

Cumulative Risk and Harm: The Condition of Accumulation in Child Maltreatment

India Bryce¹

¹ School of Linguistics, Adult and Specialist Education, University of Southern Queensland

Abstract

Children may often be able to overcome and grow from single episodes of maltreatment, however as these risk factors accumulate, a child's capacity to endure diminishes (Newman & Blackburn, 2002). This paper highlights the prevalence of chronicity and multiplicity in maltreatment experiences and the ways in which these experiences may manifest, as multi type maltreatment, poly-victimisation and re-victimisation across the life course. The article discusses the reciprocal relationship between risk and harm; and examines the literature on cumulative risk and cumulative harm and the theoretical frameworks that underpin the notion of accumulation. The paper argues that cumulative risk and harm need to be embedded in practice and prioritised in research, across all aspects of the helping professions, in order to turn the tide in our battle to protect our most vulnerable children and families.

Keywords: Accumulation; Child maltreatment; Cumulative harm; Cumulative risk; Practice; Research.

Introduction

The prevalence of adverse childhood experiences (ACEs) was found to be so common ... and their powerful, dose-related relationship to various damaging outcomes so strong, that one can only wonder why the relationship of life experiences in the developmental years to adult functionality, disease, and life span was not recognised long ago (Felitti, 2017, p. 205)

There is an overwhelming body of research which provides evidence for what we as helping professionals know instinctively to be true, that multiple and chronic experiences of maltreatment are alarmingly more frequent than singular, episodic events (Bromfield & Higgins, 2005; Bromfield, Gillingham, & Higgins, 2007; Edwards, Holden, Felitti, & Anda, 2003; Felitti et al., 1998; Higgins, 2004; Higgins & McCabe, 2001). Empirical research, as well as our lived experience on the front line supports the notion that an accumulation of risk and harm is far more predictive and far more valuable in informing practice, than viewing these adversities and violations in isolation (Appleyard, Egeland, van Dulmen, & Sroufe, 2005; MacKenzie, Kotch, & Lee, 2011a; MacKenzie, Kotch, Lee, Augsberger, & Hutto, 2011b).

Cumulative risk is well accounted for in the literature and assumes that the accumulation of risk factors, rather than a single particular risk factor, has a higher predictive power for negative outcomes (Li, Chu, Ng, & Leong, 2014; MacKenzie et al., 2011a, 2011b). Similarly, when considering the reciprocal relationship of risk and harm, cumulative harm is a label which has been attributed to

... the effects of patterns of circumstances and events in a child life which diminish the child's sense of safety, stability and wellbeing. Cumulative harm is the existence of compounded experiences of multiple episodes of abuse or 'layers' of neglect (Miller, 2007, p. 1).

Despite the strength of the research supporting the importance of recognising accumulation in legislation, policy and practice, this perspective has had difficulty infiltrating both the investigation of, and responses to, maltreatment.

This paper highlights the prevalence of chronicity and multiplicity and the manifestations thereof. The article discusses the reciprocal relationship between risk and harm and examines the literature on cumulative risk and cumulative harm, drawing on the theoretical frameworks underpinning the notion of accumulation. This paper argues that accumulation, through a comprehensive understanding of both cumulative risk and cumulative harm, needs to be embedded in practice and prioritised in research. Child protection practice, within the helping professions, needs to broaden its scope to focus, not merely on the maltreatment itself, but on the "tremendous levels of ecological adversity facing so many families in society" (MacKenzie et al., 2011b, p. 2397).

The Prevalence of Cumulative Experiences

Since its public recognition in 1962 (Kempe, Silverman, Steele, Droegemueller, & Silver, 1962), child maltreatment has been acknowledged in research and in practice as occurring in either isolated or repeated incidents. Research into child maltreatment has historically been located in two dominant areas; (1) factors increasing vulnerability to maltreatment and (2) the impact of maltreatment on individuals (Anderson, 2010; Bromfield & Higgins, 2005; Higgins, 2004). Researchers have typically explored maltreatment in terms of specific subtypes; physical, psychological, sexual abuse and witnessing family violence (Herrenkohl & Herrenkohl, 2009; Higgins, 2004; James, 2000; Miller-Perrin & Perrin, 2007). Bromfield and Higgins (2005) reasoned that a focus on singular and episodic maltreatment fails to adequately acknowledge that children's development can be characterised by prolonged maltreatment and does not address the potential cumulative impact. An abuse type may not be considered detrimental in isolation but may in fact be detrimental over those prolonged periods (Higgins, 2004). For adults who experienced any single form of adversity in childhood, multiple other adverse childhood experiences, over prolonged periods of time, were likely (Bromfield & Higgins, 2005; Dong et al., 2004). In their Chronic Maltreatment Study, Bromfield and Higgins (2005) identified that 65 percent of participants in their sample had experienced chronic maltreatment, with multiple, interrelated issues. Similarly, Lewis and Ghosh Ippen (2004) reported that children exposed to traumas often have caregivers who have themselves been exposed to chronic traumas, further highlighting the cyclical nature of maltreatment chronicity.

