The Implications of Awe as a Preventative Treatment for Young Children at Risk of Aggressive Behaviours

Yoshie, A. Ezra.

***Abstract*— Existing literature suggests that a positive correlation exists between awe and prosociality and that prosociality and aggression are negatively correlated. Young children who exhibit aggressive behaviours have a greater risk of experiencing peer rejection, delinquency, psychiatric illnesses, academic problems, and suicidal behaviours. Current treatments typically target clinical aggression and are not preventative or effective for young children without developed executive functioning skills. As such, creating accessible and appropriate preventative treatments for young children at risk of future aggressive behaviours or those displaying subclinical aggression should be a priority. Since awe is commonly experienced in childhood it may be effective in preventing the development or worsening of aggressive behaviours in young children compared to existing treatments that require cognitive reappraisal. Awe could reduce aggressive behaviours by promoting prosocial thoughts, curiosity about the world, and positive affect. While it is possible that awe does not directly influence aggression, its positive relationship with prosociality could decrease stress, promote curiosity, induce amusement, and foster well-being, which may have spillover effects into other domains of functioning and promote positive developmental outcomes such as improved family dynamics, reduced aggression and increased positive affect. This proposed treatment also has the potential to help differentiate children who need additional targeted support.**

***Keywords*—** *Awe, Aggression, Aggressive Behaviours, Children, Prevention, Intervention*

I. The Implications of Awe as a Preventative Treatment for Young Children at Risk of Aggressive Behaviours

Research suggests that awe is positively correlated with prosocial behaviour (Li et al., 2024), and increases prosocial tendencies in children (Stamkou et al., 2023). While little research has investigated the direct relationship between prosociality and aggression, evidence suggests they are negatively correlated (Vecchio et al., 2023). This raises the possibility that early childhood aggression can be reduced by awe.

A search on APA PsycINFO for "awe" and "prosocial*" at the time of this writing resulted in 72 results from 2003 onwards. The asterisk indicates that any word which begins with "prosocial" is used to complete the search (i.e., prosocial, prosociality). Of these, 63 have been published in academic journals, and only 43 are categorized as being empirical. Of the 43, only one study by Stamkou et al. (2023), as referenced throughout this paper, is relevant to children under 13 years of age. When searching for "awe" and "aggressi*" on APA PsycINFO following the steps above, only 8 works appear to have been published in academic journals, and none of them are relevant to children under 13 years of age. While the positive relationship between awe and prosociality has been consistently reported (Li et al., 2024), using awe as a preventative treatment to reduce aggression in children has not yet been explored.

Awe in children is characterized by the feeling of being small in a vast world and the need to create alternative explanations for stimuli that cannot be understood or explained by existing mental concepts (Keltner & Haidt, 2003; Stamkou et al., 2023). Awe typically arises from unexpected events that motivate explanation-seeking (Valdesolo et al., 2017), and although awe is commonly encountered in childhood, little research has explored this topic (Aknin et al., 2018). Relatedly, while the scientific study of awe is quite new (Allen, 2018), awe has been found to increase prosociality, which includes actions recognized to benefit others such as providing comfort and sharing possessions (Eisenberg et al., 2015; Penner et al., 2005; Stamkou et al., 2023; Li et al., 2024). Prosociality has been associated with positive developmental outcomes related to academic achievement, psychological health, and peer and teacher relationships (Buckley et al., 2024; Longobardi et al., 2021; Padilla-Walker et al., 2014).

