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Weighing in on the Time-out Controversy

An Empirical Perspective

Lauren Borduin Quetsch, M.S.
Nancy M. Wallace, M.S.
Amy D. Herschell, Ph.D.
Cheryl B. McNeil, Ph.D.
West Virginia University

Abstract: Appropriate implementation of time-out has been shown for decades to produce positive outcomes ranging from the reduction in child problem behaviors to reduced levels of child maltreatment. Although the literature indicating positive outcomes on time-out is abundant, time-out continues to elicit controversy. While this controversy has been long-standing, more recent, outspoken sceptics have contested time-out using widely-viewed mediums. Unfortunately, critics present arguments against time-out without consulting the abundant, empirical literature on its positive effects. Moreover, these misinformed views can have devastating consequences by swaying families away from appropriate time-out implementation who may otherwise benefit. This paper utilizes the breadth of research on time-out to addresses myths surrounding its implementation.

Keywords: time-out, children, parenting, behavior problems, evidence-based treatment

Introduction

The use of time-out with children has been debated for years (e.g., LaVigna & Donnellan, 1986; Lutzker, 1994a; Lutzker, 1994b; McNeil, Clemens-Mowrer, Gurwitsch, & Funderburk, 1994; Vockell, 1977). Research indicates that the use of time-out has been recommended to reduce problem behaviors for both typically behaving and clinically referred children (see Everett, Hupp, & Olmi, 2010 for a review; O'Leary, O'Leary, & Becker, 1967). The use of time-out in the classroom has been accepted by the general public for decades (Zabel, 1986), over and above alternative forms of discipline (e.g., spanking; Blampied & Kahan, 1992; Foxx & Shapiro, 1978). This sentiment is still shared in recent community sample perspectives (Passini, Pihet, & Favez, 2014). The use of time-out has been endorsed by the American Academy of Pediatrics,

Society for a Science of Clinical Psychology, and American Psychological Association, among others, as an effective discipline strategy for child misbehaviors (American Academy of Pediatrics, 1998; Novotney, 2012; Society for a Science of Clinical Psychology, 2014). However, the implementation of this widely used procedure continues to evoke controversy (e.g., Siegel & Bryson, 2014a).



Lauren Borduin Quetsch

Despite abundant evidence documenting the effectiveness and utility of time-out, highly visible, non-evidence-based cautions and recommendations against its use continue to be written and publicly disseminated. Unfortunately, such unfounded arguments against time-out implementation meaningfully permeate the public discourse. For example, a recent article in Time magazine (Siegel & Bryson, 2014a) publically ridiculed time-out by claiming it negatively affected children's neuroplasticity, isolated children, deprived them of receiving their "profound need for connection" (para. 4), and worsened problem behaviors rather than reducing them. The current article details the important components present in evidence-based practices incorporating time-out. In turn, the authors directly address major concerns raised by opponents of time-out using evidence collected through a rigorous literature search and relevant news articles. Research on the subject is compiled to provide an empirical perspective on time-out myths and controversies.

Specifications of Time-out

To address questions concerning the time-out paradigm, we first define the term and operationalize the procedure. Definitional issues are important as research findings from improperly implemented discipline procedures have produced mixed results (Larzelere, Schneider, Larson, & Pike, 1996). The term "time-out" was originally coined by Arthur Staats (Staats, 1971), and is an abbreviation of what many behavior analysts or behavioral psychologists would describe as "time-out from positive reinforcement" (Kazdin, 2001). Time-out "refers to the removal of a positive reinforcer for a certain period of time" (Kazdin,

2001, p. 210). By definition, time-out includes (1) a reinforcing environment, as well as (2) removal from that environment (Foxx & Shapiro, 1978). The positive, reinforcing environment often is established through warm, supportive parenting practices (e.g., praise). Appropriate child behaviors are immediately followed by positive parental attention to increase children's use of the appropriate behavior. Time-out, therefore, is meant to follow an inappropriate response to decrease the frequency of the response (Miller, 1976). Time-out is not meant to ignore a child's essential needs such as hunger, thirst, fear, or distress due to an accident (Morawska & Sanders, 2011). There are three situations that are appropriate for time-out implementation: (1) the presence of inappropriate behavior (e.g., noncompliance to a parental command), (2) the presence of a safety issue associated with the behavior (e.g., child hitting others), (3) when the use of reinforcements by the caregiver is ineffective due to the presence of other maintaining reinforcers in the child's environment (e.g., other children laughing at the behavior in the classroom; Anderson & King, 1974).