Chronic childhood maltreatment can manifest in a range of ways, through multi-type maltreatment (Higgins & McCabe, 1998), poly-victimisation (Finkelhor, Ormrod, Turner, & Hamby, 2005), and revictimisation across the lifespan (Finkelhor, Ormrod, & Turner, 2007a; Tseloni & Pease, 2003). In order to adequately communicate the interconnectedness of maltreatment experiences in childhood, Australian researchers, Higgins and McCabe (1998) introduced the term, multi-type maltreatment. In 2001, they conducted a systematic review of existing studies which explored more than one type of child abuse or neglect

and discovered two key findings: A large percentage of adults who had experienced childhood maltreatment were subject to more than one type; and those who reported multiple abuse subtypes had significantly poorer life outcomes than those experiencing one or no abuse types (Higgins & McCabe, 2001).

These findings were consistent with international studies, most notably the Adverse Childhood Experiences Study (ACES) (Felitti et al., 1998), a landmark investigation of negative childhood experiences (abuse, neglect and family dysfunction) associated with poor adult outcomes. The study found more than half the respondents (52%) had experienced one or more adverse childhood experiences (ACEs), more than one in five reported three or more ACEs and 6.2% indicated more than four ACEs (Felitti et al., 1998). The findings further highlighted the fact that for persons experiencing at least one ACE, the probability of exposure to additional categories of ACE ranged from 62% to 93%, and experiencing more than two additional categories ranged from 40% to 74% (Felitti et al., 1998). Noting the commonality of multiple ACES, further research was conducted into the relationship between multiple ACEs and long-term outcomes. Edwards, Holden, Felitti, and Anda (2003) found in their study of multi-category maltreatment, of the 43% of individuals who identified experiencing some form of childhood abuse, 34.6% reported experiencing at least two types of maltreatment.

However, Finkelhor, Shattuck, Turner, and Hamby (2013) argued that the original ACE Study omitted important domains. They argued peer rejection, exposure to violence outside the family, low socioeconomic status, and poor academic performance were valuable predictors absent from the original study (Finkelhor, et al., 2013). Finkelhor et al. (2013) argued that a complete understanding of the most harmful childhood adversities has not yet been achieved due to the complex interrelationships between factors. However, their study, improving on the original ACES work, confirmed that child maltreatment exposures remain powerful predictors of adult outcomes, independent of the other adversities considered in the scale. The additional adversities identified in Finkelhor and colleagues' revised ACES scale include forms of interpersonal victimization such as property crime, peer victimization, and exposure to community violence "which reinforce findings from other studies, highlighting the cumulative harm of different forms of childhood victimisation" (Finkelhor et al., 2013, p. 74).

There is a growing body of evidence to suggest that broader experiences of victimisation tend to accumulate for certain individuals or in certain environments (Price-Robertson, Rush, Wall, & Higgins, 2013). This broadened understanding of childhood victimisation is termed *poly-victimisation*. The dominant research tool used to measure poly-victimisation is the Juvenile Victimization Questionnaire (JVQ) (Finkelhor et al., 2005). The JVQ measures five general categories; conventional crime, child maltreatment, peer and sibling victimisation, sexual victimisation (peer or adult perpetrator) and witnessing and indirect victimisation. Poly-victimisation is indicated when an individual identifies experiencing an accumulation of four or more of these forms of victimisation over a 12-month period (Price-Robertson et al., 2013). The largest poly-victimisation studies found that almost a quarter of US children experienced poly-victimisation in a 12-month period (Finkelhor et al., 2005; Finkelhor et al., 2007a).

Finkelhor et al. (2007a) explored this cohort more closely and concluded that those children who had experienced four or more victimisations in one year were at high risk of re-victimisation across their life course. Those who experience childhood maltreatment in the familial unit may be more susceptible than others to peer violence, exposure to crime or childhood sexual abuse, and these victims may also be more vulnerable to further sexual victimisation as adults (Finkelhor et al., 2007a; Tseloni & Pease, 2003). Finkelhor et al.

(2007a) proposed that for many children “victimisation is more of a condition than an event” (p. 9).