On the other hand, children who exhibit aggressive behaviours have a greater risk of developing psychiatric concerns such as Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD). ODD is characterized by abnormally excessive non-compliance or aggressive behaviours, and can be followed by CD, which involves serious rule violations or harm to people and animals (Baker, 2016). As suggested by a recent meta-analysis, 4.6% of children under 19 in high-income countries have been diagnosed with ODD or CD (Barican et al., 2022). Similarly, a study based in Ontario found that in 2014, 8.3% of children aged 4–11 had a diagnosis of ODD or CD (Georgiades et al., 2019). Children may also be at a greater risk of experiencing peer rejection, future delinquency, and academic problems (Archer & Coyne, 2005; Evans et al., 2019; Liu et al., 2013; Rivenbark et al., 2018; Shepard & Dickstein, 2009), and are more likely to engage in future suicidal behaviour and substance abuse (Evans et al., 2019; Liu et al., 2013; Tremblay et al., 1999).

Some children are at a greater risk of developing aggressive behaviours. They may have risk factors related to genetics (Liu et al., 2013), personality traits and temperament (Lone & Albotuaiba, 2022; Vanderbilt-Adriance et al., 2015), low socioeconomic status (SES), and poor or inconsistent parenting (American Psychological Association [APA], 2014; Girard et al., 2019; Baker, 2016; Campbell, 1995).

Other risk factors exist, such as being Indigenous (Vance et al., 2022; Beals et al., 1997), and having an incarcerated parent (Norman & Enebrink, 2023; Martin, 2017; Thomson et al., 2020) or a mother with a history of antisocial behaviours (i.e., violations of rules and rights of others; Toro et al., 2020) (Tremblay et al., 2004; Hay et al., 2021). The likelihood becomes greater when multiple risk factors are present (Shepard & Dickstein, 2009).

However, having a risk factor does not mean a child will develop clinically significant aggressive behaviours. Protective factors including higher SES, nutrition, relationships with adults who are good influences, parental warmth and responsivity, and maternal social support (Liu et al., 2004; Vanderbilt-Adriance et al., 2015; Williams et al., 2019) can offset the potential effects of risk factors and promote healthy development.

Although conduct-related concerns are the number one reason for children to be referred to mental health services, the demand for treatments far exceeds their availability (Pikard et al., 2018; Saggar et al., 2019; Shepard & Dickstein, 2009).

II. Awe as an Effective Prevention

While the relationship between aggression and prosociality is complex and still being investigated, some research suggests that they are negatively correlated in childhood (Vecchio et al., 2023). Since awe is associated with increased prosociality (Stamkou et al., 2023; Li et al., 2024), aggressive behaviours in young children can potentially be discouraged by the experience of awe. This would likely be a more pleasant, approachable, and appropriate method than interventions such as Cognitive Behavioural Therapy (CBT) or Anger Control Training (ACT), which will be discussed in further detail later in this paper. Awe may decrease aggression by shifting an individual's attention to the greater social world, thereby increasing prosocial thought, by decreasing experienced stress, and fostering amusement and happiness.

One study found that children's prosocial tendencies increased after viewing awe-inducing films (Stamkou et al., 2023). The researchers assessed prosocial behaviour by the number of items that participants counted for a food bank and the increased number of ticket donations after exposure to awe. Children primed with awe acted more prosocially because the world seemed more expansive and magical to them (Stamkou et al., 2023; Yoshie, 2023). Additionally, this effect occurs because awe turns an individual's attention away from themselves and to the social world around them (Ejova et al., 2021; Perlin & Li, 2020; Prade & Saroglou, 2016; Stamkou et al., 2023). Increased prosociality is correlated with increased prosocial thought such as ideas concerning the well-being of others which may in turn inhibit aggression (Vecchio et al., 2023). Thus, by increasing prosociality, levels of aggression in children should decrease.

Moreover, Bai et al. (2021) found that undergraduate participants who felt awe reported greater life satisfaction and less daily stress. Since life satisfaction and aggression are negatively correlated and stress and aggression are positively correlated (Chatterjee, 2013; Contreras & Novaco, 2023), awe may also be related to aggression through stress. Relatedly, awe can reduce the number of negative emotions an individual may experience (Koh et al., 2019), which likely affects cognition and behaviour.

