, these mechanisms – stable relationship building, reflective functioning/empathy development, and reduction in psychopathology – are highly translatable and already targets of numerous therapeutic endeavors. Further, continued efforts to elucidate subtype-specific mechanisms of IGTM will pave the way for targeted intervention efforts, such as parental discipline training for individuals who have experienced CPA as children. In addition, a subtype-specific IGTM model encourages attention to discontinuities, which can inherently inform practice by refining outdated one-size-

fits-all intervention models (e.g., by identifying ages at which interventions may be more effective for particular subtypes based on subtype-specific IGTM mechanisms).

Despite ongoing gaps in extant research on IGTM, and the need for clarity and explication in several areas, we believe the field is advancing toward a more focused and considered program of research on IGTM. In the years since the first edition of this volume was published, several authors have explicitly incorporated subtype comparisons into their work. In particular, a special section on maltreatment and parenting in *Development and Psychopathology* (Alink et al., 2019) contained a number of articles that critically advance the science in this area by explicitly examining subtypes of maltreatment in their work on IGTM. Most notably, the meta-analysis by Madigan et al. (2019) has taken great strides toward identifying rates of homotypic and heterotypic IGTM. Other key studies noted in this chapter that have directly compared IGTM across subtypes include those by Widom et al. (2015), St-Laurent et al. (2019), and Yang et al. (2018), with the latter being the only study to explicitly compare *mechanisms* of IGTM across homotypic and heterotypic transmission patterns. In terms of identifying rates of transmission, the literature on CN has advanced over the last several years, whereas the literature on CEA still lags behind, highlighting a key area for continued growth. Regarding mechanisms of transmission, IPV has emerged as a newly salient subtype-general IGTM mechanism, supporting extant evidence that safe stable relationships are a key factor in discontinuity of IGTM. Finally, genetic factors are poised to dramatically advance our ability to study mechanisms of IGTM over the next decade (cf. Pittner et al., 2019). Notwithstanding these notable advancements, we nevertheless renew our call for studies of IGTM that move beyond generalizations to focus on distinctions among maltreatment subtypes and specific features that define unique experiences (such as multiple maltreatment overlap). In continuing this paradigmatic shift in our investigative and interpretive lenses on IGTM, we will be able to more effectively target intervention and prevention efforts toward appropriate and modifiable mechanisms and more fully understand developmental pathways across unique experiences.

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