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What Is It to Discipline a Child: What Should It Be? A Reanalysis of Time-Out From the Perspective of Child Mental Health, Attachment, and Trauma

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Parental discipline strategies are a necessary and critical aspect of positive child development. Their qualities confer risk versus protection for the development of mental health problems. Time-out from positive reinforcement is now one of the most common and well-researched discipline procedures across the world, with overwhelming evidence to support its efficacy and acceptability. It has also recently attracted considerable criticism from writers evoking child well-being considerations based on attachment theory. The main concern is that the removal of a child to time-out exposes the child to a break in attachment security and, for children with trauma histories, potentially causes harm. Here, we consider what a discipline strategy should be from a mental health perspective and, utilizing the best available models of developmental mental health and psychopathology, derive five axioms for judging and guiding the worth and acceptability of any particular discipline strategy. We then use these axioms to evaluate and specify how time-out can be used in a way that maximizes positive child outcomes, and then review its use with children who have experienced complex trauma. We show that time-out, when conceptualized and enacted consistently with contemporary models of learning, attachment, self-regulation, and family systems theory, is actually a positive perturbation to these systems that can rapidly remediate problems the child is experiencing, and thereby generally enhances child well-being. Clinical, research, and policy implications are briefly discussed.

Keywords: parent discipline, child mental health, time-out, attachment, trauma

In 2014, *Time* magazine published an article titled "Time-Outs Are Hurting Your Child" by Siegel and Bryson (2014a). The article warned parents against using time-out with children, arguing that harmful effects were supported by neuroplasticity research. These authors largely recanted most of what they wrote in a later article in the Huffington Post (Siegel & Bryson, 2014b), arguing that they were simply cautioning against inappropriate or punitive use of time-out. However, *Time* magazine followed up with another article in 2016 by psychologist Vanessa Lapointe, again specifying the reasons why time-out may be damaging children (Lapointe, 2016). These articles have been associated with a widespread and growing rejection of time-out as an acceptable and effective parental discipline strategy, especially for children who are believed to have attachment problems or trauma histories. As noted by Quetsch, Wallace, Herschell, and McNeil (2015), there is no empirical evidence to show that time-out is ineffective or harmful; however, Internet-based literature warning of the harmful nature of time-out is now rife.

The aim of this article is to conduct a first analysis of time-out from the perspective of the child's developing mental health. We believe that the analysis of child discipline from a mental health perspective is an important yet neglected area. The quality and effectiveness of parental socialization, especially parental discipline, are associated with lifelong mental and social health (Kessler et al., 2010). At extremes, most episodes of child abuse arise in the context of ineffective and problematic parental–child discipline encounters (Chaffin et al., 2004; Straus, 2000). Each incident of parent–child discipline has the potential to invest in the building of a more socially skilled, resilient, and self-regulating child or, on the other hand, a child who is more vulnerable to interpersonal conflict, intense unregulated emotions, and impulsive selfishness (Patterson, 1982; Straus, 2000; United Nations Children's Fund, 2017). In

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this sense, child discipline is one of the most common, ongoing, and critical events or processes that drives the social and psychological development of children, and thus society, as it invests in the next generation. As such, a comprehensive understanding of the effects of various child discipline techniques should be a critical priority for child development and mental health research.

The term *time-out* is an abbreviation of "time out from positive reinforcement." It thus requires the presence of a reinforcing environment as well as removal from access to reinforcers for a specified period of time for some form of misbehavior. Although the abbreviated term *time-out* is widely used in scientific literature, we believe that use of this term has led to the misunderstanding that it is a stand-alone strategy rather than being one part of a set of procedures in which enhancing responsive parenting and strengthening the parent–child relationship is a critical first step. Thus, we believe that the use of the phrase *time out from positive reinforcement* is a more descriptive and accurate one to use, and we adopt the acronym TOPR for the remainder of the article. In line with its behavioral history, we define TOPR as a parenting strategy in which a child's access to rewards, usually parental attention, is temporarily removed contingent upon a problem behavior and reinstated following a specified period of nonproblem behavior. Although the removal of access to rewards can be implemented at any age, we specifically focus this article on its common usage with children 2 to 8 years of age, as specified by the major evidence-based parenting programs (see Everett, Hupp, & Olmi, 2010). The use of the acronym TOPR in this article refers to both nonexclusionary time-out (or the time-out chair) and exclusionary time-out, which is often used as a backup for nonexclusionary time-out.

The analysis of TOPR presented here is embedded in a broader discussion of what discipline is and should be. Specifically, in the first part of the article, we derive a set of axioms for evaluating the worth of parental discipline strategies from the perspective of emerging child mental health, using what we believe to be the best available contemporary theories in developmental psychopathology. We then scrutinize TOPR from this perspective, leading to a set of guidelines for use of this technique that maximize its contribution to the positive development and mental health of growing children. In the second part of the article, we review evidence on the use of TOPR with children who have trauma histories given the recent concerns about the appropriateness of TOPR with these children. In this section, we revisit the axioms and guidelines set out in the first part of the article and aim to answer the following questions: Is there any evidence that treatments that include TOPR are harmful? How does TOPR fit within best-practice treatments for children with trauma symptoms?

A History of Time-Out

According to Risley (2005), it was Montrose Wolf who first focused on the reinforcing power of adult attention for children and, based on that, invented and named the nonviolent parenting procedure "time-out" (Wolf, Risley, & Mees, 1963). More generally, experimental research on TOPR commenced in the 1960s, when principles of behavioral analysis were first applied to a child's home or school environment. Behavioral analysis grew out of Skinner's work in the 1930s and 1940s on operant conditioning with laboratory animals, which described the association between a particular behavior and a consequence (Skinner, 1950): Actions that are followed by reinforcers are strengthened and more likely to occur again in the future, whereas punishers are an adverse event or outcomes that cause a decrease in the behavior it follows. Applied to the parenting context, *reinforcers* are parenting behaviors (such as praise, affection, quality time with the child) that increase the frequency of positive behaviors in a child, whereas *punishers* (such as ignoring misbehavior, removal of toys or privileges, and TOPR) reduce or extinguish negative behaviors.

It was clear from some of the first trials close to 50 years ago (e.g., O'Leary, O'Leary, & Becker, 1967; Patterson, Ray, & Shaw, 1968) that TOPR was not a stand-alone parenting strategy; rather, it was part of a stepped process, in which effective implementation was dependent on mastery of positive reinforcement of the child as a first step. In other words, enhancing the positive relationship between parent and child ("time-in") was necessary for time-out to be effective. TOPR was also not considered a singular intervention but part of a sequence of procedural steps.

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From the earliest trials, TOPR was considered a temporary strategy that was inherently self-limiting in its use. That is, effective implementation of TOPR resulted in rapid improvements in behavior, and thus the need to use the strategy subsequently decreased (e.g., see O'Leary et al., 1967). Early trials of applied behavioral analysis in the home and school contexts were formalized into a two-stage model of parenting skill delivery by Hanf (1969). The first stage involved differential reinforcement of appropriate child behavior (via praise for positive behavior and ignoring of misbehavior) and strengthening the parent–child relationship. The second stage involved delivering calm and consistent behavioral management skills in the form of effective instructions and providing appropriate consequences for misbehavior via TOPR and other consequences.

During the 1970s and 1980s, research on TOPR largely focused on the effectiveness of different procedural parameters for TOPR. For example, research examined effects of differing procedural variables such as duration of TOPR (e.g., Hobbs, Forehand, & Murray, 1978), provision of warnings before TOPR (e.g., Roberts, 1982), and escape prevention strategies (e.g., Bean & Roberts, 1981). From the 1990s, research commenced on contemporary evidence-based parenting interventions, which included TOPR, with randomized controlled trials examining the effectiveness of these interventions as a prevention or treatment for child mental health problems. These new manualized and evidence-based parenting interventions—including Triple P (Sanders, Kirby, Tellegen, & Day, 2014), Parent Child Interaction Therapy (PCIT; Querido, Bearss, & Eyberg, 2002), The Incredible Years (Webster-Stratton, 2001), Helping the Noncompliant Child (McMahon, Long, & Forehand, 2011), and Parent Management Training Oregon Model (Patterson, Reid, & Eddy, 2002)—moved beyond simple use of reinforcers and punishers, and integrated elements of social interaction theory, cognitive–behavioral theory, and attachment theory. In these interventions, TOPR was delivered as one discipline strategy within a suite of positive parenting strategies. That is, the behavioral approach saw discipline as embedded within a context of positive nurturing parent–child relationship.