At the time of this writing, no experimental study has tried to reduce aggression in children by inducing awe, but one study by Yang et al. (2016) found that college-aged students were less aggressive in a shooter game following exposure to awe. This effect occurred because the participants felt smaller in an expansive world and felt positive emotions such as amusement. Although the generalizability of this paper is limited since the participants were not children, it may relate to how children could behave less aggressively. The feelings of amusement, wonder, and curiosity induced by awe may encourage the child to interact with the world in a purposeful and novel way as a means to seek new knowledge (Kidd & Hayden, 2015), thus, promoting more consideration about the consequences of their actions.

Additionally, it is important to note that some existing studies have found inconclusive or contradicting results. While Li et al.'s (2024) meta-analysis suggests a moderate relationship between awe and prosociality, the researchers also describe how some studies did not find an increase in prosocial behaviour after exposure to awe.

Awe as prevention for aggressive behaviours in young children should be implemented at the selective or indicated level and provided when conduct problems first become concerning for families with risk factors. Selective or indicated interventions using awe can promote general well-being and encourage children to view the world with more curiosity and wonder (Stamkou et al., 2023; Keltner & Haidt, 2003). Universal preventions target whole populations regardless of risk factors, selective preventions target people with heightened risk (i.e., low SES), and indicated preventions target those with a high likelihood of a disease (i.e., regarding childhood aggression, having a mother with a history of antisocial behaviour; Tremblay et al., 2004) (Singh et al., 2022).

Since the feeling of awe is elicited by things that promote explanation-seeking such as moving films, beautiful artworks, nature, and remarkable human behaviour (Keltner & Haidt, 2003; Valdesolo et al., 2017), children may benefit from watching demonstrations of helpful behaviours or videos that elicit awe (Stamkou et al., 2023). Instructing participants to engage in activities that promote awe between sessions could be incorporated into the treatment.

Similarly, hosting treatment sessions in local and easily accessible locations like community recreation centers, schools, or hospital outpatient facilities may increase accessibility (Singh et al., 2022; Yu-Lefler et al., 2023; Williams et al., 2020). Hosting group sessions would allow more families to participate in the program alongside one or two group mediators, and could also allow parents and young children to communicate with each other, potentially expanding their social network and support systems.

However, given the dearth of research on this subject matter and the challenges associated with developing clinical treatments, it is difficult to outline how this treatment may proceed. Additional research on this topic can help clinicians

and researchers develop a more realistic and empirically supported treatment plan.

III. Existing Treatments and Their Deficiencies

Awe as a preventative treatment should be further investigated since many existing treatments target older children, have poor accessibility, and are specialized to treat clinically significant problem behaviours such as conduct disorders.

Children acquire executive functioning (EF) skills between ages 6-8. These skills include a working memory, the ability to control attention, and self-control (Best & Miller, 2010). Existing treatments previously mentioned like CBT and ACT work by manipulating EF skills through training the child to reappraise social situations, critically challenge their thoughts, and self-regulate their emotions (Sukhodolsky et al., 2016). These treatments are based on the assumption that the aggressive behaviours being exhibited are age-inappropriate, and while that may be true for older children, those without developed EF may not understand the harm their behaviours cause (Vanderbilt-Adriance et al., 2015). Thus, while CBT is effective at treating childhood aggression, it is only recommended for use in children aged 7 or older (Matthys & Schutter, 2021; Mohlman & Gorman, 2005).

Parent management training programs (PMTs) are also used to treat disruptive and aggressive behaviours and work in children from birth to 12 years of age (Shepard & Dickstein, 2009). PMTs focus on parenting practices such as enforcing appropriate discipline, increasing parental involvement, breaking coercive interactions by teaching communication skills, and encouraging positive parent-child interactions (Shepard & Dickstein, 2009; Saggar et al., 2019). However, CBT, ACT, and PMTs are often inaccessible due to their popularity and effectiveness.