Persistence is a pathway in which child maltreatment, domestic violence, family conflict, and disruption propel children into an intensively and generalized victimized condition that in turn generates anger and aggression, which, by fueling and sustaining defiant, challenging, rule-violating behaviour, tends to lock them into an even more persistent victimized condition. (Finkelhor et al., 2007b, p. 493)

The Relationship between Risk, Harm and Accumulation

Although risk and harm are individual areas of interest, they are not mutually exclusive and share a reciprocal and iterative relationship. Risk, defined as “a combination of an estimate of the probability of a target behaviour occurring with a consideration of the consequences of such occurrences” (Towl & Crighton, 1996 p. 55), provides the predication of harm occurring, in order to inform action. Harm can take the form of intention or unintentional acts and omissions or commissions of abusive behaviour. According to Shaw and Barrett (2006) risk assessment contributes to the identification and management of intentional harm (e.g. physical or sexual abuse) and offers a means of minimizing the potential for unintentional harm (e.g. neglect). In terms of childhood experiences of maltreatment and adversity, we need to consider the way risk identifies an individual’s vulnerability not only to victimisation in childhood, but poly-victimisation, and re-victimisation across the life course. As clearly identified in the literature, risk and harm are best understood in a dose - relationship, this means the more adversity accumulates, the more harm is caused, which increases the risk of further victimizations, perpetuating the accumulation as a persistent lifelong condition (Edwards et al., 2003; Felitti, 2017; Felitti et al., 1998; Finkelhor et al., 2007b).

Cumulative Risk Perspectives in Child Maltreatment

There is a precedent, set in the ecological transactional risk literature, which supports the significance of cumulative experiences in maltreatment. Ecological perspectives have highlighted the various levels of a child’s environment which influence the aetiology and consequences of maltreatment (Belsky, 1980; Bronfenbrenner, 1977; Garbarino, 1976; Garbarino & Crouter, 1978; Garbarino & Sherman, 1980). Garbarino and Sherman (1980) proposed the ‘human ecology of child maltreatment’ which was one of the first studies to consider community influences in the context of child abuse and neglect. In his equally significant paper, Belsky (1984) emphasised the many influences on parenting in the context of maltreatment. His ecological model included child influences, parental personality, developmental history and functioning, and supports and stressors arising from the parent’s life (Belsky, 1984).

This was followed by an application of the transactional model, which accounted for the reciprocal interactions between child, caregiver and environment that contribute to child abuse and neglect (Cicchetti & Rizley, 1981). The transactional models integrate individual, familial, social and political contexts, all of which interact and transact to influence the experience of the child in the world. The ecological and transactional models were formally integrated by Cicchetti and Lynch (1993) in their proposed ecological-transactional model. This model acknowledged the complexity of family systems and permitted the examination of the processes involved in both causes and outcomes associate with child maltreatment (MacKenzie et al., 2011, p. 1639). An appreciation for the cumulative nature of risk must be situated in this

process-oriented framework. According to MacKenzie and colleagues (2011);

... what is needed is an appreciation for the role that factors at all levels of the ecology play in mutually conspiring to create a milieu that either protects against or fosters parent – child relationship disturbances and maltreatment (p. 1839).

A cumulative risk model assumes that the accumulation of risk factors has a higher predictive power for negative outcomes, than any single risk factor, in isolation (Li et al., 2014). The cumulative risk model is empirically supported across social, medical and psychological domains and a cumulative ecological transactional model provides enhanced predictive capability for repeated maltreatment (Li et al., 2014; MacKenzie et al., 2011). The cumulative risk hypothesis argues that the greater the number of risk factors, regardless of their type or nature, the greater the prevalence of psychological and developmental issues (Rutter, 1979; Rutter et al., 1976; Samroff, 2000; Sameroff, Seifer, Zax, & Barocas, 1987).

The ground-breaking Isle of Wight Study (Rutter, 1979; Rutter et al., 1976) identified six factors significantly correlated with childhood psychological disorders. These were severe marital conflict, low social status, large family size, paternal criminality, maternal mental illness and out of home care placement. However, the authors also revealed that no single factor was associated with increased risk for disorder. Instead, they found an accumulation of two factors, of any type, contributed a four-fold increase in the likelihood of mental disorder, and four or more factors presented a ten-fold increase (Rutter, 1979; Rutter et al., 1976). Complementary findings from the Rochester Longitudinal Study (RLS) (Samroff, 2000; Sameroff et al., 1987) demonstrated that multiple risk factors hold the potential for progressively poor outcomes. The RLS clearly illustrated the negative life-course implications resulting from concurrent accumulated risk factors.

These two landmark studies proposed two approaches to accumulation: A threshold model and a linear model. Rutter and colleagues' (1976) study evidenced the threshold model, with a dramatic increase in risk of mental health after four risk factors. Other similar research has concurred that after three or four risks, an increase in negative adjustment and mental health issues is noted (Greenberg, Speltz, DeKlyen, & Jones, 2001; Jones, Forehand, Brody, & Armistead, 2002). Alternatively, other studies support the linear model, with research demonstrating a steady, dose-like increase in problematic outcomes. This is reflected in the ACEs Study that also purports a dose relationship between childhood adversity and lifespan outcomes (Felitti et al., 1998; Edwards et al., 2003). This threshold versus linear effect was tested by Appleyard et al., (2005) and their findings corroborated previous studies espousing that an accumulation of risk strongly predicts negative outcomes. Their research supported the additive model of risk, and disputed the threshold approach, positing that there is no 'threshold' at which outcomes are significantly worsened or 'point of no return' past which interventions are less effective (Appleyard et al., 2005)

MacKenzie et al. (2011a) sought to integrate cumulative risk models with empirical research on the aetiology of maltreatment. MacKenzie et al. (2011a) compared the capacity of individual risk factors and cumulative risk indexes to predict maltreatment in 842 mother-child dyads, over 16 years of each child's life. Cumulative risk remained the best predictor of maltreatment and no single risk factor was as powerful as the cumulative level of risk. Despite risk being a dynamic concept, influenced by developmental and environmental contexts, risk factors have been found to be frustratingly unwavering. MacKenzie et al. (2011a), having studied these factors

across a 16-year period, argued risk factors are stable, accumulating across the lifespan, and exerting their toxic influence across the life course.