Between the years of 1977 and 2007, Everett, Hupp, and Olmi (2010) evaluated the collection of time-out research to operationally define a best-practice time-out procedure. Of the 445 studies collected, the researchers selected the 40 highest quality articles comparing 65 time-out intervention methods. A necessary set of criteria largely accepted across the literature was summarized as a collection of "(a) verbalized reason, (b) verbalized warning, (c) physical placement, (d) location in a chair, (e) short time durations, (f) repeated returns for escape, and (g) contingent delay release" (Everett, Hupp, & Olmi, 2010, p. 252). In addition, behavioral management principles were largely recommended including "(a) remaining calm during implementation, (b) the use of the intervention immediately and consistently following target behavioral occurrence, and (c) appropriate monitoring through which to judge intervention effectiveness" (Everett, Hupp, & Olmi, 2010, p. 252).

Overall, time-out is meant to provide a consistent form of discipline that is delivered in a calm, controlled manner. Psycho-education on the use of developmentally appropriate behaviors is often conducted, thereby helping parents to set appropriate expectations for their child's behavior. Time-out allows parents to set limits when children act defiantly. It can be utilized in conjunction with other parental methods of discipline (e.g., removal of privilege), and is often implemented when a child does not respond to other parenting

approaches (Hakman, Chaffin, Funderburk, & Silovsky, 2009). Time-outs are only administered for a pre-specified period of time (e.g., typically 3-7 minutes). Therefore, the child's circle of security is maintained as the parent returns positive attention to the child after completion of the discipline procedure, such that warm, positive words and touches are used to help the child regain emotional control and rebuild the relationship (McNeil & Hembree-Kigin, 2010). A number of evidence-based programs implement a structured time-out protocol adhering to Everett and Hupp's guidelines including Defiant Children (Barkley, 2013), Fast Track Program (Slough et al., 2008), Helping the Noncompliant Child (McMahon & Forehand, 2003; Peed, Roberts, & Forehand, 1977), the Incredible Years (Webster-Stratton, 1984), the Kazdin Method for Parenting the Defiant Child (Kazdin, 2008), Oregon Model, Parent Management Training (Forgatch, Bullock, & Patterson, 2004), Parent-Child Interaction Therapy (Eyberg & Funderburk, 2011; McNeil & Hembree-Kigin, 2010), Positive Parenting Program (Triple P; Nowak & Heinrichs, 2008; Sanders, Cann, & Markie-Dadds, 2003), and the Summer Treatment Program (Chronis et al., 2004). While some argue against time-out practices, families trained in time-out, their children, and the therapists who deliver treatment rate the procedure as appropriate and acceptable to help reduce problem behaviors (Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993).



Nancy M. Wallace

The following sections will address five separate myths commonly made by time-out opponents. Within each myth, specific empirical literature will be cited to support each counter argument. The paper will conclude by summarizing key counter arguments and placing time-out in the broader context of the evidence based treatment approaches.

Myth 1: Time-out is Counterproductive Because Loving, Positive Parenting is the Most Therapeutic Approach to Alleviating Child Misbehavior

Some time-out opponents support the perspective that time-out hurts children's emotional development, arguing that parents need to provide love, attention,



Amy Herschell

and reasoning to help children regulate their anger during episodes of misbehavior (Siegel & Bryson, 2014a). In contrast to this perspective, decades of research have validated the notion that optimal child development occurs in the context of both warmth, love, and clear, consistent parental control and direction. In 1967, Diana Baumrind proposed three categorizations of parenting styles: authoritative, authoritarian, and permissive (for reviews, see Baumrind, 1967; Baumrind & Black, 1967). Each style delineated a balance between various degrees of parental responsiveness (warmth) and parental demandingness (control; Baumrind, 1967 & 1978). Baumrind operationalized parental responsiveness as displays of parental warmth, communication, and the encouragement of individual expression (Baumrind, 2005; Areepattamannil, 2010). Baumrind conceptualized parental control as a high degree of demandingness in which a parent may request that a child exhibit or change his or her behavior to better conform to the rules and expectations of society (Baumrind, 2005). While authoritative parents utilize a balance of both responsiveness and consistent control, authoritarian parents employ high levels of control and low levels of responsiveness (Areepattamannil, 2010; Maccoby & Martin, 1983). Although, permissive parents utilize high levels of responsiveness, they also place few demands upon their children (Areepattamannil, 2010; Baumrind, 1996; Maccoby & Martin, 1983). Since such parental typologies were proposed, decades of empirical research have investigated the application of such categorizations with a variety of populations. Specifically, authoritative parenting has been related to positive child health outcomes (Cullen et al., 2000), positive school outcomes (Areepattamannil, 2010) and lower levels of child behavior problems (Alizadeh, Talib, Abdullah, & Mansor, 2011). Conversely, caregivers' consistent failure to set developmentally appropriate limits on children's inappropriate behavior, a primary dimension of permissive parenting, has been associated with suboptimal levels of child development. Furthermore, the permissive parenting style has been related to higher levels of child behavior problems (Driscoll, Russell, & Crockett, 2008), substance abuse (Patock-

Peckham & Morgan-Lopez, 2006), and poorer emotion regulation in children (Jabeen, Anis-ul-Haque, & Riaz, 2013).

