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Childhood abuse and neglect experiences, Hostile-Helpless attachment, and reflective functioning in mentally ill filicidal mothers

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ABSTRACT

The present study represents the first empirical investigation of the mechanisms - a Hostile-Helpless (HH) attachment and reflective functioning (RF) – through which childhood abuse and neglect (CA&N) experiences may impact a mother's likelihood to commit filicide. The sample was comprised of 46 mentally ill mothers. Differences in attachment-derived risk variables between filicidal mothers (FM) and non-filicidal mothers (NFM) were also examined. FM (n = 23) reported lower RF, higher HH attachment, and a more severe history of CA&N, compared to NFM (n = 23), but did not differ on the severity of childhood experiences of loss of and/or separation from attachment figures. Bayesian analysis indicated that the mediated effect of more severe CA&N on the likelihood of committing filicide through higher HH attachment was significantly amplified by lower RF. A developmental interpretation of filicide is proposed and clinical implications for prevention and attachment-based interventions with at-risk mother-child dvads are discussed.

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KEYWORDS

Hostile-Helpless attachment; reflective functioning; filicide; mental illness; childhood abuse and neglect

The family environment is supposed to protect children from harm. However, a growing body of evidence suggests that infants and young children are at risk of violence and death at the hands of their primary caregivers and other family members (UNICEF, 2014). Epidemiological data indicate that more than half of all infant and child deaths are caused by parents, and, in industrialized countries, the official filicide rate ranges from 2.4 to 7.0 per 100,000 residents (Flynn et al., 2013; Porter & Gavin, 2010). Although there is no single definition of child murder that specifies the age or relationship of the parties involved (e.g. whether stepparents are included or excluded), the term *filicide* is generally used to refer to the murder of a child aged 1 year or older, as committed by the parent. The term may also be used as a broader synonym of both *infanticide* – murder of a child younger than 1 year – and *neonaticide* – murder of a child younger than 24 hours (Friedman et al., 2005).

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Because the broad category of filicide encompasses a heterogeneous set of circumstances (Sidebotham, 2013), it is sometimes miscategorized as death by another cause (UNICEF, 2014). In addition, although some research has attempted to elucidate the role of psycho-social factors in the determination of filicide, the act remains a largely understudied public health issue (Friedman & Resnick, 2007). Mothers' risk factors for committing filicide include (to varying extents): unwanted children, lack of prenatal care, lack of a stable couple relationship, young age, low socio-economic status, traumatic childhood experiences, and a psychiatric diagnosis (Debowska et al., 2015). In particular, the relationship between mental illness and filicide has been repeatedly demonstrated (McKee & Bramante, 2010), with the most frequent diagnoses shown to be psychosis and anxiety/ mood disorders with psychotic features (Flynn et al., 2013; Friedman et al., 2005). What remains unclear, however, is whether such psychiatric diagnoses represent the key factor associated with filicide, or whether other factors might also play an essential role.

Childhood abuse and neglect experiences and Hostile-Helpless mental states as risk factors for filicide

Investigations of mothers' childhood abuse and neglect (CA&N) experiences and attachment states of mind are crucial for identifying the risk factors for filicide, as both of these variables are likely detrimental to the quality of care given to a child. This view is even more important when considered alongside evidence that a sizable number of mothers experience a serious mental illness before or after childbirth, with the risk of onset remaining elevated during the early years of parenting (Oyserman et al., 2000). Following pregnancy and childbirth, a mother must re-organize her identity as a woman to make the psychological shift to becoming a provider of care and protection to her child (Ensink et al., 2014; 2016b; Slade et al., 2009; Stern, 1995); such re-organization inevitably re-activates her internal representations of her own caregivers. In mothers who continue to experience voices from the past and the lingering effects of trauma (i.e. what Fraiberg et al. (1975) conceptualized as "ghosts in the nursery"), this re-activation can be quite fraught.

Attachment theory (Bowlby, 1969/1982; 1973; 1980) provides an extremely useful framework for understanding the way in which past trauma (i.e. CA&N, loss of and/or separation from attachment figures) may affect a mother's relationship with her child, as it roots both the development of representations of the self and other and the development of strategies for regulating impulses and emotions in early attachment to a caregiver. From this view, the loss of and/or separation from attachment figures in the early years and/or childhood experiences of neglect and frightening/abusive experiences involving attachment figures (e.g. direct or observed physical/sexual abuse or extreme emotional threats) may generate modified internal representations of the self and other and negatively affect the ability to process attachment-related thoughts and feelings. However, while CA&N has been shown to predispose individuals to delivering disturbed caregiving in later life (e.g. Lyons-Ruth & Block, 1996; Main & Hesse, 1990), the loss of and/or separation from attachment figures in the early years has not (Lyons-Ruth et al., 2005; Schuengel et al., 1999).

Most studies on the effects of CA&N on adults' caregiving quality have used the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985), which is a semi-structured

interview assessing an individual's current state of mind about past parent-child experiences. Initially, the Adult Attachment Scoring and Classification Systems created by Main & Goldwyn (1984, 1991) was designed to assess attachment in low-risk populations and was then extended for use with at-risk populations (Bakermans-Kranenburg & van IJzendoorn, 2009). The Main & Goldwyn (1984, 1991) and Main et al. (2003) coding system leads to an overall classification of secure/autonomous, insecure/dismissing, insecure/ preoccupied, or unresolved with respect to experience of loss or abuse. The Unresolved classification indexes disorganization on the AAI by coding lapses in discourse or reasoning in relation to experiences of loss or trauma. However, an important conceptual and methodological problem arises when there has been no serious loss or abuse to inquire about on the AAI.

Another approach to assessing disorganization on the AAI is to evaluate the presence of a pervasively unintegrated Hostile–Helpless (HH) state of mind regarding attachment relationships that might present on the AAI secondary to chronic relational trauma, including sexual, physical, or emotional abuse (Lyons-Ruth et al., 1995-2005). In this vein, more recently, Lyons-Ruth et al. (1995-2005) developed the HH coding system to capture a second set of disorganized indicators on the AAI, based on contradictory representations of one or more globally devalued caregivers coded across the entire interview, rather than primarily in relation to discussions of trauma or loss. The HH coding system is particularly appropriate with at-risk populations demonstrating severe psychopathology, historical experiences of interpersonal trauma, and disturbed early attachment to detect indexes of adult attachment disorganization (Lyons-Ruth & Block, 1996; Lyons-Ruth et al., 2007; 2003; Melnick et al., 2008; Milot et al., 2014). The strength of this approach aligns with evidence indicating that U and CC categories assigned with the Main et al. (2003) coding system are lower than expected in clinical populations with a childhood history of loss or trauma – including persons who have been diagnosed with borderline personality disorder (Barone et al., 2011; Finger et al., 2015), men who physically abuse their spouse (Holtzworth-Munroe et al., 1997), personality-disordered violent criminal offenders (Van IJzendoorn et al., 1997), and individuals with histories of childhood abuse (Boulet et al., 2004; Byun et al., 2016).