MacKenzie et al. (2011b) examined the tendency to focus on child maltreatment as a unique risk factor with a direct impact on later behavioural problems. They hypothesised that the heterogeneity of behavioural outcomes could be attributed, at least in part, to the cumulative level of risk facing children and their families (MacKenzie et al., 2011b). MacKenzie and colleagues (2011b) collected data from 242 mothers with at risk newborns, over the first four years of life, to assess presence of early maltreatment. The mothers then completed a child behaviour check list at 4, 6, 8, 10 and 12 years. Early experience of maltreatment was not, in itself, an important factor in early childhood functioning, rather the cumulative level of risk was a strong predictor of long-term clinical behavioural issues. In fact, reported maltreatment was singularly less important than unreported high-risk families.

Building on their earlier research (MacKenzie et al., 2011a), this study (MacKenzie et al., 2011b) concluded that the maltreatment incident was less indicative of harm than the accumulation of risk factors and the influences which fostered an environment conducive to maltreatment occurring. In other words, the disadvantage and adversity which predisposes a child to abuse and neglect, may in fact be just as damaging to lifespan development and well-being as the abuse itself. Essentially, risk factors, maltreatment experiences and maltreatment types are significantly more predictive and more valuable, in research and in practice, when considered cumulatively. According to MacKenzie et al. (2011b) there is a need to broaden our understanding of the impact of maltreatment to encompass the influence the context of cumulative adversity has on an individual.

The cumulative risk perspective highlights a body of literature that advocates for the recognition of the significant contribution of accumulation to the maltreatment experience. MacKenzie and colleagues (2011a) posited, however, that despite the well-established literature supporting the accumulation of ecological risk, this perspective has had difficulty gaining traction in empirical maltreatment research, with studies favouring specific individual risk factors. The body of literature on chronic maltreatment and cumulative risk clearly illustrate the need to move beyond singular and simplistic views of maltreatment trajectories, to an acknowledgment of the commonality of accumulated maltreatment experiences and the pervasiveness of cumulative contextual and environmental risk. The new directions for intervention and research encompassing this enlightened perspective are discussed later in the paper.

Cumulative Harm in Research and Practice

It is understood that cumulative harm refers to the effects of an accumulation of adverse experience in a child's life (Bromfield et al., 2007). The literature emphasises that harm is not necessarily evident at the initial investigation of a single incident, rather, harm and the impacts of multiple abuse events surface after a protracted period of time (Bryce, 2018). As highlighted earlier, research to date has shifted from a conceptualisation of isolated events of maltreatment to an understanding of the chronicity of abuse and neglect and the lifespan implications of prolonged and repetitive trauma (Bromfield, et al., 2007; Dong et al., 2004; Felitti et al., 2003; Frederico, Jackson, & Black, 2008; Higgins, 2004). The term 'cumulative harm' was coined by Bromfield et al. (2007), as an over-arching label to describe the impact of chronic maltreatment following their Chronic Maltreatment Study conducted in 2005. Whilst investigating the chronicity of maltreatment

through their broader study, Bromfield and Higgins (2005) identified that repeated maltreatment over an extended period was more common than isolated maltreatment, the impact of which could be profound and exponential. The researchers and their colleagues (Bromfield & Higgins, 2005; Bromfield et al., 2007; Bromfield & Miller, 2007) went on to apply the term cumulative harm to “the impact of patterns of circumstances and events in a child’s life, which diminish a child’s sense of safety, stability and well-being” (Bromfield & Miller, 2007, p. 1).

Since Bromfield and colleagues coined the term in 2007, publications regarding cumulative harm have centred predominantly on practitioner perspectives and practice implications, relying on systematic and scoping reviews of literature and legislation, with little to no empirical research conducted. Howard Bath (2014), former Children’s Commissioner for the Northern Territory, highlighted that although discussion regarding cumulative harm in child protection literature has been present for some time, there has been a dearth of specific research relating to the impact of multi-type abuse or the prevalence of chronic maltreatment leading to cumulative harm. Bath (2014) drew on the Australian Early Development Index (AEDI) which provides a census of population-based well-being indicators, undertaken by educators in a child’s first year of school. He argued that “the problematic AEDI scores for Indigenous children across Australia, especially in the Northern Territory, provide a clear illustration of the impact of adverse experiences in early childhood and, by proxy, the phenomenon of cumulative harm” (2014, p. 6). Bath (2014) emphasised that despite the lack of studies specifically exploring cumulative harm, there was no lack of evidence for the phenomenon, drawing on statutory legislation as an indicative example. He purported that, by definition, child protection legislation recognises cumulative harm in that it emphasises the need for neglect to be persistent and a child’s needs to be repeatedly unmet (Bath, 2014).