There have now been hundreds of randomized controlled trials of parenting interventions that include TOPR. These parenting programs are now considered one of the most significant achievements of clinical psychology (Brestan & Eyberg, 1998), having clearly established effectiveness for preventing or treating a range of child behavioral and emotional problems (Kaminski & Claussen, 2017; Sanders et al., 2014). Importantly, a meta-analytic review of studies of parenting interventions examined program components associated with larger interventions effects and found that TOPR was a key strategy associated with larger effects in improving child behavioral adjustment (Kaminski, Valle, Filene, & Boyle, 2008).

TOPR is now one of the most common discipline procedures used by parents, second only to verbal explanations, as the most common parental discipline technique in the United States (Regalado, Sareen, Inkelas, Wissow, & Halfon, 2004). Its use has accelerated over the last few decades (Ryan, Kalil, Ziol-Guest, & Padilla, 2016). Despite this, however, other aversive forms of discipline, such as spanking, have continued, such that worldwide as many as three in four young children are subjected to physical discipline by their caregivers on a regular basis (United Nations Children's Fund, 2017). In addition, a recent survey found that although a majority of parents reported using TOPR, many procedural elements were implemented incorrectly, and this was associated with parents' perception that TOPR was ineffective (Riley, Wagner, Tudor, Zuckerman, & Freeman, 2017). When parents view TOPR as ineffective, it is likely to be replaced with more harsh or coercive strategies (Drayton et al., 2014) or permissive parenting strategies. Thus, the effective implementation of TOPR by parents appears to be hampered by a lack of accurate information regarding effective procedural elements, along with inaccurate and misleading information about the potential harmful effects of the strategy.

The Theoretical Basis of Time-Out

Throughout the recent widespread adoption of TOPR, the conceptual definition has remained largely unexplored, noncontroversial, and firmly grounded in operant theory. That is, TOPR is defined as any procedure that reduces unacceptable child behavior by the child experiencing an enforced reduction in available reinforcement for a brief defined period contingent upon an unacceptable behavior. Enacted procedures range

from a caregiver briefly withdrawing attention from a child, to placing a child on a specified chair or corner of the room, to the use of a specially designed segregated TOPR area (see Corralejo, Jensen, Greathouse, & Ward, 2018). There is a distinction between nonexclusionary and exclusionary TOPR: In nonexclusionary TOPR, the child remains in the environment where the problem occurred, whereas in exclusionary TOPR, the child is removed to another location (Scarboro & Forehand, 1975). Exclusionary versions are typically reserved for younger children, commonly 2 to 8 years of age, who at first struggle to regulate their behavior and may need to be physically removed in order to achieve an effective time-out from reinforcers. Exclusionary TOPR is usually used as a backup to nonexclusionary TOPR if a child does not follow the rules (such as remaining on the chair or staying quiet).

Given its widely accepted operant base, few writers have addressed the adequacy of its conceptual underpinnings, and attention has largely focused on the procedural techniques defining TOPR. For example, MacDonough and Forehand (1973) outlined and reviewed available research on eight parameters of the TOPR procedure: location, schedule, warning, signal, form of administration (which we elected to call *instructional vs. physical administration*), verbalized reason, contingent release, and duration. A number of updates of these procedures have taken place since (Corralejo et al., 2018; Everett et al., 2010; Harris, 1985; Hobbs & Forehand, 1977). As we will see, subtle variations in procedure are critical to how TOPR functions when it is scrutinized from a contemporary mental health perspective.

Researchers and practitioners have occasionally presented innovative ideas about the underlying goals and meaning of TOPR as a general discipline and child mental health strategy. For example, Dadds and Hawes (2006) described a parenting program in which TOPR is conceptualized within a behavioral, attachment, and systems perspective (see also Scott & Dadds, 2009). Johns and Levy (2013) presented a case study in which TOPR and time-in are used within both behavioral and attachment frameworks to treat a child with severe emotional and behavioral problems. Although not focusing on TOPR per se, a number of authors have pointed to the compatibility of learning and attachment theories in the processes and outcomes associated with behavioral parent training interventions for child behavior problems (e.g., Allen, Timmer, & Urquiza, 2014; O'Connor, Matias, Futh, Tantam, & Scott, 2013; Troutman, 2015).

What is missing, however, is a thorough analysis of what TOPR is and should be in consideration of emerging child mental health. In the nearly 60 years since TOPR was first used in the scientific and health literature, there has never been a thorough reanalysis of the full set of parent–child dynamics that ensue when a parent implements TOPR with a child. We argue here that a parent placing a child in TOPR represents a dynamic far greater than a mere "operant" punishment. It speaks to issues of power, attachment, self- versus other- behavioral/emotional regulation, and contextual family dynamics.

The following section presents an analysis of parental discipline strategies, and TOPR specifically, in terms of four contemporary pillars of child development theory: social learning theory, attachment theory, self- and emotion regulation theory, and ecological/family systems theory. We use these models to derive a set of axioms to guide how any discipline strategy should be evaluated in terms of its impact on child mental health. We then apply these axioms to TOPR in order to clarify how it should be used. We show that when conceptualized and enacted according to the joint considerations and indications of these highly compatible models, TOPR is a positive perturbation across these behavioral, attachment, self-regulatory and ecological/family systems that can rapidly remediate problems the child has in these systems, and thereby generally enhance child development.

Parental Discipline and Child Mental Health

Discipline From the Perspective of Learning Theory

In terms of learning theory, broadly sampled here from early operant to later social and cognitive learning theory, we take the core criterion of effectiveness—that is, parental discipline should work. Unfortunately, judging effectiveness can be somewhat complicated, especially for parents and many social commentators in society, as the worth of a discipline strategy may be judged according to visible effects on the child (that is, it might be assumed that effectiveness is indicated by the distress it causes in the person being disciplined). In formal learning terms, the effects on the emotion of the child is not the criterion for effectiveness; discipline—or "punishment," in formal learning terms—is effective if it reduces the frequency or intensity of the problematic child behavior it is contingent upon. That is, discipline reduces the likelihood of the behavior it follows. Discipline strategies such as TOPR can also be thought of as extinction procedures or "response costs," in that they remove a positive reinforcer from the behavior that previously elicited this reward. Thus, in the instance of a child being placed in TOPR for kicking a parent, TOPR is both a punisher that may reduce the likelihood of future kicking and an extinction event that removes parental attention that may have previously rewarded the kicking behavior.

Further, discipline functions in at least four ways in terms of broader social learning theory. First, effective discipline should prevent the likely escalation of parent–child conflict that is fundamental to social learning models of antisocial behavior, family violence, and associated psychopathology. Patterson's (1982) classic coercive family process remains the best explanatory model of how reinforcement traps, in which parent and child are simultaneously reinforced for

mutual attack and capitulation, move from the innocuous to the pathological as small struggles over daily life escalate into chronic and frequent aggression and abuse. When no effective discipline strategy is available to parents, mundane events like getting a child ready for school can escalate into severe conflict (Straus, 2000). In this sense, effective discipline procedures prevent escalating coercion cycles and give families a sense of predictable control over otherwise uncontainable escalations.

Second, learning theory specifies modeling and imitation as core mechanisms for learning behavior. Effective discipline should present parents as positive mental health models to the child. The use of a brief calm parenting discipline procedure models to the child that conflict can be dealt with calmly without resorting to physical and verbal aggression. It thus minimizes the modeling of aggression that often ensues when parents are unable to contain escalating coercion cycles.

Third, a core component of social learning theory is self-efficacy, defined as the expectation caregivers hold about their ability to parent successfully (Johnston & Mash, 1989). The evidence is clear that the use of escalating coercive discipline strategies is associated with low parental self-efficacy (Johnston & Mash, 1989; Jones & Prinz, 2005) and poor child mental health (Regalado et al., 2004). An effective discipline procedure provides parents with a method that enhances self-efficacy and reduces the likelihood of the use of aversive coercive parenting borne of frustration and anger. For the child, it is critical that discipline strategies are consistent, predictable, and controllable. As such, the child clearly understands parental expectations for child behavior, that discipline is not random or emotionally driven, and, thus, that it can be successfully avoided through self-regulation. Fourth, programs based on social learning theory are not designed to simply remove a negative behavior without consideration of a replacement behavior; some of the most successful programs show reductions in problematic behavior by the establishment or strengthening of an alternative, often incompatible, positive behavior (Baldwin & Baldwin, 1986).

Finally, the issue of the causes of the particular child behavior is an important point that is addressed in social learning theory. TOPR was designed as a response to an *operant* child behavior, that is, an inappropriate behavior that is purposeful or goal directed, and thus influenced by a reinforcement contingency, often parental attention. The operant specifies that the child's behavior is occurring to achieve some goal. Thus, TOPR is a punisher or extinction event applied to a child "operant." It was not designed to be used with child behaviors that are "elicited" by powerful environmental stimuli and are not under the child's control, such as fear and panic and distress reactions in the absence of behavioral problems.