CBT, ACT, and PMTs entail long waiting times, with waitlists for CBT typically reaching 18 weeks in the UK (Punton et al., 2022). Similarly, in 2017, children under 19 years of age in Ontario had to wait an average of almost 10 weeks for counselling and therapy (Children's Mental Health Ontario, 2020). It is possible that while waiting for treatment, families may need to relocate, experience an economic burden such as losing a job, or experience additional stressors like a family member's death, all of which can exacerbate the child's aggression as well as any mental and physical health challenges the family may be experiencing (Shepard & Dickstein, 2009).

In addition, these services require access to qualified mental health providers and often necessitate physician referrals (Pikard et al., 2018; Punton et al., 2022) which typically take place when symptoms of an illness start negatively impacting daily functioning. This, in effect, further delays the onset of treatment. Considering the greater risk of negative outcomes, such as developing psychiatric concerns, experiencing rejection, delinquency, academic problems, and suicidal behaviours (Archer & Coyne, 2005; Evans et al., 2019; Liu et al., 2013; Rivenbark et al., 2018, Shepard & Dickstein, 2009), developing alternative and accessible ways to mitigate aggressive behaviours in early childhood is necessary.

Due to the high demand, children with more severe presentations of aggression are typically prioritized (Tran, 2024; Singh et al., 2021). As a result, these treatments are used to manage and reduce clinically significant aggression (i.e., ODD and CD) rather than to prevent minor aggressions in at-risk children from worsening. While this is not necessarily bad, this means that a child's problematic behaviours are often left untreated until they become severe enough to require immediate intervention. Children may be required to have an ODD or CD diagnosis before being admitted into these programs or to receive medical insurance coverage for mental health services (Bender, 2019). Though some free or low-cost mental health services in Canada accept self-referrals (Pikard et al., 2018), not all families live near these services or are eligible to participate due to stringent eligibility criteria.

Additionally, untreated aggressive behaviours can negatively influence family dynamics and are often reinforced by inadequate support (Horwitz et al., 2011), making them more difficult to treat (Shepard & Dickstein, 2009; Baker, 2016). Parents may feel uncertain of what to do about their child's aggressive behaviours (Sisterhen & Wy, 2023) and may attempt to manage or reduce their child's aggression without seeking professional support. Parents may intentionally or unintentionally use coercion or engage in inconsistent or harmful parenting practices, which in effect increases the risk that their child's aggressive behaviours persist or worsen (Campbell, 1995; Girard et al., 2019; Baker, 2016). However, given that there is research to support the benefits of early prevention (Singh et al., 2022, Moroz et al., 2020), more focus on prevention efforts must be made to reduce aggressive behaviours while they are still subclinical.

IV. Prevention and Early Intervention Success

Finally, prevention efforts exist to prevent the development, delay the onset, or prevent a disorder or illness from returning, and can also be used to prevent comorbidities from developing (Singh et al., 2022). Regarding aggression, early treatments often reduce the risk of aggressive behaviours, have lasting effects, reduce the need for specialized care, and are cost-effective.

Physical aggression is thought to develop between 12–24 months of age (Tremblay et al., 1999) while relational forms, such as name-calling, are present by age 4 and are thought to develop by 36 months (Archer & Coyne, 2005; Casas & Bower, 2018). Notably, physical aggression exhibited by infants at 6 months of age, as measured by actions like biting or kicking, can predict their physical aggression as toddlers (Hay et al., 2014). That being said, while the goal may be to inflict harm, aggression can also arise from provocation or annoyance and may not be intended to deliberately hurt others (Murray-Close & Ostrov, 2009; Kruglanski et al., 2023; Girard et al., 2019).

While a child's predisposition to aggression, also known as trait aggression, is consistent across time (Kersten & Greitemeyer, 2024; Yang et al., 2016; Tremblay & Belchevski, 2004), children who participate in prevention programs are less likely to develop clinically significant concerns since these programs reduce the effects of risk

factors (i.e., by teaching coping strategies) and increase or strengthen protective factors (i.e., through healthy relationships with caring adults) (APA, 2014). Furthermore, early prevention efforts yield better outcomes than those pursued later in life possibly because childhood is a sensitive and vulnerable time of rapid development (Tremblay et al., 2004; Singh et al., 2022; Colizzi et al., 2020).