In her review of the Victorian statutory child protection system, Broadley (2014) argued that cumulative harm has not received the attention intended by legislation due to the demand for an evidentiary link between parent action and child outcome in the Australian court system. Broadley (2014) proposed that “legislation should focus on the abusive parental behaviours that are likely to result in cumulative harm” (p. 265). A focus on the action or inaction of the parent, rather than the observable outcome for the child at the time of investigation, ensures due weight is given the potential long-term impacts of cumulative harm, not evident until later in life.

Comparatively, Sheehan (2019) examined the Australian legal context more broadly and argued that the emphasis on isolated episodes of maltreatment in the court system excluded the majority of child protection cases which are chronic in nature and are about cumulative harm, rather than ‘specific dangerous parental behaviours’ (Allen Report 2003, p. 29). Bryce (2018) conducted an extensive review of the Australian legislative response to cumulative harm identification and intervention and concurred that insufficient weight is attributed to the impact of cumulative harm in child protection practice, particularly in relation to reporting and assessment. Whilst there has been an evident shift towards a broader understanding of harm and the impact of long-term maltreatment, consistent practice which places cumulative harm and reoccurring maltreatment in equal position with episodic maltreatment is yet to be achieved (Bryce, 2018).

Cumulative harm is largely an Australian term, with international research using the more global terminology of complex trauma to encapsulate the lifespan implications of the accumulation of childhood adversity. However, the terms cumulative harm, cumulative abuse, cumulative trauma or cumulative risk have

been utilised in some trustworthy research in the United States. In a study conducted in the mid-1990s, Follette, Polusney, Bechtle and Naugle (1996) in fact referred to cumulative trauma in their exploration of trauma symptomology and childhood and adult sexual and physical abuse. These researchers sought to address the gap in literature regarding cumulative impacts of sexual and physical trauma, in both childhood and adulthood. They hypothesised that “multiple trauma experiences would lead to increased trauma symptoms and, as the number of different types of traumatic experiences increased, subjects would demonstrate a cumulative impact of trauma” (Follette et al., 1996, p. 27).

Follette et al. (1996) concluded exposure to multiple interpersonal traumas are cumulative in their impact on an individual. Comparatively, McNutt, Carlson, Persaud, and Postmus (2002) investigated the relationship between cumulative abuse experiences, physical health and health behaviour, concluding that both repeat victimisation in childhood and re-victimisation in adulthood influenced health in adulthood. In 2013, the U.S. Department of Health and Human Services highlighted the cumulative impact of chronic child neglect, drawing specifically from the research of Kaplan, Schene, DePanfilis, and Gilmore (2009). This work found that chronically neglected children experience cumulative harm as a result of an ongoing pattern of deprivation of a child’s basic physical, psychological and developmental needs.

Indeed, the body of literature examining both cumulative risk and cumulative harm has established the deleterious effects of co-occurring adversities and abuses on children’s lifespan outcomes (Appleyard et al., 2005; Bromfield, et al., 2007; Edwards et al., 2003; Felitti et al., 1998; MacKenzie et al., 2011a, 2011b). Gilmore (2010), in fact, made an analogy between cumulative harm and global warming, in that it is a seemingly intractable problem involving a culmination of human and environmental factors. It is vitally important that research findings and knowledge about chronic maltreatment and its legacy of cumulative harm find a central place in our legislative, practice, research and intervention frameworks (Bath, 2014; Bryce, 2018).

Implications for Practice

MacKenzie and colleagues (2011a, 2011b) articulated the complex nature of the maltreatment experience, as a prime example of both multifinality and equifinality. In the case of multifinality, similar initial conditions may lead to dissimilar outcomes, depending on the particular mix of ecological risk and protective factors. Equifinality holds that multiple causal pathways can result in the same outcome, in this case maltreatment. This necessitates the adoption of a multidisciplinary approach to address the impact of an accumulation of both risk and harm on an individual’s life course trajectory (MacKenzie et al., 2011a).

As highlighted in the literature regarding cumulative risk perspectives, helping professionals need to attribute equal weight to the risky environment, which fosters and contributes to the resulting maltreatment, as to the maltreatment itself. By paying too little attention to the adversity facing vulnerable families, and focusing narrowly on the maltreatment itself, intervention may be targeted in the wrong direction (MacKenzie et al., 2011b). MacKenzie et al. (2011b) also encouraged practitioners to move beyond responding merely to maltreatment reports, notifications and substantiations, to guide families in the midst of early relationship disturbances. We need to apply a more informed understanding of what constitutes adversity, risk and harm, to account for accumulative experiences, and recognise the multiple points of entry for intervention in the accumulation of risk (Appleyard et al., 2005).