In addition, the implementation of purely positive parenting techniques alone has been found to be insufficient to obtain significant improvements in child behavior problems (Eisenstadt et al., 1985). These findings indicate that a positive relationship cannot alleviate significant problem behaviors or maintain appropriate levels of behavior without proper limit-setting (Pfflner & O'Leary, 1987). Eisenstadt and colleagues (1993) evaluated the separate components of positive parenting practices and discipline strategies through a highly structured time-out procedure. Results indicated that children who received only the positive parenting component had slight improvements on oppositionality, but large problem behaviors were not eliminated. The children who received the discipline procedure improved to within normal limits of oppositionality. A separate review of the literature indicated that differential reinforcement alone was not as effective in reducing problem behavior as reinforcement combined with discipline procedures (Vollmer, Irvata, Zarcone, Smith, & Mazaleski, 1993). Discipline procedures are thus important components to positive parenting for all families (Cavell, 2001).

The field of applied behavior analysis has been particularly influential in the translation of behavioral principles to work with children in applied settings. Research in applied behavior analysis indicates that providing immediate attention (e.g., reasoning, hugs) for disruptive behaviors that are maintained by attention will result in increased behavior problems (Cipani & Schock, 2010). Specifically, differential reinforcement of other behavior (DRO), a commonly used behavioral schedule in applied behavior analysis, employs operant conditioning techniques to decrease the frequency and length of inappropriate behaviors otherwise maintained by attention. In contrast, a child in distress from an accident or upset about the loss of his pet should receive warm, understanding attention and emotional validation from his or her caregiver given that the behavior is not problematic, nor is its function negative attention seeking.

DRO is based off of positive reinforcement techniques in which positive behaviors are reinforced, thereby increasing their frequency, while negative and inappropriate behaviors are ignored, thereby reducing their frequency (Gongola & Daddario, 2010). Strictly speaking, other behaviors are reinforced for a

period of time while the negative, target behavior is not provided with any attention. The DRO schedule has demonstrated efficacy across a wide variety of environments and populations in decreasing inappropriate and noncompliant behavior. The DRO schedule also supports a positive environment and is an ethically appealing form of behavior modification (see Gongola & Daddario, 2010 for a review). A childhood tantrum represents a common childhood behavior that often functions as a means by which children may receive negative attention. However, if attention (e.g., reasoning, negotiating, comforting) is provided in this moment, as suggested by some authors (Siegel & Bryson, 2014a), such negative attention seeking behavior will be reinforced and the frequency and intensity of the tantrum will increase. Unfortunately, research and clinical practice indicate that verbal instruction regarding appropriate child behavior alone has not been shown to reduce a child's negative outbursts (Roberts, 1984), indicating a need for additional procedures to successfully modify aggressive and non-compliant behavior. Additionally, such attention may result in progressively escalating emotional exchanges between the parent and child in an attempt to control the situation (Dishion, French, & Patterson, 1995). By ignoring a child's tantrum and enthusiastically engaging in an appropriate activity, a parent is likely to redirect a child's attention away from his or her tantrum. Praise (e.g., for "using your words" or "calming yourself down") and positive touches may then be used to reinforce calm, emotionally regulated behavior. If the timing of such attention is provided after the tantrum has ceased and when the child is calm, the child is less likely to engage in a tantrum for attention seeking purposes in the future, tantrums are likely to decrease in duration and frequency, and instances of emotional regulation may be likely to occur. Time-out therefore, functions similarly to a DRO procedure, in that attention is removed for a specified period of time and reinstated after the allotted time is up, and the child is calm and able to complete the original request.

While typically developing children in the preschool age are likely to display regular levels of noncompliance to assert their independence (Schroeder & Gordon, 1991), most do not develop significant behavior problems because parents already provide both positive attention and appropriate limit-setting. In severe cases of persistent childhood misbehavior, however, a caregiver may be referred for evidence-based parent-training treatment to quickly modify maladaptive parent-child interactions. In such cases,

research indicates that families typically enter treatment utilizing inappropriate and inconsistent strategies to handle their children's behavior (Bandura & Walters, 1959; McCord, McCord, & Zola, 1959; McNeil et al., 1994). Evidence-based practices are used to teach parents consistent discipline only after they have mastered positive approaches of interacting with their children including praising and rapport-building between the parent and child (Nowak & Heinrichs, 2008). A compilation of time-out literature concludes that approximately 77% of these research articles utilized time-out in addition to another treatment component, namely parent-child relationship building (Everett, Hupp, & Olmi, 2010). The goal of this treatment is to reduce negative parenting practices and eliminate corporal punishment techniques by the conclusion of treatment (McNeil et al., 1994). Across the time-out literature, research indicates that eighty-six percent of studies used positive reinforcement to increase positive behaviors (Everett, Hupp, & Olmi, 2010). Once an environment is built on positive, warm relationships, the time regularly spent with the child outside of time-out becomes rewarding and reinforcing. As a result, the child is increasingly motivated to avoid time away from parental attention, to work to gain positive attention, and to engage in fewer negative attention-seeking behaviors.