Related to the universal, selective, and targeted categories mentioned earlier, preventions can also be categorized as primary, secondary, or tertiary. Primary preventions target the general public or people at risk of an illness, secondary preventions aim to mitigate the effects of a disorder early to prevent it from worsening, and tertiary preventions focus on treatment and recovery (Singh et al., 2022; Perski et al., 2017).

Tobin & Sugai (2005) examined primary, secondary, and tertiary prevention adaptations of Positive Behavior Support which is intended for young children at risk of behavioural problems. The researchers found that primary prevention, a school-wide effort to reinforce appropriate behaviours, was effective for 60% of participants. Teacher ratings of students' self-control increased after primary and secondary prevention, while cooperation increased greatly after secondary prevention. Internalizing behaviours such as rumination, depression, worry, or social isolation, and externalizing behaviours like tantrums, aggression, hyperactivity, or impulsivity (Vergunst et al., 2023) decreased while academic performance increased on all prevention levels. To further support the effectiveness of preventions, one meta-analysis reports that the majority of selected and indicated preventions for childhood aggressive behaviours had at least small effect sizes (Hendricks et al., 2018).

Similarly, home visitation programs for low-income, unmarried women have resulted in positive outcomes such as reduced instances of child abuse and neglect 15 years later, suggesting that prevention efforts also have long-lasting effects (Olds et al., 1997). Likewise, the Incredible Years program, an early PMT intervention that works with parents of children aged 3–8 with ODD symptoms, demonstrates that improvements in the child's conduct in home and school settings can be maintained for at least 2 years after treatment ends (Maag & Katsiyannis, 2010; Shepard & Dickstein, 2009; Reid et al., 2003). While the Incredible Years program is not a prevention program, it is included to demonstrate that early efforts to prevent or mitigate harm can have lasting impacts.

Prevention efforts greatly reduce the need for specialized considerations like case management or mental health treatment teams since they target people who have yet to develop problematic behaviours. Thus, less extensive training is required for service providers, and trained volunteers can assist mental healthcare workers like social workers or registered clinical counsellors in providing preventative care. Additionally, prevention programs can be as short as one session (Shepard & Dickstein, 2009) and take place in community centres or local schools (Singh et al., 2022; Yu-Lefler et al., 2023; Williams et al., 2020). As a result, prevention efforts are more cost-effective than interventions (Singh et al., 2022; APA, 2014; Moroz et al., 2020).

Given the poor mental and physical health associated with aggressive behaviours in children, families with aggressive children on average utilize more healthcare services than families with less aggressive children (Raaijmakers et al., 2011; Rivenbark et al., 2018). By age 28, people with CD are estimated to cost 10 times more than people without CD (Scott et al., 2001). These costs are attributed to factors like housing and residential care, healthcare, government benefits, divorce, special education, inpatient services, and crime (Scott et al., 2001; Rivenbark et al., 2018; Foster et al., 2005). By working with concerned families before children develop and receive diagnoses for ODD or CD, the potential future economic burden of clinically significant aggression can be reduced.

V. Limitations and Future Directions

As mentioned at the beginning of this paper, very little research has explored this topic. It is hard to know if awe can effectively reduce aggression in children, and more research is necessary to better conceptualize awe in children, the relationship between awe and aggression, and the relationship between prosociality and aggression.