Integrating a comprehensive understanding of cumulative risk in the assessment of future victimisation and maltreatment will be valuable in informing and prioritising prevention and targeting appropriate services prior to the need for intrusive tertiary and statutory interventions (MacKenzie et al., 2011a, 2011b). A cumulative risk model can inform not only the prevention of initial entry into the child protection system, but the re-entry and institutionalisation of vulnerable families and children (Li et al., 2014). Cumulative risk is critical in focusing our protection efforts, not merely on the maltreatment experience, but on the significant disadvantage and adversity facing at-risk and vulnerable families (MacKenzie et al., 2011b).

In order to effectively and collaboratively intervene in matters of chronic and cumulative abuse and neglect, practitioners and stakeholders must be guided by legislation and frameworks that accurately recognise and acknowledge the impact of ongoing exposure to adverse experiences and maltreatment (Bryce, 2018). Policy and procedure must reflect the equally pervasive and damaging nature of cumulative harm on the development and functioning of the individual and allow intervention in matters of ongoing adversity and maltreatment, regardless of whether the child is exhibiting indicators of harm at the time the maltreatment is identified (Broadley, 2014; Bryce, 2018).

The initial cumulative harm research (Bromfield et al., 2007) identified the tendency for low-to-moderate severity cases of maltreatment to fall below the threshold for intervention. The research regarding cumulative risk clearly indicates that it is the low to moderate adversity, which nurtures the abusive environment, that can influence the lifelong outcomes for individual, as equally and pervasively as the maltreatment itself. Bath (2014), similarly concludes event focus paradigms remain dominant in child protection practice, with a significant focus on immediacy. Bath (2014), reflecting the perspectives of MacKenzie and colleagues (2011a, 2011b), argued this urgency shifts the focus of assessment and resourcing to the immediate circumstances of the child rather than the ongoing, chronic and debilitating issues in the family that may need to be addressed. The evidence of the deleterious nature of accumulated risk and harm attests to the need for comprehensive, developmentally informed prevention and intervention programs, at the primary, secondary and tertiary tiers (Appleyard et al., 2005).

Recommendations for Future Research

A better understanding of the relationship between cumulative risk and cumulative harm, as well as the potentially toxic combinations of accumulations, would prove invaluable in enhancing prevention science and practice. Thus, future research should explore the relationship between accumulating risk factors and maladaptive outcomes, furthering the work of the ACE Study, as it applies to accumulation (Appleyard et al., 2005). New directions in research must consider the precursors of maltreatment as risk factors, not just of the abuse itself, but of the adverse lifespan outcomes that may result regardless of whether the maltreatment occurs, is reported, or substantiated (MacKenzie et al., 2011a). Early maltreatment needs to be viewed as a symptom of a more profound issue of accumulated adversity and dysfunction in the familial environments of our most vulnerable children, rather than the problem itself.

The literature available on cumulative harm clearly identifies the prevalence of the concept in practice dialogue but a significant gap in empirical literature. There is a need to prioritise the investigation of cumulative harm in research, not only to increase our understanding and awareness, but also to improve outcomes for at risk children and families. Despite a plethora of practice guides, policies and even pieces of

legislation that reference the phenomenon of cumulative harm, there remains no Australian child protection authority that systematically collects data on chronic maltreatment in its management or reporting systems and utilises this to identify the children most at risk of cumulative harm (Bath, 2014). Focusing our research efforts on a deeper understanding of accumulation and chronicity will in turn improve our service delivery and support for those at risk of cumulative harm.

Conclusion

In summary, three key conclusions from the literature can be drawn as it relates to accumulation - that an: Accumulation of risk is more predictive of maladaptive outcomes than any one risk factor; accumulation of maltreatment experiences is more likely than isolated, episodic maltreatment; and accumulation of maltreatment can have a pervasive impact on an individual regardless of the type or severity. If we acknowledge that chronicity and multiplicity are common to the maltreatment experience, contributing to the dominant percentage of child abuse and neglect, then accumulation must feature heavily in our assessment of, and our responses to, risk and harm.

Our legislation, our research agendas, our practice frameworks, must all reflect an informed awareness of the critical role accumulation plays in the lifespan outcomes of our vulnerable children. Finkelhor et al. (2007a) proposed that for many children “victimisation is more of a condition than an event” (p.9). They further argued:

... persistence is a pathway in which child maltreatment, domestic violence, family conflict, and disruption propel children into an intensively and generalised victimised condition that in turn generates general anger/aggression, which, by fueling and sustaining defiant, challenging, rule-violating behaviour, tends to lock them into an even more persistent victimized condition (Finkelhor et al., 2007b, p. 493).