Cheryl B. McNeil

Myth 2: Time-out Strategies are Manualized and Do Not Address the Individual Needs of Children

As previously noted, a number of empirically-based parenting programs for children with severe behavior problems specify the use of a clear, step-by-step time-out procedure (e.g., Parent-Child Interaction Therapy, Eyberg & Funderburk, 2011; the Summer Treatment Program, Chronis et al., 2004). In contrast to views that manualized treatments do not address a child's individual needs, the specific components of time-out (e.g., duration, child characteristics, child age, specific behavior problems) have been investigated to maximize efficacy while minimizing the intensity of the procedure for a given child (Fabiano et al., 2004).

Evidence supporting the efficacy of individualized time-out programs within the larger framework of three manualized treatment programs (Summer Treatment Program, Chronis et al., 2004; Parent-Child Interaction Therapy, McNeil & Hembree-Kigin, 2010; Defiant Children, Barkley, 1997) will be presented.

Fabiano et al. (2004) investigated the effect of three time-out procedures of varying lengths for children attending a summer treatment program for Attention Deficit Hyperactivity Disorder (ADHD: a disorder characterized by attention difficulty, hyperactivity, and/or impulsiveness). Time-out conditions consisted of a short (5 minute), long (15 minute) and an escalating/de-escalating procedure whereby a child could increase or decrease the length of the time-out depending on the appropriateness of his or her behavior in time-out. A time-out was only assigned following the occurrence of intentional aggression, intentional destruction of property, or repeated noncompliance. In the final response-cost condition, children only lost points for exhibiting such behaviors and commands were repeated until compliance was achieved. Results supported previous literature, indicating that time-out, irrespective of duration and child's age, was effective in reducing the occurrence of problematic behaviors (McGuffin, 1991). Recognizing that responses to time-out varied by the individual, the authors recommended modifications of the procedure if the initial time-out protocol is rendered unsuccessful. For example, some children may require a more complicated time-out procedure (Fabiano et al., 2004; Pelham et al., 2000). Finally, despite the context of a manualized treatment program with clear time-out procedures, the authors reported that individualized goals and individualized behavioral treatment programs were instated for children whose behavior did not respond well to time-out. The use of such programs indicates a degree of flexibility within the model and a focus on individualized efficacy of the procedure.

Another manualized treatment approach, Parent-Child Interaction Therapy (PCIT), utilizes a variety of procedures based in behavioral theory to individualize treatment to each child and family (McNeil, Filcheck, Greco, Ware, & Bernard, 2001). For example, PCIT begins with a non-standard functional assessment in which the therapist observes parent and child behavior across three situations meant to simulate typical parent-child interactions. The function of both parent (e.g., negative talk) and child (e.g., defiance, complaining) behaviors during these interactions are specifically evaluated (McNeil et al., 2001). Such conceptualizations are used to guide treatment

so that caregivers can be taught to use positive interactional skills for attending to specific prosocial behaviors displayed by their children (McNeil et al., 2001). Additionally, individualized, skill-based data from behavior observations conducted at the start of each session are immediately utilized to shape the treatment session (McNeil et al., 2001). The discipline procedures used in PCIT may also be adapted according to the child's age and developmental level (McNeil et al., 2001). Furthermore, time-out is not recommended for toddlers less than two years old in response to noncompliance (McNeil & Hembree-Kigin, 2010). Instead a procedure involving simple words and pointing to what the child should do (e.g., "give me hat") followed by a hand over hand guide and praise for compliance should be used. A short (1 minute) time-out in a safe space (e.g., high chair, playpen) is recommended for aggressive behavior (McNeil & Hembree-Kigin, 2010). In contrast, discipline procedures for older children (7-10 years) include a number of potential steps such as (1) an explanation of the command, (2) an initial "big ignore" upon noncompliance in which a parent withdraws attention from the child for 45 seconds, and (3) a time-out warning. To teach the older child to cooperate with the time-out procedure, a sticker chart may be used to reward either avoiding time-out entirely by complying with parental instructions or accepting the time-out consequence without resistance. A suspension of privilege procedure is introduced late in treatment if children refuse to attend time-out or escape from time-out. Finally, some critics believe that time-out should not be used with children on the autism spectrum as the procedure allows the child to escape from otherwise non-pleasurable demands. However, a core component of effective time-out across evidence based programs is completion of the original command, thereby inhibiting the function of time-out as escape.