Thus, from the perspective of learning theory, successful parental discipline is that which satisfies six criteria. Discipline should (a) reduce the likelihood of the inappropriate behavior recurring; (b) prevent the ongoing escalation of coercive aggressive cycles; (c) model calm, positive interpersonal processes; (d) strengthen an alternative positive behavior; (e) increase self-efficacy that one is an effective agent; and (f) limit active discipline strategies to operant child behavior, not elicited or accidental behavior like fear or making mistakes.

Discipline From the Perspective of Attachment Theory

From Bowlby through Ainsworth to contemporary models of attachment and parent–child processes, attachment theory has provided a rich framework for understanding developmental psychopathology (Cassidy & Shaver, 1999). At its core is the idea of secure attachment as a fundamental element of well-being. It is conceptualized and operationalized in terms of separation and rapprochement. A young child who is securely attached to a caregiver is able to separate in order to explore the environment, and develop creative independence, self-soothing, and regulation, due to the availability of rapprochement with a secure base in the form of a predictable nurturing relationship with the caregiver. Although attachment theory has developed broadly to include several corollaries of child and adult relationships (see Cassidy & Shaver, 1999), the core idea remains that children require a secure caregiving relationship that allows them to effectively separate, explore, reunite, and seek comfort in order to successfully negotiate and master the changing demands of their social environment and development.

From an attachment perspective, a discipline strategy should, at a minimum, not threaten or break the attachment bond; at its best, it should enhance the bond. Attachment bonds are threatened when a caregiver is abusive, unpredictable, unreliable, or unavailable, such as associated with death, separation, and rejection. Insecure attachments are characterized by the inability to separate and reunite successfully (Ainsworth & Bell, 1970); hence, the clingy child and/or parent who struggle with anxiety and anger at separation and reunite with avoidance and hostility. Avoiding separation or reunification does not solve these attachment threats; rather, attachment theory specifies that a secure attachment is marked by the ability to successfully separate and reunite without threats to the bond (Ainsworth & Bell, 1970; Cassidy & Shaver, 1999). Thus, discipline is effective from an attachment perspective when it provides a clear message to the child that the attachment bond is maintained solidly throughout the discipline event. That is, the strategy used provides the message that the caregiver cares about the child, does not approve of the behavior, and believes in their capacity to demonstrate self-control and positive behavior.

This core process of successful separation and rapprochement is enacted precisely in many common discipline strategies when delivered effectively. TOPR, for example, by definition, involves a temporary separation in which access to parental attention is reduced and is contingent upon the child regulating their emotions and behavior, at which time rapprochement is enacted. The essential ingredient that makes a discipline strategy compatible with attachment theory is that the "separation" inherent in the strategy is not a threat to the attachment bond—rather, it is a temporary and predictable separation solely based on the need for an operant disciplinary event—and that the basic parent–child relationship, its attachment security, remains unchanged by this temporary separation.

The major concern of writers criticizing TOPR and other forms of discipline from an attachment perspective (e.g., Siegel & Bryson, 2014a) is that the separation damages or breaks the attachment bond by communicating to the child that the parent is not available to the child to help them manage and soothe difficult emotions and interpersonal conflicts. This is a worthy concern and should be axiomatic to how discipline should be used, but it also misunderstands the underlying message that contemporary discipline strategies such as TOPR have been designed to communicate, that is, that discipline is about a brief predictable response to a specific problem behavior; it is not about isolating and abandoning a child. It effectively says, for example, "You are loved, you are my child, you are safe, this is not about you or us, it is just about this instance of aggression."

This provides a stark contrast to the experience of many parent–child dyads who are not able to use discipline techniques without getting upset and impacting the attachment relationship. As noted above, from a social learning perspective, effective discipline provides a preventative measure against escalating coercive cycles. These escalations frequently drift into dark areas of attachment threat and abuse as parents and children grow increasingly emotional and frustrated with each other and say and do things they might not wish to resort to. When this happens, discipline procedures become "attachment rich"—they stray into issues of attachment (e.g., "I am sick of you, I'm fed up, why are you like this? Get out of my sight"). These are unsuccessful separations from an attachment perspective, as they damage the secure base and make rapprochement difficult.

Thus, from an attachment perspective, successful discipline does not threaten, and preferably strengthens, the parent–child bond, thereby increasing each person's capacity for successful attachments more generally. By successfully negotiating the symbolic "separation and rapprochement" that is represented by the initiation and resolution of a discipline event, especially TOPR, successful discipline thus normalizes and reinforces the daily manifestations of a secure attachment bond.

Discipline From the Perspective of Self- and Emotion Regulation Theory

Here, we draw upon the rich and overlapping areas of self-control, behavioral regulation, and emotion regulation in the science of child development. Although these are diverse fields each with their own methods and issues, they share a common focus on the individual's ability to regulate self-processes in order to achieve a desired outcome, and we refer to this commonality of self-regulation in what follows. The ability to successfully regulate across domains of behavior, emotions, cognition, and attention has been shown to promote positive child development and mental health (Gross, 1998, 2015). That is, there is a huge literature showing that skill in these regulatory processes is associated with, and predictive of, a diverse range of physical, social, and health outcomes (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Fergusson, Boden, & Horwood, 2013; Gross, 1998; Moffitt et al., 2011; Southam-Gerow & Kendall, 2002). Further, there is an impressive literature that formally links parental discipline with self-regulation in children. The child's regulatory abilities develop early in life and in the context of parent–child relationships and interactions, before generalizing to school and peer settings (Fabes, Eisenberg, & Miller, 1990). A wealth of evidence suggests a clear link between coercive, dysregulated parenting styles and deficits in a child's own capacity for emotion regulation (Chang, Schwartz, Dodge, & McBride-Chang, 2003; Gottman, Katz, & Hooven, 1997).

Thus, parental behavior and parent–child interactions can promote the positive development and mental health of children by promoting the child's ability to effectively regulate their emotions, attention, and behavior. In relation to parental discipline strategies, then, self-regulation theory would regard an effective discipline strategy as one that, at a minimum, does not challenge or reduce, but preferably enhances, a child's ability to self-regulate their behavioral, emotional, and attentional/cognitive processes. This is challenging to achieve with many discipline strategies, especially with young children, as discipline inherently contains elements of control, whereby the child is, by definition and necessity, being regulated by the parent. A common element of broad models of child development (e.g., Vygotsky, 1978) is the idea that healthy child development entails some form of transfer of control from parents to the child, such that the child gradually internalizes disciplinary control into skills for autonomous regulation.

For discipline in general, then, and TOPR in particular, the development of self-regulation should be a broad goal. Although TOPR typically involves parental control, there are multiple opportunities in the process whereby the child can be empowered to learn self-regulatory skills. By understanding that a predictable, nonemotional consequence will reliably follow a problematic behavior, a child is given maximum opportunity to regulate in advance to avoid the

discipline. Similarly, a calm instruction given before TOPR maximizes the likelihood of self-regulation. Explaining to a child how TOPR works in advance of implementation maximizes the chances that the child can stay calm and regulate. By making removal from TOPR contingent upon the child successfully regulating behavior and emotions, autonomous regulation and a sense of self-agency and control can be strengthened in the child.

This approach to discipline overlaps with the previous comments on self-efficacy, such that *self-regulation* refers to actual regulatory processes, and *self-efficacy* refers to an individual's beliefs about their ability to successfully perform a behavior, in this case, self-regulatory processes, in order to achieve a desired goal. Developmental psychopathology has identified self-regulatory processes at the core of various models of vulnerability and resilience to mental health problems (e.g., Gross, 2015), as well as models of specific disorders, including cognitive and behavioral regulation in ADHD, attention control in anxiety disorders and psychopathy, and emotion regulation in conduct problems (Cavanagh, Quinn, Duncan, Graham, & Balbuena, 2017).

Thus, from the perspective of self-regulation theory, an effective discipline strategy will be a positive force in the development of mental health by enhancing, over time, the child's ability to regulate behavior, emotion, arousal, and attention without the need for external, disciplinary constraints. The development of autonomous self-regulation skills is a core aspect of early child development. Thus, disciplinary strategies should be sensitive to and promote development such that external control inherent in discipline should be gradually relinquished as the child learns to internalize the regulatory skills.

Discipline From the Perspective of Ecological/ Family Systems Models

Children develop in a complex social field. Huge contributions to understanding developmental psychopathology have come from models that focus on the ecological system in which development is embedded. This covers a range of diverse models that have in common the core idea that the development of mental health is in part determined by the relationship of the child to functional and structural properties of the social context. This context includes the family, neighborhood, school, sporting and other activity groups, religion, and larger cultural groupings. Some of the most influential ideas come from Bronfenbrenner (1979) and the ecology of child development; the 1970s family therapy thinkers such as Minuchin et al. (1975), who detailed how healthy child development is in part dependent on structural hierarchies and groupings with clear boundaries within the family; and a wealth of empirical work showing that effective parent–child and family communication patterns are a clear predictor of developmental health versus disorder (Davies & Cummings, 2006).