Armed with this knowledge, are we not then compelled, as helping professionals, to act in a manner that acknowledges this persistence, this accumulation, this condition? We are called, as practitioners and as researchers, to respond accordingly to cumulative risk and harm, to intervene, interrupt and, ultimately, protect children from the cumulative cycle of adversity and maltreatment.

References

- Allen Consulting Group. (2003). *Protecting children: The Child Protection Outcomes Project*. Melbourne: Victorian Department of Human Services.
- Anderson, K. L. (2010). Conflict, power, and violence in families. *Journal of Marriage and Family*, 72(3),

726–742.

Appleyard, K., Egeland, B., van Dulmen, M. H., & Sroufe, L. A. (2005). When more is not better: The role of cumulative risk in child behavior outcomes. *Journal of Child Psychology and Psychiatry*, *46*(3), 235-245.

Bath, H. (2014). The accumulating evidence for cumulative harm. *Developing Practice: The Child, Youth and Family Work Journal*, April 2014, 38(6).

Belsky, J. (1980). Child maltreatment: An ecological integration. *American Psychologist*, *35*(4), 320.

Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, *55*(1), 83-96.

Broadley, K. (2014). Equipping child protection practitioners to intervene to protect children from cumulative harm: Legislation and policy in Victoria, Australia. *Australian Journal of Social Issues*, *49*(3), 265-284.

Bromfield, L. M., Gillingham, P., & Higgins, D. J. (2007). Cumulative harm and chronic child maltreatment. *Developing Practice: The Child Youth and Family Work Journal*, *19*, 34-42.

Bromfield, L. M., & Higgins, D. J. (2005). Chronic and isolated maltreatment in a child protection sample. *Family Matters*, *70*(38).

Bromfield, L., & Miller, R. (2012). *Cumulative harm: Best interests case practice model*. Melbourne: Victorian Government Department of Human Services.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, *32*(7), 513.

Bryce, I. (2018). A review of cumulative harm: A comparison of international child protection practices. *Children Australia*, *43*(1), 23-31.

Cicchetti, D., & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: Consequences for children's development. *Psychiatry*, *56*(1), 96-118.

Cicchetti, D., & Rizley, R. (1981). Developmental perspectives on the etiology, intergenerational transmission, and sequelae of child maltreatment. *New Directions for Child and Adolescent Development*, *1981*(11), 31-55.

Dong, M., Giles, W. H., Felitti, V. J., Dube, S. R., Williams, J. E., Chapman, D. P., & Anda, R. F. (2004). Insights into causal pathways for ischemic heart disease. *Circulation*, *110*(13), 1761-1766.

Edwards, V. J., Holden, G. W., Felitti, V. J., & Anda, R. F. (2003). Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: results from the adverse childhood experiences study. *American Journal of Psychiatry*, *160*(8), 1453-1460.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, *14*(4), 245-258.

Felitti, V. J. (2017). Future applications of the adverse childhood experiences research. *Journal of Child & Adolescent Trauma*, *10*(3), 205-206.

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007a). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect*, *31*(1), 7-26.

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007b). Re-victimization patterns in a national longitudinal sample of children and youth. *Child Abuse & Neglect*, *31*(5), 479-50.

Finkelhor, D., Ormrod, R. K., Turner, H. A., & Hamby, S. L. (2005). Measuring poly-victimization using the Juvenile Victimization Questionnaire. *Child Abuse & Neglect*, *29*(11), 1297-1312.