Relatedly, one treatment cannot mitigate all types of aggressive behaviours in children, given their complexity and the intricacies of childhood development (Murray-Close & Ostrov, 2009; Colizzi et al., 2020). Aggressive behaviours are subject to individual differences and become more varied with age (Underwood et al., 2009). In addition, aggression is heavily influenced by interactions between biological and environmental factors (Shepard & Dickstein, 2009) and targeting childhood aggressive behaviours through awe may be ineffective when issues such as parental job instability, child abuse, interparental violence, inadequate housing, racism, discrimination, and immigration are concerned (Cavell et al., 2023; Afifi et al., 2009; Boden et al., 2010). Aggressive behaviours are also related to the quality of the parent-child relationship and parental involvement. This is partly why PMT programs are so effective (Lakhdir et al., 2020, Shepard & Dickstein, 2009; Saggar et al., 2019).

While prevention efforts for aggression are effective, they are not common in part due to the ambiguity of subclinical and clinical presentations. Mental disorders are not observable in the way that physical ones are and determining with certainty when symptoms of a particular disorder (i.e., ODD) have become clinically significant is difficult (Singh et al., 2022). In addition, there is currently a shortage of mental healthcare workers (Mongelli et al., 2020), which may make developing, testing, and moderating new prevention programs challenging. However, as mentioned earlier, mental health workers such as social workers can help provide at-risk children with preventative care alongside trained volunteers.

VI. Conclusion

Awe as a selective and indicated prevention program for aggressive behaviours in children could mitigate and prevent negative developmental outcomes like future delinquency and poor mental health. As a selective or indicated prevention program, costs to the public are expected to

decrease while access to support for families with risk factors will likely increase. Mitigating the effects of risk factors in early childhood by providing accessible support to families is vital, and current treatments are not sufficient in that regard. Awe has been shown to decrease aggression in adult populations and increase prosociality in all ages, and as such, awe may directly or indirectly decrease aggression in young children. Since awe is commonly experienced in childhood, it is an age-appropriate way to prevent the development or worsening of aggressive behaviours in young children. Given the evidence that exists about the relationship between awe, prosociality, and aggression, as well as the risks associated with untreated aggressive behaviours, it is recommended that awe as a potential treatment be further investigated.

Acknowledgment

Thank you Beau Wallbridge for your encouragement, critical insights, and for sharing with me the research conduceted by Li et al., (2024). Additionally, thank you Kaitlin Kantilas and Livia Lam for your critical insights.

References

Aknin, L. B., Van de Vondervoort, J. W., & Hamlin, J. K. (2018). Positive feelings reward and promote prosocial behaviour. *Current Opinion in Psychology, 20,* 55–59. http://dx.doi.org/10.1016/j.copsyc.2017.08.017

Afifia, T. O., Bomanb, J., Fleisher, W., & Sareena, J. (2009). The relationship between child abuse, parental divorce, and lifetime mental disorders and suicidality in a nationally representative adult sample*. Child Abuse & Neglect, 33*(3)*,*139–147. http://dx.doi.org/10.1016/j.chiabu.2008.12.009

Allen, S. (2018). *The science of awe*. Greater Good Science Centre. https://ggsc.berkeley.edu/images/uploads/GGSC-JTF_White_Paper-Awe_FINAL.pdf

American Psychological Association (APA). (2014). Guidelines for prevention in psychology. *The American Psychologist*, *69*(3), 285–296. https://doi.org/10.1037/a0034569

Archer, J., & Coyne, S. M. (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review, 9*(3), 212–230. https://doi.org/10.1207/s15327957pspr0903_2

Bai, Y., Ocampo, J., Jin, G., Chen, S., Benet-Martinez, V., Monroy, M., Anderson, C., & Keltner, D. (2021). Awe, daily stress, and elevated life satisfaction. *Journal of Personality and Social Psychology, 120*(4), 837–860. https://doi-org.proxy.lib.sfu.ca/10.1037/pspa0000267

Baker, K. (2016). Conduct disorders in children and adolescents. *Pediatrics and Child Health, 26*(12), 534-539. https://doi.org/10.1016/j.paed.2016.08.009