For the purposes of evaluating discipline from the ecological perspective, we propose a general tenet emerging from the core of these models, especially Bronfenbrenner's (1979) ecological model, that can be summarized as follows: Child development and mental health is in part determined by both how the child interacts with his or her immediate family and social systems, and how these systems interact with each other to promote child development. This, then, includes the child's interactions with individual parents and other family members, school, and broader social groups, as well as how these individuals and groups interact with each other with regard to the child. The latter is determined by how well the broader social ecology holds compatible and positive values about child development, moral and cultural systems, and meaning in general.

Thus, discipline, both in terms of its procedures and the behavior it is applied to, should be consistent with a larger set of shared values held by the child and parent's social ecology. Discipline is thus not erratic, impulsively emotional, random, or applied differentially; it is based on higher goals of moral and social behavior. This fit between the discipline and its social and moral context is a critical principle for understanding the worth of any discipline strategy. As argued by Grusec, Danyliuk, Kil, and O'Neill (2017), discipline is effective when it is perceived by the child to be fair, reasonable, and clearly embedded in explicit community moral values of right and wrong. That is, the discipline event has meaning clearly embedded in a family and ecological system of shared perceptions of what is right; it is not arbitrary, out of scale to the problem behavior, unfair, and based on parental emotion or impulse. We also note that the construct of how well individual behavioral events are embedded in, and consistent with, larger cultural and spiritual meaning is emerging as one of the most robust predictors of mental health and resilience in the "happiness" literature (see Ryan & Deci, 2001).

This literature indicates that to understand the value and acceptability of TOPR, there must be consideration of the social context in which it is implemented. Primarily, this refers to the child's family and how fairly and explicitly its moral and social principles are used to guide the various child behaviors that are selected for discipline. From the perspective of ecological and family systems thinking, effective discipline is one that responds to a behavior that is wrong or inappropriate according to broader system and cultural mores, and enacts a corrective process that is fair, reasonable, acceptable, and aligned with the general cultural mores and meaning of the system.

Integrating the Prescriptions of Major Mental Health Models Into a Set of Working Axioms

The above leads us to propose a set of working axioms by which to guide and evaluate the worth of specific parental discipline strategies. It should be noted that elements of these recommendations are specified in existing evidence-based interventions that employ TOPR, such as Triple P (Sanders et al., 2014), PCIT (Querido et al., 2002), and the Incredible Years (Webster-Stratton, 2001). This is the first time, we believe, that these axioms have been brought together into an expanded, integrated set. Thus, in terms of the development of mental health in children, discipline strategies should be (a) effective in terms of their success in reducing recurrence of the problem behavior, preventing escalation of further coercive aggression, providing effective modeling of interpersonal process, and developing and strengthening alternative behaviors to the problem behavior; (b) attachment secure, as in not a threat to, and preferably facilitative of, ongoing secure attachment relationship between the parent and child; (c) promoting of the child's self-efficacy and skills for behavioral, emotional, and cognitive/attentional self-regulation; and (d) fair and meaningful, not arbitrary and personal, and be clearly embedded in, and consistent with, an explicit set of shared family, social, and cultural mores about what is right and meaningful.

Guidelines for Implementation of TOPR From a Mental Health Perspective

These axioms about how discipline should be conceptualized and implemented to enhance positive child development and mental health can now be used to inform the appropriate use of TOPR, our main focus in this article. Thus, in response to the question "How then should TOPR be implemented in terms of promoting the ongoing mental health of children?" we propose the following specific guidelines:

1. TOPR should only be used for inappropriate child behavior that has an operant or deliberate quality or component, that is, behavior over which the child has some control and that is functional in producing some desired outcome for the child. It should not be used for behavior that represents an inability to perform an action, lack of understanding, mistakes, fear or other overwhelming emotions. These behaviors warrant supportive teaching responses from parents, not discipline. TOPR can be used for inappropriate child behavior such as aggression that accompanies distress reactions but not for the distress reactions themselves.
2. The effectiveness of TOPR implementation should be judged in terms of observable and timely reductions in the problem behavior and. thus, in the rapidly diminishing need to use TOPR.
3. Parental behavior during the TOPR procedure should provide a positive role model of calm, attachment-secure interpersonal process.
4. The use of TOPR must be a part of a broader behavioral program that promotes a warm and rewarding relationship, and explicitly teaches alternative positive child behaviors to replace the problem behavior to improve the child's self-efficacy in meeting their own needs.
5. TOPR should be seen as a microcosm of the fundamental attachment process of separation and reunion. It must not carry any parental communication of abandonment, isolation, and rejection during the TOPR and return to time-in phases. Implemented appropriately, TOPR can be seen as microtheater for enacting and repairing attachment problems, conveying the explicit message that this discipline event is focused on a specific problem behavior, and throughout, the child remains safe, valued, and loved.
6. The child should have an active role in influencing the unfolding of TOPR such that their self-regulatory capacities are enhanced rather than externally controlled and diminished. Thus, TOPR should end in a way that is contingent upon the child's self-regulation, not an arbitrary time period. For example, return to time-in can be contingent upon the child showing a brief but stable period of regulated emotions and behavior.
7. Discipline strategies should function to improve the child's ability to effectively regulate emotions and behavior. Thus, the child should be taught, at a positive time outside of conflict and prior to TOPR being used, some basic rules for TOPR and skills for regulating their emotions and behavior that can be used in TOPR and elsewhere.
8. TOPR should be used for behaviors that are prespecified and explicitly explained to the child as being problematic and inappropriate in terms of generally accepted mores to the child, the family, the school, and so on. These should be open to discussion at positive times outside of discipline events.
9. TOPR implementation should be embedded in a family and ecological system of shared perceptions of what is right; it is not arbitrary, out of scale to the problem behavior, unfair, and based on parental emotion or

impulse. Children should be encouraged to be active participants in understanding the cultural, moral, and pragmatic context of family discipline.

10. TOPR should be applied democratically. That is, in order to embed the discipline process firmly within accepted ideas of fairness, time-out should be applied equally and fairly across children in a family, depending on developmental levels.

Conceptualized and enacted within these guidelines for promoting mental health, we propose that TOPR is not only an acceptable parental discipline strategy—it is a positive perturbation of the parent–child system that can enhance and repair behavioral problems as well as broader problems of self- and emotion regulation and parent–child attachment problems. Studies show that behavioral parenting programs that include TOPR have clear benefits for these broader aspects of child development, including attachment processes (O'Connor et al., 2013). We thus propose that the widespread use of TOPR is warranted, and when conceptualized and implemented appropriately, as described above, is a positive force for the mental health of children and families.

Negative Information About TOPR

What, then, drives the recent flurry of criticism of TOPR as a harmful procedure for children? It would be easy to dismiss this as based on inaccurate ideas of what TOPR is. We think it better to look carefully at these criticisms for ideas of worth, as there is no doubt that they are motivated by a positive concern for children. From reviewing the literature on the Internet about TOPR (e.g., Australian Association for Infant Mental Health [AAIMH], 2009; Coulson, 2016; Lapointe, 2016; Siegel & Bryson, 2014a), it would seem that the criticisms can be summarized into three categories: (a) TOPR produces an attachment threat, for example, "it deliberately cuts off the child from the relationship with parent or carer so that the child feels powerless to connect with the adult" (AAIMH, 2009); (b) TOPR does not teach new behaviors; and (c) TOPR fails to address the underlying causes of the problem behavior. These are reasonable concerns and they should be carefully considered rather than dismissed by proponents of TOPR. These are the same concerns noted by Quetsch et al. (2015) in their analysis of the literature that claims TOPR to be harmful for children. Importantly, the analysis we presented above about how parent–child discipline should be conceptualized and implemented, and thus specifically how TOPR should be used, converged on the same issues. Further, the analysis showed that when implemented in terms of current knowledge of child development and mental health, TOPR is actually a positive discipline strategy that addresses each of these concerns and can be a positive perturbation for attachment problems and the development of self-regulation skills. There is a further concern, however, about the use of TOPR in relation to children with trauma histories and the potential of TOPR to harm these children, and this will be addressed in the following section.

Is TOPR Safe and Effective for Children With Trauma Histories?