The HH attachment state of mind describes the overall psychological organization of adults displaying explicit contradictory/conflicting but unintegrated emotional evaluations of a caregiver across the transcript, often including evidence of an unexamined identification with that caregiver. These contradictory/conflicting evaluations are typically accompanied by evidence of globally negative devaluing mental representations of the self and/or caregiver. Another common presentation is demonstrated by recurrent references to fearful affect that may or may not have an identified source in a traumatic experience (Lyons-Ruth et al., 2005; Melnick et al., 2008). Within the overall category of HH attachment, two subtypes have been identified: a predominantly hostile subtype and a predominantly *helpless* subtype. Individuals with a hostile mental state tend to omit their painful feelings throughout the interview, while identifying with a malevolent and devalued caregiver in an attempt to master their unbearable feelings. On the other hand, individuals with a helpless mental state identify with a caregiver they perceive to have abdicated his/her parental role and feel vulnerable while struggling with a continuing sense of badness, unworthiness, and fearful affect. Although some individuals may be polarized towards either a hostile or a helpless mental state, others report a mix of both

(Lyons–Ruth et al., 1995–2005). A more elaborated description of the HH classification is included in the "Methods" section.

Mothers who have been exposed to neglect and frightening/abusive experiences involving attachment figures (including direct or observed physical/sexual abuse and extreme emotional threats) in infancy often segregate their traumatic memories – and particularly the associated affects – in order to protect themselves against such painful experiences (Fraiberg et al., 1975). Though mothers may not be aware of these unintegrated contents, such contents remain mentally active and may ultimately be expressed in speech and behavior (Lyons-Ruth et al., 2003). As a consequence, mothers' capacity to establish a cohesive personality and integrate memories, emotional states, and physical experiences might be subject to interference (Herman, 1992), and this may lead them to develop distorted perceptions of the self and others in the context of their intimate relationships (e.g. the mother–child relationship).

For a mother whose response to her baby's distress is impeded by her own memories of punitive attacks and/or emotional and physical abandonment by her own parents, the mother-child relationship may be one of forced intimacy, whereby the responsibility for caring for the child can be especially overwhelming (Lyons-Ruth & Spielman, 2004). When the mother presents an unintegrated HH attachment mental state, the mother-child relationship will carry both sides of a (potentially) highly polarized internal working model, insofar as "the mother may experience herself as both the angry or unavailable parent and the vulnerable baby; her baby may be experienced as both controlling and helpless" (Lyons-Ruth & Spielman, 2004, p. 327). By the same token, the mother may be "often caught between opposing fears: either she will assert limits and become the uncaring, domineering parent of her own childhood who then will emotionally abandon her child, or she will withdraw and fail to set limits and the child will become the coercive, emotionally abusive figure from the past" (Lyons-Ruth & Spielman, 2004, p. 327). In the presence of her infant's pain, distress, fear, anger, or perceived rejection, a mother lacking "an inner dialogue through which to integrate and contain the activation of intense reexperiencing of her own early vulnerability" (Melnick et al., 2008, pp. 413–414) may re-live her painful traumatic memories (Ensink et al., 2014). This may place her in a position of unintended jeopardy, significantly limiting or distorting her capacity to perceive and appropriately respond to her infant's affective communications and initiatives.

Although the HH coding system is increasingly being used in research with clinical samples and has repeatedly shown good reliability (Frigerio et al., 2013; Lyons-Ruth et al., 2007; 2005; Melnick et al., 2008; Milot et al., 2014), scant research has investigated the HH state of mind in mentally ill filicidal mothers – an extremely at-risk group, given their psychopathology and filicidal behavior. To the best of our knowledge, the only attachment-based study on filicide was conducted by Barone et al. (2014), who investigated the role of psychiatric diagnoses, socio-economic status, traumatic experiences, and attachment states of mind in distinguishing filicidal mothers from mothers with mental illness and mothers from a normative sample. The findings showed that, relative to normative mothers, both mentally ill mothers and filicidal mothers had a lower socio-economic status; more experiences of trauma; and more insecure, unresolved, and HH attachment states of mind. Of relevance, only the unintegrated HH state of mind (and not simply U/CC or insecure states of mind), in association with a psychiatric diagnosis, emerged as a significant risk factor for filicide.

These results represent an initial step in addressing the essential mechanisms involved in filicide from an attachment perspective and highlight the need for further investigation of whether – and to what extent – several attachment-derived variables are predictive of filicide in the presence of maternal mental illness. As only a minority of mentally ill mothers and mothers who report traumatic attachment experiences (e.g. abuse, neglect) during childhood kill their children, in spite of their deficient parenting skills (Tyano & Cox, 2010), filicide is likely determined by a "constellation of risk factors" (Papapietro & Barbo, 2005, p. 505). The identification of these risk factors would be undoubtedly valuable for the development and implementation of strategies to prevent filicide and related atypical and abnormal maternal behaviors.

Reflective functioning in mentally III mothers

Motherhood may increase feelings of vulnerability, anxiety, fear, helplessness, and anger (Raphael-Leff, 2010). Given this, mental illness may complicate mothers' ability to care for or soothe their child, as they may be coping with negative feelings and likely to project these onto their child (Oyserman et al., 2000). In this vein, reflective functioning (RF) – the capacity to understand one's own and others' mental states (i.e. intentions, feelings, thoughts, desires, and beliefs) in order to make sense of and anticipate others' actions (Fonagy & Target, 1997) – has been found to be protective in the face of mothers' mental illness and/or histories of trauma (Berthelot et al., 2015; Ensink et al., 2014; 2016b; 2017). In mothers, higher RF implies a better capacity to screen their own negative intrusive, aggressive, and withdrawn responses (which may undermine interactions with their child) and to implicitly understand that affects become less intense with time and can be changed through thinking and seeing situations differently (Ensink et al., 2016b). Furthermore, higher RF may help mothers filter "their own affects of aggression, anxiety, and fear, and screen their infants from negative behaviours, because they are more aware of their own affects and can see themselves from the outside and imagine the infants' distress" (Ensink et al., 2016b, p. 14).