Lastly, in Defiant Children, a manualized treatment for non-compliant children, Barkley (1997) also uses a time-out procedure. Similar to PCIT, parents are told to implement time-out initially for noncompliance to commands only. After noncompliance to a warning, children remain in time-out for 1-2 minutes per year of their age and are not allowed to leave time-out until they are quiet for approximately 30 seconds. A child's bedroom is used if the child escapes from the chair before the allotted time is up. The sequence concludes when the child must comply with the original command.

It is well established that manualized treatment procedures support the efficacy of time-out in reducing

child behavior problems (Fabiano et al., 2004). Although a primary time-out procedure is specified in some manualized treatment programs, many also include individualized programs dependent upon the needs and characteristics of the child. Most importantly, time-out procedures often involve more intensive back-up consequences only when a child is unable to comply with the least restrictive consequence. When applied to typically developing children, the higher steps in the procedure may not be necessary. Children are taught all procedures prior to their initiation, and the provision of various backup procedures to time-out is determined by the child's choices. As the foundation of time-out is removing the child from reinforcing events, an integral component of the procedure involves enhancing time-in by increasing the reinforcing value of the parent-child interactions. As such, time-out procedures always fall within the larger context of a warm, positive environment where prosocial child behaviors are encouraged through high rates of social reinforcement.

Myth 3: Time-out Can Trigger Trauma Reactions Related to Harsh Discipline Practices, Thereby Retraumatizing Children with a History of Maltreatment

There is considerable debate on the use of time-out for children with histories of trauma. However, a number of research studies spanning multiple areas of psychology shed light on the use of time-out with this specialized population (Chaffin et al., 2004). Physical abuse is likely to occur in the context of the coercive cycle whereby a parent and child use increasingly intensive verbal and behavioral strategies to attempt to control a given situation (Patterson & Capaldi, 1991; Urquiza & McNeil, 1996). Such escalation may result in child physical abuse (CPA). Chaffin et al. (2004) conducted a randomized controlled trial to investigate the effects of PCIT on physical abuse. At the two year follow-up assessment, reports of physical abuse were 19% in the PCIT group as compared to 49% in the community parenting group, suggesting that the use of a time-out procedure may have helped to reduce the occurrence of CPA.

Some may argue that the use of time-out with children who have experienced abuse may result in retraumatization. Retraumatization has been 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). These responses can occur in the context of repeated multiple exposures within one category of events (e.g.,

child sexual assault and adult sexual assault) or multiple exposures across different categories of events (e.g., childhood physical abuse and involvement in a serious motor vehicle collision during adulthood). According to the Diagnostic and Statistical Manual of Mental Disorders-5, examples of traumatic events may include torture, disasters, being kidnapped, military combat, sexual abuse, and automobile accidents (5th ed., text rev.; DSM-5, American Psychiatric Association, 2013). An individual's response to the traumatic event may be any combination of "a fear-based re-experiencing, emotional, and behavioral symptoms... [an] anhedonic or dysphoric mood state and negative cognitions [and/or] arousal and reactive-externalizing symptoms [and/or] dissociative symptoms" (5th ed., text rev.; DSM-5; American Psychiatric Association, 2013, p. 274). Given such definitions, it seems unlikely that a three minute time-out in a chair would qualify as a traumatic event for a young child. Yet, it remains important to consider whether time-out could serve as a trauma trigger, causing a child to experience intense fear and dissociative symptoms. At the same time, we must consider how to differentiate dysregulated behavior that has been triggered by association with a past trauma (e.g., physical abuse during discipline) versus the typical yelling, crying, and tantrumming seen routinely when strong-willed children receive a limit.

In a typical time-out procedure, a child is issued a command. Following a short period (e.g., 5 seconds), a warning is given indicating that if the child does not do as instructed, then he or she will go to time-out. Following an additional period of silence, the child is led to a time-out chair (Eyberg & Funderburk, 2011). Although such procedures could be potential triggers for recalling prior abuse, time-outs involve setting clear, predictable limits which are essential to healthy growth and development. Without the ability to establish boundaries and enforce predictable limits, caregivers of children with prior abuse histories may resort to a permissive parenting style that (1) lacks the structure needed for children to develop adequate self-control and emotional regulation, and (2) has been shown to lead to poor mental health outcomes (Fite, Stoppelbein, & Greening, 2009; McNeil, Costello, Travers, & Norman, 2013).