Exposure to traumatic or adverse events is unfortunately common in childhood and adolescence, and is associated with the onset of a broad range of mental health disorders (e.g., McLaughlin et al., 2012) as well as behavioral symptoms of "trauma," such as reexperiencing, avoidance, and hyperarousal, which may lead to a diagnosis of posttraumatic stress disorder (PTSD). Concerns about the harmful effects of TOPR for children with trauma histories are prolific on the Internet, although these concerns have not been documented in the published scientific literature, and it is not clear how widespread these concerns are among practitioners and caregivers. For the sake of this analysis, it is important to distinguish between *acute trauma*, which results from exposure to a discrete traumatic event, and *complex trauma*, which results from the experiences of multiple, chronic, and prolonged developmentally adverse events, often of an interpersonal nature and with early life onset (van der Kolk, 2005). Exposure to child abuse and neglect is considered a complex trauma and can result in difficulties in emotion perception, processing and regulation, and long-lasting physical, emotional, and psychological problems as well as changes in structural and functional brain development (Jedd et al., 2015).

We believe it is important to focus on the appropriateness and effectiveness of TOPR as a discipline procedure for children who have experienced complex trauma in the form of abuse and neglect specifically, as it is for these children that concerns about potential harmful effects of TOPR are paramount. Additionally, because the trauma is often experienced within the context of a dysfunctional caregiving system, it is important to explore the potential of TOPR to reduce trauma-related mental health problems. Thus, we address two key questions in relation to use of TOPR with children with abuse and neglect histories: Is there any evidence that treatments that include TOPR are harmful, and how does TOPR fit within current best-practice treatments for children with trauma symptoms? We also revisit the axioms and guidelines for implementation of TOPR covered earlier in relation to children with trauma histories.

Regarding the first question about whether interventions that include TOPR are harmful for children with abuse and neglect histories, there is considerable research that has examined the efficacy of parenting interventions that include TOPR within child welfare populations, and this research has found no evidence of adverse effects. For

children who have experienced physical abuse and remain with their parents, parenting interventions have been found to significantly reduce rereports of physical abuse; ineffective, harsh, and dysfunctional parenting practices; and negative parenting attitudes, and to enhance positive parenting practices, attitudes, and attributions (see reviews by Chen & Chan, 2016; Vlahovicova, Melendez-Torres, Leijten, Knerr, & Gardner, 2017). Many of these interventions include TOPR as part of a focus on teaching effective parental discipline, along with enhancing the parent–child affective bond. PCIT includes TOPR, and a review of 11 PCIT studies targeting maltreating families found significant reductions in child welfare rereferrals, negative parenting practices, and child externalizing behaviors (Batzer, Berg, Godinet, & Stotzer, 2018). There is much less research for children who have experienced parental neglect, but there is some evidence that interventions including TOPR are also effective in reducing neglect recidivism (Chaffin, Funderburk, Bard, Valle, & Gurwitch, 2011). We could find no evidence of iatrogenic effects stemming from the use of parenting programs that include TOPR with these populations of children.

Use of TOPR for children who have been removed from their parents and placed with foster or kinship carers warrants a particular focus. Not only have these children experienced abuse and/or neglect severe enough to result in removal from their parents—they have also experienced separation from parents and other attachment figures. For these children, there is evidence that parenting interventions are effective in improving child mental health and parenting (see reviews by Hambrick, Oppenheim-Weller, N′zi, & Taussig, 2016; Uretsky & Hoffman, 2017), and TOPR is often included as a key discipline procedure in these interventions (e.g., Mersky, Topitzes, Grant-Savela, Brondino, & McNeil, 2016; Price et al., 2008). Thus, there appears to be evidence that interventions involving TOPR improve parenting and child adjustment for children in the welfare system, and there is no evidence to date of harmful effects.

A few evidence-based parenting interventions have also been adapted to be appropriate for children with trauma symptoms (Akin, Lang, McDonald, Yan, & Little, 2019; Gurwitch, Messer, & Funderburk, 2017). For example, Parent Management Training Oregon Model was adapted to include trauma content and a focus on emotion regulation and mindfulness techniques for children in foster care with serious emotional disturbance (Akin et al., 2019). This intervention was found to be effective in improving child socioemotional well-being in an randomized controlled trial when compared with services as usual (Akin et al., 2019). Importantly, the adaptations to this program did not include changes to core parenting strategies such as TOPR.

There have been concerns among practitioners and parents that the use of TOPR with children with abuse and neglect histories may retraumatize children, which is defined as "traumatic stress reactions, responses and symptoms that occur consequent to multiple exposures to traumatic events that are physical, psychological, or both in nature" (Duckworth & Follette, 2012, p. 2). It is argued that retraumatization can occur through discipline practices that are distressing for a child and may cause reexperiencing of the traumatic event (McNeil, Costello, Travers, & Norman, 2013). For example, TOPR may serve as a reminder of a previous traumatic event and cause intense distress (see McNeil et al., 2013, and Quetsch et al., 2015, for detailed discussions about retraumatizaton in relation to TOPR). However, in the unlikely event that TOPR should remind a child of a previous traumatic event (e.g., limit setting by parents reminding a child of previous physical abuse) and trigger temporary arousal or fear, repeated use of the procedure as part of a calm, consistent response to misbehavior may potentially serve as psychological exposure (McNeil et al., 2013; Quetsch, Lieneman, & McNeil, 2017; Quetsch et al., 2015). Gradual exposure to trauma reminders is a key component of interventions for child trauma symptoms. In this context, exposure to TOPR has the potential to reduce a child's arousal or fear of the trauma reminder (McNeil et al., 2013). Through the implementation of TOPR as a calm and predictable discipline strategy—and one that does not disrupt secure attachment—children may learn to replace feelings of fear and pain with feelings of control and safety (see Quetsch et al., 2015, 2017).

In support of the argument that interventions that include TOPR do not increase trauma symptoms, a study of a standard PCIT found significant reductions in child trauma symptoms along with child behavior problems from pre- to posttreatment (Pearl et al., 2012), although it should be noted that this was not a randomized controlled trial. The children in this study were considered high risk, with the majority of children having experienced some form of traumatic event. It is important to caution that we are not suggesting that TOPR be used as a discipline procedure specifically for trauma symptoms (as noted earlier in Guideline 1), but it may be indicated as part of a parenting intervention for inappropriate child behavior that accompanies these symptoms Cohen, Berliner, & Mannarino, 2010.

The second question focuses on how TOPR fits within current best-practice treatments for child trauma symptoms. Recent reviews have identified that one of the most evidence-based interventions for reducing child trauma symptoms is trauma-focused cognitive behavioral therapy (TF-CBT; Leenarts, Diehle, Doreleijers, Jansma, & Lindauer, 2013). This intervention—described by the acronym PRACTICE—involves a focus on parenting, along with psychoeducation, relaxation skills, affective modulation skills, cognitive coping and processing skills, trauma narrative, in vivo mastery of trauma reminders (exposure), conjoint child–parent sessions, and enhancing future safety and development (Cohen, Berliner, et al., 2010). In the parenting component, caregiv-

ers learn effective parenting skills, stress management, and skills to support gradual exposure and to correct their own trauma-related cognitive errors (Kliethermes, Drewry, & Wamser-Nanney, 2017). The parenting skills taught in TF-CBT comprise standard discipline strategies, including the use of TOPR (Cohen, Berliner, et al., 2010). However, interventions such as TF-CBT may not feasible if child disruptive behaviors prevent the child and parent from effectively engaging in the intervention, so in this case, a parenting intervention may be warranted as a first-line treatment (Cohen, Berliner, et al., 2010; Gurwitch et al., 2017). Cohen, Berliner, et al. (2010) provide a detailed discussion about treatment for comorbid behavior problems and trauma symptoms. Thus, it would seem that TOPR is already a standard procedure within evidence-based interventions for child trauma symptoms such as TF-CBT.

It is also important to revisit the likely putative mechanisms for how TOPR works within the context of maltreating parents and trauma-exposed children, and in doing so, revisit the axioms set out earlier. Child physical abuse mostly occurs within a context of an escalating coercive parent–child interactions, and interactions may be driven by negative parental attributions and intolerance toward the child's behavior as well as increasing reliance on harsh discipline (Chaffin et al., 2004). Through successful implementation of TOPR, discipline becomes calm, controlled, predicable, and brief, instead of being emotional, escalating, chaotic, and prolonged, with caregivers modeling effective emotion regulation skills (Axiom a). Use of TOPR ensures that the positive parent–child relationship is maintained and not damaged by discipline encounters (Axiom b). Children practice and achieve success at emotional and behavioral regulation in TOPR, thus improving their skills in self-regulation (Axiom c). Through consistent and predictable use of TOPR, which is discussed and rehearsed with children prior to implementation, children will replace beliefs about discipline being unsafe, unfair, and erratic with an understanding that TOPR is safe, fair, reasonable, and meaningful (Axiom d). Consequently, children may replace the distress and fear that was once associated with discipline with feelings of safety, security, and predictability (Quetsch et al., 2017).