There are some indications that mothers with a history of CA&N may present deficits in mentalization about emotionally painful experiences of fear and helplessness; such deficits may lead them to carry out non-mentalizing, teleological actions with their child, crudely translating mental states into behaviors that ignore the child's intentionality (Fonagy, 1993). Such actions may reveal an unconscious identification with an earlier aggressor (Fraiberg et al., 1975) and have a disorganizing impact by increasing anxious arousal in the context of the infant's distress. In this respect, it is likely that low RF represents a risk factor for filicide, because mothers with a history of CA&N tend to also lack sufficient insight and appropriate boundaries to realize when they are harming their child (Fonagy & Target, 2005). All of the abovementioned expectations stem from the view that "the development of children's understanding of mental states is embedded within the social world of the family, with its interactive network of complex and at times intensely emotionally charged relationships, which, after all, constitute the primary content of early reflection" (Fonagy & Target, 1997, p. 681). Thus, RF is strongly linked to attachment experiences and a potential mediator of the intergenerational impact of childhood maltreatment (Ensink et al., 2014; Fonagy et al., 1994; Kwako et al., 2010).

However, recently, Fonagy and Luyten (2009) suggested that "mentalization is likely to be a function loosely coupled with the attachment system" (p. 1374). In their view, although mentalization originates in the context of attachment relationships, it subsequently follows a distinct developmental trajectory, whereby some individuals develop mentalization capacities from other relationships that give sense to difficult experiences, even if their initial attachment was insecure (Ensink et al., 2014). Although there is general agreement that secure attachment and RF go hand in hand, the direction of the influence (or whether they develop in tandem) is unknown (Borelli et al., 2015). Preliminary evidence indicates that the capacity to mentalize upon one's past experiences might act as a protective factor against maladaptive outcomes (Arnott & Meins, 2007; Fonagy et al., 1995), insofar as engaging in a reflective process about these experiences may promote "positive adaptation within the context of significant adversity" (Luthar et al., 2000, p. 543).

It is paramount to note that no study has assessed RF in mentally ill filicidal mothers, though studies with mentally ill non-filicidal mothers have shown their very low capacity for RF (with scores falling between 3 and 4; for a review, see Katznelson, 2014). Since higher rates of CA&N and HH states of mind have been found in filicidal mothers relative to normative mothers and mothers with psychiatric diagnoses who have not committed filicide (Barone et al., 2014), it is reasonable to expect that RF scores may be even lower in filicidal mothers. In light of this, it seems highly unlikely that high RF may prevent mothers with an HH state of mind and a history of CA&N from committing filicide; whereas it is likely the opposite: that lower RF may increase the risk of filicide in mentally ill mothers with an HH attachment state of mind and a history of CA&N.

Present study

The present study aimed at identifying the mechanisms (i.e. HH attachment and RF) through which CA&N experiences might increase filicide likelihood in a sample of mentally ill mothers. The study also investigated whether a constellation of attachmentderived risk variables (i.e. CA&N, childhood experiences of loss/separation from attachment figures, HH attachment, and RF) would differentiate mentally ill mothers who had committed filicide ("filicidal mothers" or "FM") from mentally ill mothers who had not committed filicide ("non-filicidal mothers" or "NFM"). Specifically, the following hypotheses were tested:

- FM would score lower on RF and higher on HH attachment, and present a more severe history of CA&N and early separation from and/or loss of attachment figures, relative to NFM;
- (2) More severe CA&N experiences would increase filicide likelihood through both higher HH attachment and lower RF (double mediation model). This hypothesis was based on Fonagy and Target's idea (Fonagy & Target, 1997) of the importance of family emotional context and the quality of early parent-child interactions for the development of mentalization;
- (3) More severe CA&N experiences would increase filicide likelihood through higher HH attachment, especially in mothers with lower RF (moderated mediation model). This hypothesis was consistent with the most recent suggestion by Fonagy and

Luyten (2009) on the distinct developmental trajectories followed by attachment and mentalization, as well as with the lack of conclusive evidence on the unidirectional influence of secure attachment on RF (Borelli et al., 2015).

Method

Participants

The participants were 46 mothers who met the criteria for a mood or anxiety disorder with psychotic features, or a psychotic disorder. Of these, 23 had committed filicide. The age range for the murdered children was 6 months to 7 years, with 17.4% (n = 4) murdered in their first year of life, 56.5% (n = 13) in their preschool years, and 26% (n = 6) in their primary school years. Mothers' socio-demographic characteristics are displayed in Table 1.

Procedure

Mothers were matched by age and recruited through multiple procedures, by group: all NFM were recruited from psychotherapy waiting lists at mental health facilities, whereas 21 FM were enrolled through forensic psychiatric hospitals and the remaining 2 FM were recruited from housing communities. All mothers gave informed consent to participate. Ethical approval for the research was obtained by the institutional ethics committee.

Measures

Psychiatric diagnosis

Psychiatric diagnoses were obtained from the official reports of psychiatric hospitals or other mental health facilities and were made by expert clinicians. Specifically, anxiety/ mood disorders with psychotic features and psychotic disorders were assessed using the Structural Clinical Interview for DSM-IV Axis I Disorders, Italian version (SCID I; First et al., 1994; Mazzi et al., 2000). In scoring the SCID I, only the Axis I diagnosis that represented the main clinical problem was considered.

HH attachment

The AAI (George et al., 1985) was administered to each woman (12–37 months after the filicide for the FM mothers) and coded independently by two reliable and certified researchers, in accordance with the HH attachment coding system of Lyons–Ruth et al. (1995–2005). This coding system was chosen over that of Main et al. (2003) in order to discriminate between states of mind reflecting traumatic relational and/or physical experiences, which are given a primary classification of HH and have been frequently found in previous research (Barone et al., 2014). On the scale, subjects are classified as having HH attachment if they score 6 or higher on a 9-point scale for HH states of mind, whereas a score of 5 leaves the classification decision open to the coder's judgment. The HH attachment classification indicates that the subject's discourse contains elements of one or both of the hostile or helpless strategies for managing attachment-related affects. In the present study, before ratings were assigned, transcripts were also scored for six indicators that previous clinical observations have linked to these contradictory