- Finkelhor, D., Shattuck, A., Turner, H., & Hamby, S. (2013). Improving the adverse childhood experiences study scale. *JAMA Pediatrics*, *167*(1), 70-75.
- Follette, V. M., Polusny, M. A., Bechtle, A. E., & Naugle, A. E. (1996). Cumulative trauma: The impact of child sexual abuse, adult sexual assault, and spouse abuse. *Journal of Traumatic Stress*, *9*(1), 25-35.
- Frederico, M. M., Jackson, A. L., & Black, C. M. (2008). Understanding the impact of abuse and neglect on children and young people referred to a therapeutic program. *Journal of Family Studies*, *14*(2-3), 342-362.
- Garbarino, J. (1976). A preliminary study of some ecological correlates of child abuse: The impact of socioeconomic stress on mothers. *Child Development*, *47*(1), 178-185.
- Garbarino, J., & Crouter, A. (1978). Defining the community context for parent-child relations: The correlates of child maltreatment. *Child Development*, *49*(3), 604-616.
- Garbarino, J., & Sherman, D. (1980). High-risk neighborhoods and high-risk families: The human ecology of child maltreatment. *Child Development*, *51*(1), 188-198.
- Greenberg, M. T., Speltz, M. L., DeKlyen, M., & Jones, K. (2001). Correlates of clinic referral for early conduct problems: Variable-and person-oriented approaches. *Development and Psychopathology*, *13*(2), 255-276.
- Gilmore, D. (2010). Chronic child neglect: Building knowledge, fostering hope. *Policy & Practice*, *68*(3), 12-13.
- Herrenkohl, R. C., & Herrenkohl, T. I. (2009). Assessing a child's experience of multiple maltreatment types: Some unfinished business. *Journal of Family Violence*, *24*(7), 485-496.
- Higgins, D. J. (2004). Differentiating between child maltreatment experiences. *Family Matters*, *Summer 2004*(69), 50.
- Higgins, D. J., & McCabe, M. P. (1998). Parent perceptions of maltreatment and adjustment in children. *Journal of Family Studies*, *4*(1), 53-76.
- James, M. (2000). *Child abuse and neglect: Part 1 - Redefining the issues*. Canberra: Australian Institute of Criminology.
- Jones, D.J., Forehand, R., Brody, G., & Armistead, L. (2002). Psychosocial adjustment of African-American children in single-mother families: A test of three risk models. *Journal of Marriage and Family*, *64*, 105-115.
- Kaplan, C., Schene, P., DePanfilis, D., & Gilmore, D. (2009). Introduction: Shining light on chronic neglect. *Protecting Children*, *24*(1), 1-8.
- Kempe, C. H., Silverman, F. N., Steele, B. F., Droegemueller, W., & Silver, H. K. (1962). The Battered Child Syndrome. *Journal of the American Medical Association*, *181*, 17-24.
- Lewis, M., & Ghosh Ippen, C. (2004). Rainbows of tears, souls full of hope: Cultural issues related to young children and trauma. In J. Osofsky (Ed.) *Young children and trauma: Intervention and treatment* (pp. 11-46). New York: The Guilford Press.
- Li, D., Chu, C. M., Ng, W. C., & Leong, W. (2014). Predictors of re-entry into the child protection system in Singapore: A cumulative ecological-transactional risk model. *Child Abuse & Neglect*, *38*(11), 1801-1812.
- MacKenzie, M. J., Kotch, J. B., & Lee, L. C. (2011a). Toward a cumulative ecological risk model for the etiology of child maltreatment. *Children and Youth Services Review*, *33*(9), 1638-1647.
- MacKenzie, M. J., Kotch, J. B., Lee, L. C., Augsberger, A., & Hutto, N. (2011b). A cumulative ecological-transactional risk model of child maltreatment and behavioral outcomes: Reconceptualizing early maltreatment

- report as risk factor. *Children and Youth Services Review*, 33(11), 2392-2398.
- McNutt, L. A., Carlson, B. E., Persaud, M., & Postmus, J. (2002). Cumulative abuse experiences, physical health and health behaviors. *Annals of Epidemiology*, 12(2), 123-130.
- Miller, R. (2007). *Cumulative harm: A conceptual overview*. Melbourne, Victoria: Victorian Government.
- Miller-Perrin, C., & Perrin, R. (2007). *Child maltreatment: An introduction*. Thousand Oaks, California: Sage Publications.
- Newman, T., & Blackburn, S. (2002). Transitions in the lives of children and young people: Resilience factors. Scotland: Interchange 78.
- Price-Robertson, R., Rush, P., Wall, L., & Higgins, D. (2013). *Rarely an isolated incident: Acknowledging the interrelatedness of child maltreatment, victimisation and trauma*. Melbourne: AIFS, Child Family Community Information Exchange.
- Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. In: M. W Kent & J. E. Rolf (Eds.), *Primary prevention of psychopathology, Vol. 3: Social competence in children* (pp. 49-74). Hanover, NH: University of New England Press.
- Rutter, M., Tizard, J., Yule, W., Graham, P., & Whitmore, K. (1976). Isle of Wight studies, 1964-1974. *Psychological Medicine*, 6(2), 313-332.
- Sameroff, A. J. (2000). Dialectical processes in developmental psychopathology. In A. Sameroff, M. Lewis & S. Miller (Eds), *Handbook of developmental psychopathology* (pp. 23-40). Boston, MA: Springer.
- Sameroff, A. J., Seifer, R., Zax, M., & Barocas, R. (1987). Early indicators of developmental risk: Rochester Longitudinal Study. *Schizophrenia Bulletin*, 13(3), 383-394.
- Shaw, S., & Barrett, G. (2006). Research governance: Regulating risk and reducing harm. *Journal of the Royal Society of Medicine*, 99(1), 14-19.
- Sheehan, R. (2019). Child abuse and neglect and the judicial system: The limits of legal enterprise. In I. Bryce, Y. Robinson. & W. Petherick (Eds.), *Child abuse and neglect: Forensic issues in evidence, impact and management*. London: Elsevier (In Press).
- Towl, G. J., & Crighton, D. A. (1996). *The handbook of psychology for forensic practitioners*. London: Routledge.
- Tseloni, A., & Pease, K. (2003). Repeat personal victimization: 'boosts' or 'flags'? *British Journal of Criminology*, 43, 196-212.