Implementation of TOPR should be considered with each child's abuse and neglect histories in mind (Quetsch et al., 2015), along with their behavioral presentations. It is important that comprehensive assessments include standardized measures about a child's traumatic experiences, PTSD symptoms, and behavioral problems, as well as the quality of parenting and the parent–child relationship. A thorough assessment is critical to determine treatment planning for children with trauma histories in order to determine what problems to focus on during treatment (see Cohen, Berliner, et al., 2010, and Cohen, Bukstein, et al., 2010, for more information about assessment and treatment). Based on each child's individual history and presentation, TOPR may require modification. Such modifications may include identifying alternative strategies to exclusionary TOPR, which is often used as a backup to nonexclusionary TOPR. The use of exclusionary TOPR may be particularly concerning for caregivers of children with trauma histories, and they may be reluctant to implement it. Pearl et al. (2012) described how the strategy was modified in response to organizational policies preventing the use of exclusionary TOPR. In this example, loss of privileges was implemented as a backup procedure to nonexclusionary TOPR, and this modification did not appear to reduce the effectiveness of the strategy. Additionally, some strategies or procedures may require an increased emphasis for a child with trauma histories, such as an a more intense focus on establishing/strengthening the positive parent–child relationship prior to introducing TOPR. Ongoing assessment of child symptoms throughout the duration of intervention is also critical, as this will determine the effectiveness of TOPR, as described in Guideline 2, and guide any modifications to the procedure.

We thus conclude that there is no evidence to show that TOPR is contraindicated for children showing trauma symptoms, either as a discipline strategy or as part of a parenting intervention to address trauma-related behavior problems, although the procedure should not be used to manage trauma symptoms specifically. TOPR is used in evidence-based interventions that show benefits for improving parenting and child adjustment in child welfare populations. This is not to say that these research findings constitute evidence that TOPR per se is effective, as the intervention effects may arise primarily from strengthening the parent–child relationship or other strategies in the intervention. The type of studies that would be needed to evaluate the independent contribution of TOPR per se, such as dismantling studies and meta-analyses of intervention components, have not yet been conducted. The evidence base for making these conclusions is small at present, and more research into the use of TOPR with highly vulnerable populations should be a priority. We also note that procedural variations of TOPR might aid applicability and acceptability with traumatized children without compromising effectiveness. This would be recommended, with an important emphasis on monitoring implementation to ensure that caregivers adhere to its evidence-based procedural parameters, guidelines for implementation as outlined in this article, and careful monitoring of changes in child behavior to determine effectiveness of the strategy.

Summary and Conclusions

We reviewed contemporary theory and empirical studies with the aim of developing a set of axioms for evaluating the value and acceptability of parental discipline strategies from the perspective of emerging mental health using the

best available contemporary theory in developmental psychopathology. We then scrutinized TOPR, one of the most common but increasingly controversial parental discipline strategies from this perspective, leading to a set of guidelines for use of this technique that maximize its contribution to the mental health of growing children. Given recent concerns about the use of TOPR with children who have experienced trauma, we also reviewed evidence on the use of discipline with such children, especially the use of TOPR. We conclude the following:

1. Parental discipline represents a group of common and ongoing events in the lives of children that contribute to their mental health, and thus society's health at large. Thus, its usage should be a priority concern for the health, education. and social sectors of society.

2. The quality of any particular discipline strategy as a mental health perturbation can be evaluated using the best contemporary models of developmental psychopathology, that is, social learning, attachment, self-regulation, and family/ecological systems theories.

3. Each of these models contributes to a set of clear guidelines, presented in this article, about how discipline can and should be used to facilitate positive child outcomes.

4. TOPR is an increasingly common but somewhat controversial discipline strategy that has been shown to be effective in reducing inappropriate behavior and improving parent–child relations, but that has not been comprehensively scrutinized in terms of contemporary models of developmental mental health.

5. The application of the guidelines we derived from models of developmental psychopathology to the practice of TOPR leads to specific guidelines for its use, specified earlier in this article.

6. When implemented within these guidelines, TOPR is an effective and positive discipline strategy that has the potential to enhance all aspects of the child's development and mental health.

7. The appropriate use of TOPR is also compatible with our best understanding of the needs of children with a history of exposure to trauma, although the procedure is not appropriate for trauma symptoms specifically.

8. Research into the use of TOPR with children with a history of trauma exposure indicates that when presented as part of broad parenting intervention, it improves behavioral and emotional problems.

9. Notwithstanding Points 7 and 8 above, further research is needed to confirm the effectiveness and safety of using TOPR with children who have experienced complex trauma.

These conclusions have important implications for clinical practice and policy. The evidence presented here indicates that the adoption of policies that prohibit the use of TOPR with children may be ill-considered and deny access of children in need to an effective evidence-based procedure. Given the wealth of evidence showing that TOPR is a positive perturbation in child mental health, and the absence of evidence showing it is harmful after five decades of research, clinical, and common usage, claims that it is harmful should be considered extraordinary, and thus require an extraordinary level of evidence to back them up. A clear parallel is claims that vaccinations cause autism. The evidence showing this to be false is so strong that claims to the contrary require an extraordinary quality and quantity of evidence to back them up. When TOPR is used, however, it is crucial that its underlying theory, therapeutic mechanisms, and procedural subtleties are well understood and explicit to all parties concerned. The evidence is clear that inappropriate parental discipline strategies have been, and continue to be, implemented in the name of TOPR and these are widespread, ineffective, and potentially harmful. Thus, a priority for improving child mental health literacy is to disseminate accurate information about the mechanisms and procedures of this and other forms of discipline.

Finally, we have clearly seen that the use of TOPR is synergistic with attachment theory and, in fact, offers a concrete way of preventing and addressing attachment problems in everyday life. Similarly, the use of TOPR is compatible with the needs of children who have been exposed to complex trauma and appears to be effective for treating behavioral and emotional problems in these children. The literature on this latter conclusion is tentative, however, and should be a priority for future research.

References

Australian Association for Infant Mental Health (AAIMH). (2009). *Time out: Position Paper 3*. Retrieved from https://aaimhi.sslsvc.com/key-issues/position-statements-and-guidelines/AAIMHI-Position-paper-3-Time-out.pdf

Ainsworth, M. D. S., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development, 41,* 49–67. http://dx.doi.org/10.2307/1127388

Akin, B. A., Lang, K., McDonald, T. P., Yan, Y., & Little, T. (2019). Randomized trial of PMTO in foster care: Six-month child well-being outcomes. *Research on Social Work Practice, 29,* 206–222.

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review.

Clinical Psychology Review, 30, 217–237. http://dx.doi.org/10.1016/j.cpr.2009.11.004

Allen, B., Timmer, S. G., & Urquiza, A. J. (2014). Parent–child interaction therapy as an attachment-based intervention: Theoretical rationale and pilot data with adopted children. *Children and Youth Services Review, 47,* 334–341. http://dx.doi.org/10.1016/j.childyouth.2014.10.009

Baldwin, J. D., & Baldwin, J. I. (1986). *Behavior principles in everyday life*. Englewood Cliffs, NJ: Prentice Hall.

Batzer, S., Berg, T., Godinet, M. T., & Stotzer, R. L. (2018). Efficacy or chaos? Parent-child interaction therapy in maltreating populations: A review of research. *Trauma, Violence, & Abuse, 19,* 3–19. http://dx.doi.org/10.1177/1524838015620819

Bean, A. W., & Roberts, M. W. (1981). The effect of time-out release contingencies on changes in child noncompliance. *Journal of Abnormal Child Psychology, 9,* 95–105. http://dx.doi.org/10.1007/BF00917860

Brestan, E. V., & Eyberg, S. M. (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, and 5,272 kids. *Journal of Clinical Child Psychology, 27,* 180–189. http://dx.doi.org/10.1207/s15374424jccp2702_5

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Cassidy, J., & Shaver, P. R. (1999). *Handbook of attachment: Theory, research and clinical applications, 5,* 113–120.