d RF by group ($N = 46$).		р	.180				.535				.116			.003						<.001								.295									
i, HH attachment, an		$\chi^{2}_{(df)}$	$3.43_{(2)}$				$1.25_{(2)}$				$2.47_{(1)}$			$8.85*_{(1)}^{*}$						24.20*** ₍₆₎								$1.10_{(1)}$									
ss/separation events	NFM ($n = 23$)	n (%)		3 (13.0)	4 (17.4)	6 (26.1)		7 (30.4)	13 (56.5)	3 (13.1)		5 (21.7)	18 (78.3)		18 (78.3)	5 (21.7)	3 (60.0)	1 (20.0)	1 (20.0)		0	3 (13.0)	1 (4.4)	10 (43.4)	1 (4.4)	1 (4.4)	7 (30.4)		3 (13.0)	20 (87.0)	7 (35.0)	4 (20.0)	3 (15.0)		4 (20)	2 (10)	0
CA&N experiences, lo	FM ($n = 23$)	n (%)		8 (34.8)	11 (47.8)	4 (17.4)		9 (39.1)	13 (56.5)	1 (4.5)		10 (43.5)	13 (56.5)		8 (34.8)	15 (65.2)	4 (26.7)	7 (46.6)	4 (26.7)		14 (60.9)	2 (8.6)	1 (4.4)	6 (26.1)	0	0	0		1 (4.3)	22 (95.7)	4 (18.2)	2 (9.1)	7 (31.8)		4 (18.2)	3 (13.6)	2 (9.1)
Table 1. Mothers' socio-demographic information,			Education	Secondary school or less	High school	Master's degree	SES	Low	Medium	High	Psychiatric diagnosis	Psychotic	Anxiety-mood with psychotic features	HH attachment	Absence	Presence	Hostile subtype	Helpless subtype	Mixed subtype	RF subtype	Unintegrated/bizarre	Disavowal	Distorted/self-serving	Naïve/simplistic	Over-analytical/hyperactive	Miscellaneous	Ordinary understanding	CA&N experiences occurrence	Absence – level 1	Presence	Harsh punishment only – level 2	Witnessed violence only – level 3	Verbal abuse only – level 4	Physical abuse, sexual abuse, or protective	services/foster care involvement – level 5	Two under level 5 – level 6	All those under level 5 – level 7

(Continued)

	FM $(n = 23)$	NFM ($n = 23$)				
	n (%)	n (%)	$X^{2}_{(df)}$	d		
Childhood separation and/or loss experiences severity			$1.08_{(1)}$.300		
Absence	4 (17.4)	7 (30.4)				
Presence	19 (82.6)	16 (69.6)				
Parental separation or death only	14 (73.7)	13 (81.3)				
Multiple parental separation and/or death	5 (26.3)	3 (18.7)				
	(DD) W	(DD) W	$F_{(df)}$	р	η _p ²	Bayes Factor
						$BF_{(01)}$
Agevears	34.13 (5.64)	35.82 (4.25)	$1.28_{(1,43)}$.265	.029	2.03
RF	0.96 (1.47)	3.20 (1.25)	31.00*** _(1.44)	<.001	.413	<.001
HH attachment	5.02 (2.60)	3.35 (1.69)	6.72* _(1.44)	.013	.133	0.25
CA&N experiences severity	3.39 (1.99)	2.22 (1.68)	$4.67^{*}_{(1.44)}$.036	960.	0.54
Childhood separation and/or loss experiences severity	1.04 (0.64)	0.83 (0.65)	$1.31_{(1,44)}$.259	.029	2.02
FM = filicidal mothers. NFM = non-filicidal mothers. SES = s	ocio-economic status. H	H attachment = Hostile-H	elpless attachment. RF =	reflective function	ing. CA&N experi	ences = childhood
abuse and neglect experiences. For NFIM, INTORMATION ON Ed	lucation is missing for 10	mothers (43.5%), whereas	information on age is mi	ssing for one moth	er (4.4%). bayes ra	ictors are snown as

Table 1. (Continued).

the likelihood of obtaining the null model over the alternate. *p < .05; **p < .01; ***p < .001.

states of mind. Although there is no simple algorithm for relating these indicators to a particular scale score, the first two are especially central to HH mental states and are heavily weighted. The six indicators include: *frequency of global devaluation of a caregiver, evidence of identification with a hostile caregiver, frequency of references to fearful affect, frequency of references to a sense of one's self as bad, frequency of instances of laughter at pain,* and *evidence of ruptured attachments* (Lyons–Ruth et al., 1995–2005).

Although pure subtypes of HH mental states exist in theory, they do not necessarily appear in data because they are viewed as related aspects of a single HH internal model of self-other relations (Lyons-Ruth et al., 2005). In the Hostile subtype, at least one attachment figure from childhood is represented in globally negative terms and, in many cases, the subject seems to identify with this hostile or devalued attachment figure. Such global devaluation is viewed as an indicator of "split" all good versus all bad representations. Difficult or traumatic childhood experiences are often directly described. There is also evidence of a tendency to block out or constrict feelings of vulnerability by turning painful experiences into "dark humor." In the Helpless subtype, pervasive feelings of fearfulness and helplessness are evident, and, in some cases, subjects classified in this subgroup clearly identify with a victimized attachment figure. Thus, while continuing to maintain some denial of vulnerability, they are more likely to acknowledge vulnerable feelings, such as fear and globally negative evaluations of the self, and to be more psychologically involved with unsuccessful efforts to make sense of their painful attachment relationships. Fearful affect, as operationalized here, need not occur in the context of identified (or inferred) traumatic experiences, but can be described in relation to a variety of unrelated and non-traumatic events across the interview.

Additional details on the classification criteria and how this coding system differs from and extends the traditional AAI coding system are available elsewhere (Lyons–Ruth et al., 1995–2005; 2003; 2005). In the present study, transcripts were rated blind to psychiatric diagnosis or any details regarding filicide. Interrater reliability was computed on a random selection of approximately 20% of the interviews (n = 9), resulting in interrater agreement (Cohen's k) of .87. Disagreements between coders were resolved through conferencing until consensus was reached.