A valid concern is that time-out procedures could very well serve as a trigger for previous abuse experiences, particularly those that involved the caregiver becoming physically aggressive during an escalated and coercive discipline exchange. Yet, instead of automatically concluding that discipline battles should

be avoided due to the possible triggering of a trauma response, it is interesting to consider that the time-out procedure could actually be highly therapeutic from an exposure perspective. A primary treatment component for individuals that have experienced trauma involves imaginal or in-vivo exposure to triggers associated with the traumatic event in the context of a safe environment. Through repeated exposure, the individual's anxiety surrounding the trauma decreases. Previous triggers become associated with feelings of safety and predictability, rather than fear and pain. From a behavioral perspective, a previously unconditioned stimulus (e.g., yelling and hitting during discipline interactions) is replaced by a conditioned stimulus (e.g., a calm, clear, and consistent sequence of caregiver behaviors). The previously unconditioned response (e.g., fear) is then alleviated by the feelings of safety associated with predictable consequences delivered by the caregiver (e.g., time-out delivered calmly and systematically). The use of a warning prior to the time-out provides control to children, allowing them to choose a behavioral response and control whether time-out is delivered. Through repeated exposure to consistent, calm limit setting, discipline scenarios are no longer associated with fear and pain, such that prior conditioning is extinguished. Through exposure to predictable and appropriate limit setting, the child develops a sense of control and feelings of safety during discipline interactions.

It is imperative to consider each child's individual abuse history in the context of each step of time-out. For children with histories of neglect or seclusion, an alternative back-up procedure (other than a back-up room) may be considered as a consequence for time-out escape, as the back-up room may have ethical concerns as the exposure may be too intense (more of a flooding experience than systematic desensitization; McNeil & Hembree-Kigin, 2010). In these types of extreme cases, alternative back-ups to the time-out, such as restriction of privilege, may be used to allow a more systematic exposure to the time-out sequence, allowing children to regulate their emotions while maintaining the efficacy of such procedures (McNeil, Costello, Travers, & Norman, 2013). If a back-up space is deemed appropriate, the caregiver is instructed to remain in close proximity (i.e., within two feet of the child) so that the child is aware of the parent's presence, thereby preventing the child from experiencing any sense of abandonment. Following time-out, the parent and child are encouraged to engage in calm, loving interactions, often in the form of play. These warm interactions help to maintain the positive parent-child relationship, while also communicating that the parent loves the child but does not condone the child's defiant and aggressive behavior (McNeil, 2013).

Myth 4: Time-out is Harmful to Children

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Some time-out opponents believe that time-out causes children to feel intense relational pain and feelings of rejection from their caregiver. Additionally, some argue that time-out causes children to fail to have a chance to build important social and emotional skills including emotion regulation, empathy and the ability to solve problems (Siegel & Bryson, 2014a). While there is an abundance of research indicating the positive outcomes stemming from time-out implementation, equal importance should be placed on the alternative outcomes if parent training (including both positive parenting skills and discipline techniques) is not delivered to high-risk families. Regardless of the feelings individuals have about the use of “aversive” practices (e.g., time-out), the unfortunate truth is both high- and low-risk families can inflict severe, inappropriate consequences on their children when caught in a coercive process. Passimi, Pihet, and Favez (2014) explored a community sample of highly educated, generally stable families to determine their acceptance of discipline techniques used with their children. Mothers indicated strong beliefs in a warm relationship with their children and agreed with explaining household rules regularly. The use of time-out was also highly accepted, however there was significant variation across parents indicating that strong feelings were present about the appropriateness of various discipline approaches. Discipline techniques such as yelling and spanking received the lowest acceptance by these parents, with spanking practices more accepted than yelling. In spite of their acceptance rates, both yelling and spanking were implemented by the sampled families. Moreover, although yelling was the least acceptable practice rated by mothers, yelling was implemented as frequently as time-out in this sample.

While families can be well-intentioned, parents and children may unknowingly become caught in a negative interaction cycle explained by Patterson’s coercion theory (1982). Patterson’s theory explains a process of mutual reinforcement between parents and their children in which parents inadvertently reinforce a child’s problem behaviors. More specifically, Patterson’s (2002) theory posits that a parent may give a command to a child who then resists or becomes frustrated by the request. Such child misbehavior causes the parent to become angrier, the child to become more defiant, and the interaction to escalate. If parents give in to the child at this point in the coercive exchange, it results in the strengthening of the child’s problem behavior. The coercive escalation also can lead parents to react with inappropriate discipline

strategies to elicit a form of control (Patterson, 1982; Patterson & Capaldi, 1991). When these styles of interaction become the norm, children learn a pattern of defiance, leading to behavior problems that can maintain during the course of development (Granic & Patterson, 2006). Fortunately, the use of time-out interrupts the coercive process between caregivers and children. Evidence-based practices provide parents with specific words and actions to prevent the escalation of problem behaviors (Morawska & Sanders, 2011).

Families referred for parent training have higher rates of physical punishment and inappropriate discipline strategies (Patterson & Capaldi, 1991). In one clinical sample, for example, parents admitted to spanking their children approximately 13 times a week (McNeil et al., 1994). Referred caregivers are more likely to respond to their children’s frequent, regular misbehaviors with yelling, critical statements, threats, and physical punishment (Mammen, Kolko, & Pilkonis, 2003). When no positive discipline alternatives are provided to highly stressed parents who are confronted with severe behavior problems, they are likely to resort to spanking out of desperation and frustration. When spanking is unsuccessful, physical punishments may escalate into child physical abuse.