Cavanagh, M., Quinn, D., Duncan, D., Graham, T., & Balbuena, L. (2017). Oppositional defiant disorder is better conceptualized as a disorder of emotional regulation. *Journal of Attention Disorders, 21,* 381–389. http://dx.doi.org/10.1177/1087054713520221

Chaffin, M., Funderburk, B., Bard, D., Valle, L. A., & Gurwitch, R. (2011). A combined motivation and parent-child interaction therapy package reduces child welfare recidivism in a randomized dismantling field trial. *Journal of Consulting and Clinical Psychology, 79,* 84–95. http://dx.doi.org/10.1037/a0021227

Chaffin, M., Silovsky, J. F., Funderburk, B., Valle, L. A., Brestan, E. V., Balachova, T., . . . Bonner, B. L. (2004). Parent-child interaction therapy with physically abusive parents: Efficacy for reducing future abuse reports. *Journal of Consulting and Clinical Psychology, 72,* 500–510. http://dx.doi.org/10.1037/0022-006X.72.3.500

Chang, L., Schwartz, D., Dodge, K. A., & McBride-Chang, C. (2003). Harsh parenting in relation to child emotion regulation and aggression. *Journal of Family Psychology, 17,* 598–606. http://dx.doi.org/10.1037/0893-3200.17.4.598

Chen, M., & Chan, K. L. (2016). Effects of parenting programs on child maltreatment prevention: A meta-analysis. *Trauma, Violence, & Abuse, 17,* 88–104. http://dx.doi.org/10.1177/1524838014566718

Cohen, J. A., Berliner, L., & Mannarino, A. (2010). Trauma focused CBT for children with co-occurring trauma and behavior problems. *Child Abuse & Neglect, 34,* 215–224. http://dx.doi.org/10.1016/j.chiabu.2009.12.003

Cohen, J. A., Bukstein, O., Walter, H., Benson, S. R., Chrisman, A., Farchione, T. R., . . . AACAP Work Group On Quality Issues. (2010). Practice parameter for the assessment and treatment of children and adolescents with posttraumatic stress disorder. *Journal of the American Academy of Child & Adolescent Psychiatry, 49,* 414–430.

Corralejo, S. M., Jensen, S. A., Greathouse, A. D., & Ward, L. E. (2018). Parameters of time-out: Research update and comparison to parenting programs, books, and online recommendations. *Behavior Therapy, 49,* 99–112. http://dx.doi.org/10.1016/j.beth.2017.09.005

Coulson, J. (2016). *The negative effects of time out on children*. Retrieved from https://ifstudies.org/blog/the-negative-effects-of-time-out-on-children

Dadds, M., & Hawes, D. (2006). *Integrated family intervention for child conduct problems: A behaviour-attachment-systems intervention for parents*. Samford, Queensland, Australia: Australian Academic Press.

Davies, P. T., & Cummings, E. M. (2006). Interparental discord, family process, and developmental psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Volume 3: Risk, disorder, and adaptation* (pp. 86–128). Hoboken, NJ: Wiley.

Drayton, A. K., Andersen, M. N., Knight, R. M., Felt, B. T., Fredericks, E. M., & Dore-Stites, D. J. (2014). Internet guidance on time out: Inaccuracies, omissions, and what to tell parents instead. *Journal of Developmental and Behavioral Pediatrics, 35,* 239–246. http://dx.doi.org/10.1097/DBP.0000000000000059

Duckworth, M., & Follette, V. (Eds.). (2012). *Retraumatization: Assessment, treatment, and prevention*. New York, NY: Routledge. http://dx.doi.org/10.4324/9780203866320

Everett, G. E., Hupp, S. D., & Olmi, D. J. (2010). Time-out with parents: A descriptive analysis of 30 years of research. *Education & Treatment of Children, 33,* 235–259. http://dx.doi.org/10.1353/etc.0.0091

Fabes, R. A., Eisenberg, N., & Miller, P. A. (1990). Maternal correlates of children's vicarious emotional responsiveness. *Developmental Psychology, 26,* 639–648.

Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2013). Childhood self-control and adult outcomes: Results from a 30-year longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry, 52,* 709–717.e1. http://dx.doi.org/10.1016/j.jaac.2013.04.008

Gottman, J. M., Katz, L. F., & Hooven, C. (1997). *Meta-emotion: How families communicate emotionally*. Hillsdale, NJ: Erlbaum.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2,* 271–299. http://dx.doi.org/10.1037/1089-2680.2.3.271

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry, 26,* 1–26. http://dx.doi.org/10.1080/1047840X.2014.940781

Grusec, J. E., Danyliuk, T., Kil, H., & O'Neill, D. (2017). Perspectives on parent discipline and child outcomes. *International Journal of Behavioral Development, 41,* 465–471. http://dx.doi.org/10.1177/0165025416681538

Gurwitch, R. H., Messer, E. P., & Funderburk, B. W. (2017). Parent-child interaction therapy. In M. Landolt, M. Cloitre, & U. Schnyder (Eds.), *Evidence-based treatments for trauma related disorders in children and adolescents* (pp. 341–361). Cham, Switzerland: Springer. http://dx.doi.org/10.1007/978-3-319-46138-0_16

Hambrick, E. P., Oppenheim-Weller, S., N′zi, A. M., & Taussig, H. N. (2016). Mental health interventions for children in foster care: A systematic review. *Children and Youth Services Review, 70,* 65–77. http://dx.doi.org/10.1016/j.childyouth.2016.09.002

Hanf, C. (1969). *A two stage program for modifying maternal controlling during mother-child (MC) interaction*. Paper presented at the Western Psychological Association Meeting, Vancouver, BC.

Harris, K. R. (1985). Definitional, parametric, and procedural considerations in timeout interventions and research. *Exceptional Children, 51,* 279–288.

Hobbs, S. A., & Forehand, R. (1977). Important parameters in the use of timeout with children: A re-examination. *Journal of Behavior Therapy and Experimental Psychiatry, 8,* 365–370. http://dx.doi.org/10.1016/0005-7916(77)90004-0

Hobbs, S. A., Forehand, R., & Murray, R. G. (1978). Effects of various durations of timeout on the noncompliant behavior of children. *Behavior Therapy, 9,* 652–656. http://dx.doi.org/10.1016/S0005-7894(78)80142-7

Jedd, K., Hunt, R. H., Cicchetti, D., Hunt, E., Cowell, R. A., Rogosch, F. A., . . . Thomas, K. M. (2015). Long-term consequences of childhood maltreatment: Altered amygdala functional connectivity. *Development and Psychopathology, 27,* 1577–1589. http://dx.doi.org/10.1017/S0954579415000954

Johns, A., & Levy, F. (2013). "Time-in" and "time-out" for severe emotional dysregulation in children. *Australasian Psychiatry, 21,* 281–282. http://dx.doi.org/10.1177/1039856212475327

Johnston, C., & Mash, E. J. (1989). A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology, 18,* 167–175. http://dx.doi.org/10.1207/s15374424jccp1802_8

Jones, T. L., & Prinz, R. J. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review, 25,* 341–363. http://dx.doi.org/10.1016/j.cpr.2004.12.004

Kaminski, J. W., & Claussen, A. H. (2017). Evidence base update for psychosocial treatments for disruptive behaviors in children. *Journal of Clinical Child and Adolescent Psychology, 46,* 477–499. http://dx.doi.org/10.1080/15374416.2017.1310044

Kaminski, J. W., Valle, L. A., Filene, J. H., & Boyle, C. L. (2008). A meta-analytic review of components associated with parent training program effectiveness. *Journal of Abnormal Child Psychology, 36,* 567–589. http://dx.doi.org/10.1007/s10802-007-9201-9

Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., . . . Williams, D. R. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *The British Journal of Psychiatry, 197,* 378–385. http://dx.doi.org/10.1192/bjp.bp.110.080499

Kliethermes, M. D., Drewry, K., & Wamser-Nanney, R. (2017). Trauma-focused cognitive behavioral therapy. In M. Landolt, M. Cloitre, & U. Schnyder (Eds.), *Evidence-based treatments for trauma related disorders in children and adolescents* (pp. 167–186). Cham, Switzerland: Springer. http://dx.doi.org/10.1007/978-3-319-46138-0_8

Lapointe, V. (2016, January 27). 3 reasons why time-out may be damaging your child. *Time*. Retrieved from http://time.com/4195647/three-reasons-why-time-outs-may-be-damaging-your-child

Leenarts, L. E., Diehle, J., Doreleijers, T. A., Jansma, E. P., & Lindauer, R. J. (2013). Evidence-based treatments for children with trauma-related psychopathology as a result of childhood maltreatment: A systematic review. *European Child & Adolescent Psychiatry, 22,* 269–283. http://dx.doi.org/10.1007/s00787-012-0367-5

MacDonough, T. S., & Forehand, R. (1973). Response-contingent time out: Important parameters in behavior modification with children. *Journal of Behavior Therapy and Experimental Psychiatry, 4,* 231–236. http://dx.doi.org/10.1016/0005-7916(73)90079-7

McLaughlin, K. A., Greif Green, J., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2012). Childhood adversities and first onset of psychiatric disorders in a national sample of U.S. adolescents. *JAMA Psychiatry, 69,* 1151–1160. http://dx.doi.org/10.1001/archgenpsychiatry.2011.2277

McMahon, R. J., Long, N., & Forehand, R. L. (2011). Parent training for the treatment of oppositional behavior in young children: Helping the noncompliant child. In R. Murrihy, A. Kidman, & T. Ollendick (Eds.), *Clinical handbook of assessing and treating conduct problems in youth* (pp. 163–191). New York, NY: Springer. http://dx.doi.org/10.1007/978-1-4419-6297-3_7

McNeil, C. B., Costello, A., Travers, R., & Norman, M. (2013). Parent-child interaction therapy for children traumatized by physical abuse and neglect. In S. Kimura & A. Miyazaki (Eds.), *Physical and emotional abuse: Triggers, short and long-term, consequences and prevention methods* (pp. 53–86). Hauppage, New York: Nova.