Reflective functioning

AAIs were also coded using the RF (Fonagy et al., 1998) scale, which assesses the subject's capacity to acknowledge and understand their own and others' mental states. RF focuses on an individual's use of emotion words and appropriate understanding and explanation of others' emotions. The RF score incorporates four categories of RF, each with several subcategories (Fonagy et al., 1998). The first code refers to the subject's awareness of the nature of mental states (e.g. that they can be disguised or that one cannot always know exactly what others are thinking). The second code relates to the subject's attempt to understand the mental states underlying their own and others' behaviors (e.g. by accurately attributing mental states to their self and others and demonstrating an awareness that others may feel differently in response to a particular situation). The third code measures the subject's understanding of the developmental aspects of mental states (e.g. that changes in thinking come with age). Finally, the fourth category examines the subject's awareness of mental states in the interviewer (e.g. acknowledging that it may be difficult for the interviewer to listen to an emotionally difficult story). The RF scale generates scores for each category, then total

RF is coded on a scale from 1 (*bizarre*) to 9 (*high*). In the present study, AAI transcripts were globally coded by two reliable and certified researchers who were unaware of the psychiatric diagnosis or any details relating to filicide, using the RF coding scheme. RF and HH attachment were coded by separate judges. Interrater reliability was computed on a random selection of approximately 30% of the transcripts (n = 14), resulting in interrater agreement (Cohen's k) of .78. Disagreements were resolved through conferencing until consensus was reached.

Severity of abuse and neglect in mothers' childhood

The presence of childhood experiences of neglect and frightening/abusive experiences involving attachment figures, including direct or observed physical/sexual abuse and extreme emotional threats, were derived from both clinical reports from psychiatric hospitals and other mental health facilities (which reported both psychiatric diagnoses and the most salient events in the mothers' lives) and the verbatim AAI transcripts (George et al., 1985). Severity was operationalized in accordance with Finger et al.'s (2015) and Byun et al.'s (2016) classifications on a 7-point rating scale, as follows: 1 (*no occurrence of abuse*); 2 (*harsh punishment only*); 3 (*witnessed violence only*); 4 (*verbal abuse only*); 5 (*physical abuse, sexual abuse, or protective services/foster care involvement*); 6 (*two under level 5*); and 7 (*all those under level 5*). Half of the transcripts were double coded by two independent judges who did not also code HH attachment and RF, resulting in interrater agreement (Cohen's k) of .87. Disagreements between coders were resolved through conferencing until consensus was reached.

Maternal childhood history of separation from and/or loss of attachment figures

Loss of and/or separation from attachment figures in infancy and/or childhood was scored on the clinical reports from psychiatric hospitals and other mental health facilities (reporting both psychiatric diagnoses and the most salient events in the mothers' lives) and the AAI transcripts, as follows: 0 (*no separation or loss experienced*); 1 (*parental separation or death only*); or 2 (*multiple parental separation and/or death*). Half of the transcripts were double coded by two independent judges who did not code HH attachment and RF, resulting in interrater agreement (Cohen's k) of .92. Disagreements between coders were resolved by conferencing until consensus was reached.

Analytic plan

All analyses were performed using the statistical software R (R Development Core Team, 2018). Descriptive statistics were reported for age, education, socio-economic status, psychiatric diagnoses, neglect and/or frightening/abusive experiences from attachment figures, childhood loss of and/or separation from attachment figures, unintegrated HH attachment, and RF. To test the first hypothesis, FM and NFM were compared on the basis of neglect and/or frightening/abusive experiences, childhood loss of and/or separation from attachment figures, unintegrated HH attachment, and RF. Comparisons were made using both traditional null-hypothesis significance testing (NHST) and Bayesian analysis, as the latter allows for a more robust examination of the null hypothesis (Dienes, 2011). In Bayesian analysis, a Bayes factor (BF_{01}) of 1–3 indicates anecdotal evidence, whereas

a BF_{01} of 3–10 indicates substantial evidence for the null hypothesis (i.e. the data are 3–10 times more likely to support the null vs. the alternative hypothesis) (Dienes, 2011).

Following this, to identify the mechanisms (i.e. HH attachment and RF) through which CA&N experiences would increase filicide likelihood, two models were computed and compared: a double mediation model treating HH attachment and RF as mediators of the effect of CA&N on filicide likelihood (hypothesis 2); and a moderated mediation model of the effect of CA&N on filicide likelihood through HH attachment, at different levels of RF (hypothesis 3). To determine which model better explained the effect of CA&N on filicide likelihood, significance testing was sustained by Bayesian analysis (Cumming, 2014; Van de Schoot et al., 2014; Wagenmakers, 2007). The total coefficient of determination (TCD; Bollen, 1989) and the Bayesian information criterion (BIC; Schwarz, 1978) were used to overcome the possible limitations of the small sample size while maintaining predictive accuracy. Specifically, the TCD shows the combined effect of model variables on the dependent variables; and the BIC (Schwarz, 1978) measures the efficiency of the parameterized model in predicting data and, at the same time, penalizes the complexity of the model (where complexity refers to the number of unnecessary parameters). The higher the TCD (range 0-1), the more variance is explained; the lower the BIC, the better the model. Accordingly, the best model has the lowest BIC and highest TCD.

To evaluate the interactive effects of RF and HH attachment in the moderated mediation model, the Johnson–Neyman technique (Johnson & Neyman, 1936; Preacher et al., 2006) was used to inspect the range of values (i.e. regions of significance) of the moderator (RF) for which the mediator (HH attachment) and outcome (filicide likelihood) were significantly associated. This technique was selected over simple slopes analysis, because it uses regions of significance to highlight all possible values of RF for which there are significant regressions of filicide likelihood on HH attachment, instead of probing only two arbitrarily specified levels (i.e. RF values that are 1 SD above and below the mean, even though it is a continuous dimension without a natural break point; for a wider discussion, see Dearing & Hamilton, 2006).

Results

Associations between mothers' socio-demographic characteristics, attachment-derived risk variables, and acts of filicide are displayed in Table 2.

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Variable	1	2	3	4	5	6	7	8
1. Group	1							
2. Age	07	1						
3. SES	22	.05	1					
4. Education	33 [†]	.24	.64***	1				
5. CA&N	.31*	10	.11	.18	1			
6. Childhood loss/separation	03	02	04	.06	.37*	1		
7. RF	49***	.18	.23	.24	36*	13	1	
8. HH attachment	.49**	17	10	15	.47***	.25 [†]	41**	1

Table 2. Associations between mothers' socio-demographic information, CA&N, childhood loss/ separation from attachment Figures, RF, HH attachment, and filicide likelihood (N = 46).

Group coded as 0 = non-filicidal mothers, 1 = filicidal mothers. SES = socio-economic status. HH attachment = Hostile-Helpless attachment. RF = reflective functioning. CA&N experiences = childhood abuse and neglect experiences. $^+$ <.10; $^*p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Differences in attachment-derived risk variables between FM and NFM

ANOVAs showed differences between FM and NFM, with the former scoring lower on RF, *F* (1,44) = 31.00, p < .001, $\eta_p^2 = .41$; and higher on HH attachment, F(1,44) = 6.72, p < .05, $\eta_p^2 = .13$, and CA&N experiences severity, F(1,44) = 4.67, p < .05, $\eta_p^2 = .10$. However, no differences were found with respect to the severity of childhood loss of and/or separation from attachment figures, F(1,44) = 1.31, p = .26, $\eta_p^2 = .03$. Table 1 further reports Bayes factors, which are all consistent with the ANOVA results.