Although some outspoken opponents argue that time-out makes children “angrier and more dysregulated” when children have not “built certain self-regulation skills” (Siegel & Bryson, 2014a, para. 5, 7), the research has in fact indicated that the opposite is true. Time-out represents a safe, effective form of discipline in which a caregiver and child are able to remove themselves from a potentially stressful parent-child interaction and are given the space needed to regain control of their thoughts and emotions. Specifically, recent research indicates promising outcomes using time-out for children with disruptive mood dysregulation disorder. Therefore, implementing a parenting intervention with both relationship-building and discipline (i.e., time-out) components produced significant positive effects such as a reduction in defiance and an increase in a healthier mother-child relationship. Further research supports the notion that time-out is effective in helping children’s externalizing and internalizing behavior to come within normal limits, demonstrate greater self-control and achieve better emotion regulation abilities (Graziano, Bagner, Sheinkopf, Vohr, & Lester, 2012; Johns & Levy, 2013; Webster-Stratton, Reid, & Stool-Miller, 2008). Additionally, the length of time-out is short (e.g., approximately 3 minutes or 1 minute per year of the child’s age) across most empirically-based

parenting programs (Everett, Hupp, & Olmi, 2010).

Kazdin (2002) argues that, the failure to use appropriate discipline and parenting techniques to protect a child who is acting out may be detrimental, and itself may meet the definition of abuse. If negative discipline procedures escalated to the level of severe physical punishment, abuses such as these have been shown to be associated with a child's increased likelihood of drug dependency, personality disorders, and a number of mood disorders (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012). These negative skills are linked to child psychopathology such as oppositional defiant disorder and conduct disorder (Falk & Lee, 2012). Moreover, Afifi and colleagues (2012) found that harsh physical punishment accounted for 4 to 7% of disorders including intellectual disabilities and personality disorders in addition to 2 to 5% of all other diagnostic criteria for Axis I of the DSM-IV-TR (Afifi et al., 2012).

Parents who have psychopathology themselves are at high risk of using inappropriate discipline strategies when faced with challenging child behavior (Harmer, Sanderson, & Mertin, 1999). More specifically, caregivers with psychopathologies respond at increased rates with hostility, anger, and irregular, unfair discipline techniques despite the child's behavior (Harmer, Sanderson, & Mertin, 1999; Paulson, Dauber, & Leiferman, 2006). Similarly, some children are already predisposed to high risk behavior. For example, researchers have recently concluded that children on the autism spectrum and with ADHD have a weakened sense for danger and more frequently engage in behaviors that place them at risk for harm and even death (Anderson et al., 2012; Barkley, 2005).

Research on parenting styles shows that effective parenting requires a combination of a nurturing relationship and effective limit-setting strategies (authoritative parenting style; Baumrind, 1967). Children raised by authoritative parenting styles score higher in measures of competence, academic achievement, social development, self-esteem, and mental health (Dornbusch, Ritter, Leiderman, & Roberts, 1987; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Maccoby & Martin, 1983). While slight variation in needs may be present on a cultural level, overall findings indicate successful outcomes across cultural groups when children are raised using an authoritative style of love and limits (Sorkhabi, 2005).

Myth 5: Time-out Skills Should Not Be Taught to Parents

Because They Could Use Them Improperly

Some researchers opposed to time-out procedures have noted potential danger in teaching parents to utilize therapeutic discipline practices (Lutzker, 1994b), particularly ones that involve holding preschoolers or carrying children to time-out, for fear that such procedures may be misused. Still others, have argued that highly stressed caregivers may not possess the emotional abilities to express care and concern toward their children (Joinson et al., 2008) and may overly focus on time-out, allowing negative caregiver-child interactions to perpetuate (Morison, 1998). Although it is possible that a given discipline procedure may be misused (Kemp, 1996; Morawska & Sanders, 2011), it is important to consider the multitude of responsibilities that parents in our society take on to ensure the health and well-being of their children. Are we to argue that we should not prescribe potentially helpful medication because the parent may give the child too much? Instead, the implementation of time-out must be considered in the larger context of positive parenting practices (e.g., warmth, sensitivity). For example, one evidence-based practice, PCIT (McNeil & Hembree-Kigin, 2010), has a strict set of guidelines which prevents families from receiving the time-out program until they have mastered the positive "PRIDE" skills (praise, reflection, imitation description, and enjoyment). Families also are not able to graduate from PCIT until they have mastered, under close supervision, the procedures required to implement an appropriate time-out. Defiant Children (Barkley, 2013), another evidence based program, states that the time-out procedure is not implemented until step 5, after parents have learned and practiced a number of positive parenting skills over the course of at least 4 weeks. Such components include (1) education regarding causes of child misbehavior, (2) practicing differential attention in order to reinforce positive behavior, (3) practicing positive play time for homework in order to build warmth and positivity in the parent child relationship, (4) learning to give effective commands, and (5) instating a token economy to increase compliant child behavior.