Mersky, J. P., Topitzes, J., Grant-Savela, S. D., Brondino, M. J., & McNeil, C. B. (2016). Adapting parent–child interaction therapy to foster care: Outcomes from a randomized trial. *Research on Social Work Practice, 26,* 157–167. http://dx.doi.org/10.1177/1049731514543023

Minuchin, S., Baker, L., Rosman, B. L., Liebman, R., Milman, L., & Todd, T. C. (1975). A conceptual model of psychosomatic illness in children. Family organization and family therapy. *Archives of General Psychiatry, 32,* 1031–1038. http://dx.doi.org/10.1001/archpsyc.1975.01760260095008

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., . . . Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences of the United States of America, 108,* 2693–2698. http://dx.doi.org/10.1073/pnas.1010076108

O'Connor, T. G., Matias, C., Futh, A., Tantam, G., & Scott, S. (2013). Social learning theory parenting intervention promotes attachment-based caregiving in young children: Randomized clinical trial. *Journal of Clinical Child and Adolescent Psychology, 42,* 358–370. http://dx.doi.org/10.1080/15374416.2012.723262

O'Leary, K. D., O'Leary, S., & Becker, W. C. (1967). Modification of a deviant sibling interaction pattern in the home. *Behaviour Research and Therapy, 5,* 113–120. http://dx.doi.org/10.1016/0005-7967(67)90005-8

Patterson, G. R. (1982). *Coercive family process* (Vol. 3). Eugene, OR: Castalia.

Patterson, G. R., Ray, R. S., & Shaw, D. A. (1968). Direct intervention in families of deviant children. *Oregon Research Institute Research Bulletin, 8*(No. 9). Eugene, OR: Oregon Research Institute and University of Oregon.

Patterson, G. R., Reid, J. B., & Eddy, J. M. (2002). A brief history of the Oregon model. In J. B. Reid, G. R. Patterson, & J. Snyder (Eds.), *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention* (pp. 3–20). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/10468-001

Pearl, E., Thieken, L., Olafson, E., Boat, B., Connelly, L., Barnes, J., & Putnam, F. (2012). Effectiveness of community dissemination of parent–child interaction therapy. *Psychological Trauma: Theory, Research, Practice, and Policy, 4,* 204–213. http://dx.doi.org/10.1037/a0022948

Price, J. M., Chamberlain, P., Landsverk, J., Reid, J. B., Leve, L. D., & Laurent, H. (2008). Effects of a foster parent training intervention on placement changes of children in foster care. *Child Maltreatment, 13,* 64–75. http://dx.doi.org/10.1177/1077559507310612

Querido, J. G., Bearss, K., & Eyberg, S. M. (2002). Parent/child interaction therapy. In F. W. Kaslow & T. Patterson (Eds.), *Comprehensive handbook of psychotherapy: Cognitive-behavioral approaches* (Vol. 2, pp. 91–113). Hoboken, NJ: Wiley.

Quetsch, L., Lieneman, C., & McNeil, C. (2017). *The role of time-out in trauma-informed treatment for young children*. Retrieved from http://societyforpsychotherapy.org/role-time-trauma-informed-treatment-young-children/

Quetsch, L., Wallace, N., Herschell, A., & McNeil, C. (2015). Weighing in on the time-out controversy: An empirical perspective. *Clinical Psychologist, 68,* 4–19.

Regalado, M., Sareen, H., Inkelas, M., Wissow, L. S., & Halfon, N. (2004). Parents' discipline of young children: Results from the National Survey of Early Childhood Health. *Pediatrics, 113*(Suppl.), 1952–1958.

Riley, A. R., Wagner, D. V., Tudor, M. E., Zuckerman, K. E., & Freeman, K. A. (2017). A survey of parents' perceptions and use of time-out compared to empirical evidence. *Academic Pediatrics, 17,* 168–175. http://dx.doi.org/10.1016/j.acap.2016.08.004

Risley, T. (2005). Montrose M. Wolf (1935–2004). *Journal of Applied Behavior Analysis, 38,* 279–287. http://dx.doi.org/10.1901/jaba.2005.165-04

Roberts, M. W. (1982). The effects of warned versus unwarned time-out procedures on child noncompliance. *Child & Family Behavior Therapy, 4,* 37–53. http://dx.doi.org/10.1300/J019v04n01_04

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52,* 141–166. http://dx.doi.org/10.1146/annurev.psych.52.1.141

Ryan, R. M., Kalil, A., Ziol-Guest, K. M., & Padilla, C. (2016). Socioeconomic gaps in parents' discipline strategies from 1988 to 2011. *Pediatrics, 138,* e20160720. http://dx.doi.org/10.1542/peds.2016-0720

Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical Psychology Review, 34,* 337–357. http://dx.doi.org/10.1016/j.cpr.2014.04.003

Scarboro, M. E., & Forehand, R. (1975). Effects of two types of response-contingent time-out on compliance and oppositional behavior of children. *Journal of Experimental Child Psychology, 19,* 252–264. http://dx.doi.org/10.1016/0022-0965(75)90089-2

Scott, S., & Dadds, M. R. (2009). Practitioner review: When parent training doesn't work: Theory-driven clinical strategies. *Journal of Child Psychology and Psychiatry, 50,* 1441–1450. http://dx.doi.org/10.1111/j.1469-7610.2009.02161.x

Siegel, D., & Bryson, T. P. (2014a, September 23). "Time-outs" are hurting your child. *Time*. Retrieved from http://time.com/3404701/discipline-time-out-is-not-good

Siegel, D., & Bryson, T. P. (2014b, October 21). You said WHAT about time-outs?! *Huffington Post*. Retrieved from https://www.huffingtonpost.com/daniel-j-siegel-md/time-outs-overused_b_6006332.html

Skinner, B. F. (1950). Are theories of learning necessary? *Psychological Review, 57,* 193–216. http://dx.doi.org/10.1037/h0054367

Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding: Implications for child psychopathology and therapy. *Clinical Psychology Review, 22,* 189–222. http://dx.doi.org/10.1016/S0272-7358(01)00087-3

Straus, M. A. (2000). Corporal punishment and primary prevention of physical abuse. *Child Abuse & Neglect, 24,* 1109–1114. http://dx.doi.org/10.1016/S0145-2134(00)00180-0

Troutman, B. (2015). *Integrating behaviorism and attachment theory in parent coaching*. Cham, Switzerland: Springer. http://dx.doi.org/10.1007/978-3-319-15239-4_3

United Nations Children's Fund. (2017). *A familiar face: Violence in the lives of children and adolescents*. Retrieved from https://www.unicef.org/publications/files/Violence_in_the_lives_of_children_and_adolescents.pdf

Uretsky, M. C., & Hoffman, J. A. (2017). Evidence for group-based foster parent training programs in reducing externalizing child behaviors: A systematic review and meta-analysis. *Journal of Public Child Welfare, 11,* 464–486. http://dx.doi.org/10.1080/15548732.2017.1326360

van der Kolk, B. (2005). Developmental trauma disorder: Toward a rational diagnosis of children with complex trauma histories. *Psychiatric Annals, 35,* 401–408. http://dx.doi.org/10.3928/00485713-20050501-06

Vlahovicova, K., Melendez-Torres, G. J., Leijten, P., Knerr, W., & Gardner, F. (2017). Parenting programs for the prevention of child physical abuse recurrence: A systematic review and meta-analysis. *Clinical Child and Family Psychology Review, 20,* 351–365. http://dx.doi.org/10.1007/s10567-017-0232-7

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Webster-Stratton, C. (2001). The incredible years: Parents, teachers, and children training series. *Residential Treatment for Children & Youth, 18,* 31–45. http://dx.doi.org/10.1300/J007v18n03_04

Wolf, M., Risley, T., & Mees, H. (1963). Application of operant conditioning procedures to the behaviour problems of an autistic child. *Behaviour Research and Therapy, 1,* 305–312. http://dx.doi.org/10.1016/0005-7967(63)90045-7

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