Of relevance, closer inspection of the AAI transcripts revealed further differences between groups on RF subtypes, $\chi^2(6) = 24.20$, p < .001. Specifically, among FM, 60.9% (n = 14) reported an unintegrated/bizarre RF subtype, 26.1% (n = 6) reported a naïve/ simplistic RF subtype, 8.6% (n = 2) reported a disavowal RF subtype, and 4.4% (n = 1) reported a distorted/self-serving RF subtype. Conversely, among NFM, 43.4% (n = 10) reported a naïve/simplistic RF subtype, 30.4% (n = 7) reported an ordinary understanding RF subtype, 13.0% (n = 3) reported a disavowal RF subtype, 4.4% (n = 1) reported a distorted/self-serving RF subtype, 4.4% (n = 1) reported an over-analytical/hyperactive RF subtype, and 4.4% (n = 1) reported a miscellaneous RF subtype.

Likewise, FM and NFM further differed on HH attachment subtypes, $\chi^2(1) = 8.85$, p < .01. Specifically, among HH FM, 46.6% (n = 7) reported a helpless subtype, 26.7% (n = 4) reported a mixed subtype, and 26.7% (n = 4) reported a hostile subtype. Conversely, among HH NFM, 60.0% (n = 3) reported a hostile subtype, 20.0% (n = 1) reported a helpless subtype, and 20.0% (n = 1) reported a mixed subtype.

Finally, CA&N were experienced by 22 FM and 20 NFM; whereas, separation and/or loss experiences from attachment figures during childhood was experienced by 19 FM and 16 NFM. See Table 1 for complete descriptive statistics.

HH attachment and RF in the relation between CA&N and filicide likelihood

In both of the following models, the effects of loss of and/or separation from attachment figures, as well as mothers' socio-demographic characteristics (i.e. age, education, socioeconomic status, diagnoses) were tested. Given the limited sample size, to preserve statistical power, variables were introduced separately and only significant effects were retained. Variables were retained in the full models only when they demonstrated significant predictive value when tested in isolation. Of relevance, childhood loss of and/or separation from attachment figures was not associated with filicide likelihood and was thus not included in the full models. This choice was further substantiated by the model fit indices: only models with better fit than the null model (intercept only) were reported (i.e. models containing mothers' age, education, socio-economic status, diagnoses, and childhood loss of and/or separation from attachment figures were age. and childhood loss of and/or separation from attachment figures age.

The second hypothesis was designed to test whether HH attachment and RF would mediate the relation between CA&N and filicide likelihood (double mediation model). Confidence intervals were evaluated using the bootstrap percentiles method. Findings indicated that CA&N did not directly impact filicide likelihood; rather, this pathway was uniquely mediated by mothers' HH attachment, but not RF. The model results are displayed in Table 3.

Statistics

TCD = 0.29							
BIC = 44.99							
				95%	6 C.I.		
Туре	Effect	Estimate	SE	Lower	Upper	β	р
Indirect	$CA\&N \Rightarrow HH$ attachment \Rightarrow Filicide likelihood	0.04	0.02	<0.01	0.09	0.16	.043
	$CA\&N \Rightarrow RF \Rightarrow$ Filicide likelihood	0.03	0.02	<0.01	0.07	0.13	.061
Component	$CA\&N \Rightarrow HH attachment$	0.59	0.16	0.27	0.91	0.47	<.001
	HH attachment ⇒ Filicide likelihood	0.07	0.03	0.01	0.13	0.34	.015
	$CA\&N \Rightarrow RF$	-0.33	0.13	-0.58	-0.08	-0.36	.009
	$RF \Rightarrow$ Filicide likelihood	-0.10	0.04	-0.17	-0.03	-0.36	.007
Direct	$CA\&N \Rightarrow$ Filicide likelihood	0.01	0.04	-0.07	0.08	0.03	.831
Total	$CA\&N \Rightarrow$ Filicide likelihood	0.08	0.04	0.01	0.16	0.31	.029

Table 3. Double mediation model with HH attachment and RF as mediators of the effect of CA&N on filicide likelihood (N = 46).

Filicide likelihood coded as 0 = no (non-filicidal mothers), 1 = yes (filicidal mothers). HH attachment = Hostile-Helpless attachment. RF = reflective functioning. CA&N experiences = childhood abuse and neglect experiences. Confidence intervals computed using bootstrap percentiles. TCD = total coefficient of determination (Bollen, 1989). BIC = Bayesian information criterion (Schwarz, 1978).

The third hypothesis was designed to test whether the mediation of HH attachment on the relationship between CA&N and filicide likelihood varied as a function of RF (moderated mediation model). Again, confidence intervals were evaluated using the bootstrap percentiles method. Findings indicated that there was no significant direct relation between CA&N and filicide. Further, any relation between CA&N and filicide was mediated by higher levels of unintegrated HH representations, which was, in turn, moderated by RF levels.

The follow-up Johnson-Neyman technique was used to identify the RF regions of significance at which the effect of CA&N experiences on filicide likelihood was significantly mediated by HH attachment. Findings indicated that when RF was outside the interval (-0.71 [lower band] to 6.33 [upper band]), the slope of the HH mental state mediating the relationship between CA&N and filicide likelihood was significant at p < .05 (see Figure 1). Given that centered RF scores ranged from -3.08 to 3.92 and RF and HH attachment interacted negatively, $\beta = -.28$, p = .047, the mediated effect of more severe CA&N on filicide likelihood through higher HH attachment was significantly amplified by lower RF, $\beta = .19$, p = .023 (this pattern represented 32.6% of mothers), whereas it was not significantly reduced by greater RF, $\beta = -.02$, p = .774. Model results and graphical representations are displayed in Table 4 and Figure 1, respectively.

Of relevance, Bayesian analysis indicated that, from the double mediation model to the moderated mediation model, BIC decreased from 44.99 to 33.53 and TCD increased from 0.29 to 0.47, suggesting better fit for the latter model. This finding suggests that the impact of a more severe history of CA&N on filicide likelihood via higher HH attachment differs depending on RF (i.e. specifically lower RF), and that this subsequently represents a plausible pathway to filicide.