Time-out procedures taught in the context of parenting programs are based on empirical literature documenting their efficacy. If parents struggling to discipline their child are not taught such procedures under the close guidance of a trained mental health professional, they are at risk of resorting to dangerous physical discipline practices modeled by their own abusive parents. Whereas the risk of harm in teaching an evidence-based time-out protocol is low, there is a

high possibility of harm if dysregulated and stressed caregivers are left to their own devices to discipline children who are displaying severe behavior problems. Finally, when parents are guided through effective time-out procedures, they learn how to conduct a time-out appropriately (e.g., warning statement, unemotional responding, short duration) instead of resorting to popular but ineffective practices, such as reasoning and having a child contemplate their actions (Morawska & Sanders, 2011).

Concluding Thoughts

Opinion pieces in lay periodicals have been published for a number of years arguing against the use of time-out. For example, the recent article by Siegel and Bryson in Time magazine (2014a) was widely distributed. Without regard to the huge volume of high quality research supporting time-out (Wolf, 1978), the authors argued against the practice, resulting in negative perceptions about time-out by nonprofessionals, lay persons, and clients. In this way, a single high-profile story in a magazine can lead to a serious setback in scientific advancement and clinical practice. The negative impact on public opinion is especially concerning as treatments viewed as acceptable by the consumers are more likely to be initiated and adhered to once they are learned by those who need it most (Kazdin, 1980). If inaccurate

information continues to be spread without proper filtering, the outcomes could mean large, negative effects for evidence-based practice.

Although the author of this article in Time magazine later responded to criticisms of time-out (Siegel & Bryson, 2014b) by specifying that, “the research that supports the positive use of appropriate time-outs as part of a larger parenting strategy is extensive,” the original lack of specification when criticizing time-out implementation quickly did more harm than good for informing the general public (para. 7). As researchers, it is our responsibility to disseminate high-quality findings to the lay public to improve our overall positive public health impact. In this instance, regardless of the researchers’ intentions, failing to operationally define time-out and recognize an entire body of research dedicated to “appropriate use” of time-outs did a disservice to a large group of experts who have been conducting this research for decades, while also greatly misleading the public. To protect the public and our profession, we must critically evaluate, interpret, and communicate current literature in such a way that it can be comprehended by lay consumers. Unfortunately, one of the cited articles used in the debate against time-out by Siegel and Bryson was a research article by Eisenberger, Lieberman, and Williams (2003). Siegel and Bryson claimed that findings from this 2003 study indicated social

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isolation, which they argued is characteristic of time-out situations, yields similar brain imaging patterns to traumatization or physical pain (Siegel & Bryson, 2014a; 2014b). Eisenberger and colleagues' 2003 study is instead researching brain patterns of college-aged adults socially isolated by their "peers" during a virtual reality ball-tossing game. Interestingly, during times of participation and other periods of unintentional exclusion, individuals showed the same brain imaging patterns. In addition, the Eisenberger and colleagues' study based their argument off of a summary article showing brain patterns of pre-weaned rat pups isolated from their mothers for extended periods of time (Nelson & Panksepp, 1998). As any practiced researcher is aware, these highly disparate concepts should not be used as justification for the illegitimacy of time-out, as the argument lacks scientific validity and leads to false conclusions and misunderstanding.

Rigorous research studies examining the use of parenting programs including time-out demonstrate reduced aggressive behavior, increased child compliance (Eyberg & Robinson, 1982; Pearl et al., 2012), generalization of behaviors across school (McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991) and other environments, and maintenance of effects for several years (Boggs et al., 2004; Eyberg et al., 2001; Hood & Eyberg, 2003). The use of time-out has also been a critical factor in helping children to gain emotion regulation capabilities (Graziano et al., 2012). Furthermore, emotion regulation has been linked to the broader context of self-control, which has been shown to predict a variety of life outcomes (Moffitt et al., 2011).

The use of time-out as a tool to help caregivers set limits has been a critical component of many evidence-based treatment programs such as PCIT, shown to decrease recidivism rates of child physical abuse to 19% in a group of previously physically abusive caregivers compared to 49% in a community treatment sample (Chaffin et al., 2004). Research also demonstrates that PCIT reduces child traumatic symptoms following exposure to trauma (Pearl et al., 2012). In addition to its demonstrated efficacy, PCIT is represented on the Kauffman list of best practices for children with a history of trauma (Chadwick Center for Children and Families, 2004) and is endorsed by the National Child Traumatic Stress Network (NCTSN) as an evidence-based intervention for child trauma (nctsn.org). In conclusion, time-out represents a safe, effective form of discipline which, in the context of a larger environment dominated by positivity, consistency, and predictability, has been shown

across hundreds of research studies to be beneficial to the overall emotional and developmental functioning of young children.

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