Discussion

The present study represents the first empirical investigation of the mechanisms through which CA&N impacts mentally ill mothers' likelihood to commit filicide. In line with expectations, FM demonstrated lower RF, higher HH attachment, and more severe

Statistics								
TCD = 0.47								
BIC = 33.53								
Moderator bound					95%	6 C.I.		
RF	Туре	Effect	Estimate	SE	Lower	Upper	β	p
Lower bound	Indirect	$CA\&N \Rightarrow HH$ attachment \Rightarrow Filicide likelihood	0.05	0.02	0.01	0.10	0.19	.023
Upper bound	Indirect	$CA\&N \Rightarrow HH attachment \Rightarrow Filicide likelihood$	<0.01	0.01	-0.03	0.02	-0.02	.774
	Component	$CA\&N \Rightarrow HH attachment$	0.47	0.17	0.14	0.79	0.37	.005
Lower bound		HH attachment ⇒ Filicide likelihood	0.11	0.03	0.06	0.17	0.52	<.001
Upper bound		HH attachment ⇒ Filicide likelihood	-0.01	0.03	-0.07	0.05	-0.04	.773
	Direct	$CA\&N \Rightarrow$ Filicide likelihood	0.04	0.04	-0.03	0.12	0.16	.263
	Total	$CA\&N \Rightarrow$ Filicide likelihood	0.08	0.04	0.01	0.16	0.31	.029

Table 4. Moderated mediation model of the effect of CA&N on filicide likelihood through HH attachment, at different levels of RF (N = 46).

Filicide likelihood coded as 0 = no (non-filicidal mothers), 1 = yes (filicidal mothers). HH attachment = Hostile-Helpless attachment. RF = reflective functioning. CA&N experiences = childhood abuse and neglect experiences. Confidence intervals computed using bootstrap percentiles. TCD = total coefficient of determination (Bollen, 1989). BIC = Bayesian information criterion (Schwarz, 1978).



Figure 1. Johnson-Neyman plot.

CA&N experiences, compared to NFM. In this vein, it seems plausible that mentally ill FM are a distinct, extremely at-risk group within the larger group of mothers who have been diagnosed with psychosis or an anxiety-mood disorder with psychotic features. However, in the present study, FM and NFM did not differ on the severity of their history of separation from and/or loss of attachment figures; this suggests that such experiences, alone, may not be sufficient to increase mothers' filicide likelihood, even in the presence of a psychiatric diagnosis. Though this result should be viewed through multiple lenses, one explanation is that maltreatment has a greater effect on filicide than do experiences of loss and/or separation. This suggestion is consistent with earlier research on the developmental effects of parental loss on parenting behaviors, showing that the quality

of recalled caregiving matters more for later adaptation than the occurrence of loss, per se (Harris et al., 1986; Lyons-Ruth et al., 2003).

The second and third hypotheses tested the mediating role of HH attachment on the effect of CA&N on filicide likelihood, and whether RF was a further mediator or, rather, a conditioning factor on the pathway linking CA&N to filicide through HH attachment. The data best fit the moderated mediation model (hypothesis 3), suggesting that higher HH attachment uniquely contributed to explain how the severity of mothers' CA&N might have led them to practice disturbed caregiving until it escalated to a fatal attack on their child (i.e. filicide). This path was further influenced by lower RF.

Several considerations may be advanced to explain this finding. First, to the extent that filicide is a "constellation of risk factors" (Papapietro & Barbo, 2005, p. 505), the findings indicate that it is not CA&N, per se, but its influence on the development of an unintegrated HH mental state in adult life that may limit and/or distort mothers' capacity to parent. Within such a constellation, a mother's incapacity to mentalize upon her past experiences and, in turn, understand her child's mental world, seems to be a further risk factor that might amplify the pervasiveness of the effects of her contradictory/conflicting representations of her own caregivers and fearful affect on the likelihood of filicide. This seems to support Fonagy and Luyten's idea (Fonagy & Luyten, 2009) that, while mentalization is rooted in attachment relationships, it may follow a distinct developmental trajectory. Further studies are needed to better clarify this pattern. Of relevance, a potential mediating role of RF might have gone undetected in the present study, given the limited sample size. By the same token, since the individual paths in the double mediation model (see Table 3) indicated that both CA&N affected RF and RF was negatively associated with filicide likelihood, findings suggest that when HH attachment and RF were simultaneously considered mediators of the relationship between CA&N and filicide, RF lost significance due to its shared variance with HH attachment.

Second, the prevalence of FM with a helpless (rather than hostile) stance in the sample (a total of 73.3% of HH FM reported a helpless [46.6%] or a mixed [26.7%] subtype) lends further insight into the processes involved in filicide, which, instead, could intuitively be pictured as stemming from a more overt identification with a hostile aggressor. Alongside, the conceptualization of the HH construct, itself (Lyons-Ruth et al., 2003; 2005), further contributes to this understanding, since it goes far beyond the idea of "abdicating parenting", that is mothers who give up their role as protector and carer when faced with a threat of danger (George & Solomon, 2008). Mothers with a history of CA&N who later developed a hostile attachment might have attempted to master unbearable feelings of vulnerability triggered by their infant's cues by denying their own feelings of fear and helplessness. However, in such a psychic configuration, mothers may have been more likely to identify with a hostile or controlling parent who yells or suppresses their infant's emotions (Lyons-Ruth & Spielman, 2004), rather than committing the extreme act of filicide (Barone et al., 2014).

Conversely, mothers with a history of CA&N who later developed a helpless attachment "may have adopted a lifelong caregiving adaptation characterized by paying hypervigilant attention to the moods or needs of others (e.g. their own parent) at the expense of having their own attachment needs met. Clinically, mothers in this category appear to be fearful and easily overwhelmed by the demands of others" (Lyons-Ruth & Spielman, 2004, p. 326). It follows that, caught in a hypervigilant state of mind, these mothers may have "seen" others as both a threat and a source on whom to rely. If the "other" was their infant, then the mothers may have experienced their distressed infant as attacking them by making them feel stressed and fearful. Such a "distortion of external reality" (Vaillant, 1994) may characterize a helpless stance, as it represents a defense against feelings of extreme powerlessness and a lack of ability to control or soothe another when one's own affects are aroused. Additionally, it could be speculated that such feelings of extreme powerlessness may have reflected mothers' unconscious identification with a victimized attachment figure, which, in turn, served the function to dissociate unconscious hostility precisely towards that attachment figure. If this was the case, then when FM with HH attachment became attachment figures for their own child (transitioning to a "protector" role; George & Solomon, 1996), their dissociated hostile affect may have materialized within the mother-child relationship. If this occurred, it would have clearly interfered with their capacity to interact with their child. Under these circumstances, the mothers' response to their infant's signals would have likely been based on internal cues related to trauma rather than the infant's actual needs (Ensink et al., 2014).

Third, paired with the moderating effect of an extremely low RF (mean RF score of 0.96 for FM), the indirect influence of CA&N on filicide through HH attachment suggests that FM might have struggled to cope with the unique demand to step back from their own affective experience in order to reflect upon their child's uniquely subjective experiences during moments of stress or conflict. This, in turn, may have led them to attribute malevolent intentions to their child (e.g. "My child fusses just to annoy me"). Although the present study did not directly investigate specific memories related to the moment of filicide (e.g. what mothers remembered thinking of their child prior to the act of committing filicide), this explanation cannot be entirely ruled out, as frankly paranoid thoughts – along with inexplicable, bizarre, and inappropriate attributions – are frequently presented by individuals reporting unintegrated, bizarre, or inappropriate RF (Fonagy et al., 1998) (in the present study, approximately 61% of FM showed such an RF subtype; see Table 1). This explanation is also consistent with the "distortion of external reality" defense (Vaillant, 1994), as discussed above. To summarize and link the abovementioned explanations, one could view filicide as a likely reactive eruption of violence in response to a perceived threat or stressor (e.g. an infant's cues) that triggers physiological arousal, painful memories, and negative emotions related to early vulnerability and lack of comfort in the mother (Lyons-Ruth et al., 2004). Such a perceived threat or stressor is even more likely to be misinterpreted by mothers with an extremely low RF.

Several limitations of the study should be considered when interpreting the results. First, the small sample size may have prevented the detection of small effects, as well as further variables that might have mediated the effect of CA&N on filicide likelihood. Second, mothers were mainly recruited from psychotherapy waiting lists at clinics or through forensic psychiatric hospitals, and very few were recruited from housing communities. This implies that the results of the sample may not extend to the broader set of mentally ill mothers who have committed filicide but not met the attention of mental health services. Third, the severity of CA&N and loss of and/or separation from attachment figures were retrospectively coded from mothers' reports. This implies that filicide might have challenged mothers' recall of early memories to a greater extent than is typically observed in the AAI. However, the present study safeguarded the validity of the traumatic experiences by requiring mothers to cite specific neglect and frightening/abusive

experiences involving attachment figures, as well as loss/separation events, within a narrative. Interviewers also asked probe questions to elicit further details from the mothers, carefully applying the AAI protocol for the investigation of traumatic experiences. Thus, such experiences were not assessed via a simple presence/absence measure or global questions. Furthermore, the severity of such experiences was reliably rated by independent judges who were blind to HH attachment and RF classifications. Finally, the present study evaluated mothers' RF in terms of interpreting interpersonal interactions and attributing meaning to behaviors, in general, and not in the specific context of mentalization regarding traumatic and emotionally painful experiences of fear and helplessness (Berthelot et al., 2015; Borelli et al., 2019; Ensink et al., 2014; 2017). Future studies should evaluate whether specific maternal trauma RF (Ensink et al., 2014) would better clarify the mechanisms involved in the caregiving behavior of mentally ill filicidal mothers.

Notwithstanding these limitations, a number of strengths should be mentioned. First, although prior studies have shown that psychiatric diagnoses are frequently associated with filicide (Debowska et al., 2015; McKee & Bramante, 2010), most of these studies have lacked a comparison group, and this has prevented them from examining the specific role of other well-known risk factors for filicide. Indeed, as all mothers in the present study had a psychiatric diagnosis, the study design held the effect of mental illness constant while investigating whether – and to what extent – HH attachment and RF were associated with CA&N in predicting filicide likelihood.

Second, while research has given much attention to the fact that RF is a crucial psychological capacity for caregiving (Katznelson, 2014), only few studies have adequately examined this connection in the specific context of at-risk parenting. Such studies include those investigating mothers with a history of neglect and abuse (e.g. Berthelot et al., 2015; Ensink et al., 2014; 2019; 2017), mothers with drug use disorders (Pajulo et al., 2006; Suchman et al., 2010), and children who have been sexually abused (e.g. Borelli et al., 2019; Ensink, 2016a). In addition, while the relationship between HH attachment and disturbed maternal behavior has been extensively discussed (Lyons-Ruth et al., 2004; Lyons-Ruth & Spielman, 2004; Lyons-Ruth et al., 2005; Milot et al., 2014), the present study underscores the importance of extending the effect of unintegrated HH states of mind and negative/low RF on the abnormal parenting behavior of filicidal mothers with a psychiatric diagnosis.

Third, the results have notable clinical implications for prevention and attachmentbased interventions (Friedman et al., 2005; Friedman & Resnick, 2007). Specifically, the findings suggest that mentally ill mothers should be supported in acknowledging and elaborating upon their trauma history, as well as in their efforts to perceive and recognize their own and their child's wishes, motivations, needs, thoughts, and feelings. This will help the mothers realize how their past experiences might trigger defensive processes that could invade the mother–child relationship (Moran et al., 2008) by making them more vulnerable to reexperiencing terror and helplessness, as well as the dissociated hostility towards their historical aggressor, instead of responding to their child's distress (Fonagy, 1993; Fraiberg et al., 1975). This seems particularly relevant in situations in which the mother–child interaction is likely to be flooded by maternal HH attachment representations and the child's overwhelming affects are likely to activate the mother's history of trauma and interfere with her ability to comfort and regulate the child (Grienenberger et al., 2005; Lyons-Ruth et al., 2005; Madigan et al., 2006; Soltis, 2004).

Fourth, practitioners working with this population should be mindful that the withdrawing and fearful behaviors that characterize mothers who demonstrate a helpless stance may be more difficult to discriminate than the more overt controlling/punitive behaviors that characterize mothers with a pure hostile stance (Lyons-Ruth & Spielman, 2004). In the context of maternal mental illness, which affects RF (Katznelson, 2014), this form of detection may represent a preventive measure against the risk of filicide, since if the infant begins to react with conflict and apprehension to his or her mother's hesitancy and fear in attachment requests, the mother's sense of helplessness might increasingly introduce dysregulation into the relationship. It is intuitively evident that, should this happen, the mother might "see" her infant as a peer or even an adult who poses a threat, leading her to harm the child to various degrees, up to the extreme degree of filicide.

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