Barican, J.L., Yung, D., Schwartz, C., Zheng, Y., Georgiades, K., & Waddel, C. (2022). Prevalence of childhood mental disorders in high-income countries: A systematic review and meta-analysis to inform policy-making. *Evidence Based Mental Health, 25*(1), 36–44. http://dx.doi.org/10.1136/ebmental-2021-300277

Beals, J., Piasecki, J., Nelson, S., Jones, M., Keane, E., Dauphinais, P., Red Shirt, R., Sack, W. H., & Manson, S. M. (1997). Psychiatric disorder among American Indian adolescents: Prevalence in Northern Plains youth. *Journal of the American Academy of Child and Adolescent Psychiatry 36*(9), 1252–1259. https://doi.org/10.1097/00004583-199709000-00018

Bender, A. (2019). *Disability and insurance claims in primary care: Documenting a diagnosis.* Centre for Addiction and Mental Health. https://www.camh.ca/en/professionals/treating-conditions-and-disorders/disability-and-insurance-claims-in-primary-care/disability-and-insurance-claims-in-primary-care---documenting-a-diagnosis

Best, J. R., & Miller, P. H. (2010). A developmental perspective on executive function. *Child Development, 81*(6), 1641–1660. https://doi.org/10.1111/j.1467-8624.2010.01499.x

Boden, J. M., Fergusson, D. M., & Horwood, L. J. (2010). Risk factors for conduct disorder and oppositional defiant disorder: Evidence from a New Zealand birth cohort. *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(11), 1125-1133. https://doi.org/10.1016/j.jaac.2010.08.005

Buckley, L., Atkins, T., Perera, W., & Waller, M. (2024). Trajectories of parental warmth and the role they play in explaining adolescent prosocial behavior. *Journal of Youth and Adolescence, 53*, 526–536. https://doi.org/10.1007/s10964-023-01887-3

Campbell, S. B. (1995). Behavior problems in preschool children: A review of recent research. *Child Psychology & Psychiatry & Allied Disciplines*, *36*(1), 113–149. https://doi.org/10.1111/j.1469-7610.1995.tb01657.x

Casas, J. F., & Bower, A. A. (2018). Developmental manifestations of relational aggression. In S. M. Coyne & J. M. Ostrov (Eds.), *The development of relational aggression* (pp. 29–48). Oxford University Press. https://doi.org/10.1093/oso/9780190491826.003.0003

Cavell, T. A., Quetsch, L. B., & Onovbiona, H. (2023). Working with parents through the lens of equity, diversity, and inclusion. In *Working with parents of aggressive children: A practitioner's guide* (2nd ed.) American Psychological Association, 251–264. https://doi.org/10.1037/0000355-010

Chatterjee, S. (2013). Relationships among stress and aggression in adolescents. *Indian Journal of Applied Research, 3*(9), 537–538. https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/recent_issues_pdf/2013/September/September_2013_1493100153__164.pdf

Children's Mental Health Ontario. (2020). *Kids can't wait: 2020 report.* https://cmho.org/wp-content/uploads/CMHO-Report-WaitTimes-2020.pdf

Colizzi, M., Lasalvia, A., & Ruggeri, M. (2020). Prevention and early intervention in youth mental health: Is it time for a multidisciplinary and trans-diagnostic model for care? *International Journal of Mental Health Systems*, *14*(23). https://doi.org/10.1186/s13033-020-00356-9

Contreras, I. M., & Novaco, R. W. (2023). Anger rumination vs. revenge planning: Divergent associations with aggression and life satisfaction. *Journal of School Violence, 22*(3), 383–394. https://doi.org/10.1080/15388220.2023.2186420

Ejova, A., Krátký, J., Klocová, E. K., Kundt, R., Cigán, J., Kotherová, S., Bulbulia, J., & Gray, R. D. (2021). The awe-prosociality relationship: Evidence for the role of context. *Religion, Brain & Behavior, 11*(3)*,* 294–311. https://doi.org/10.1080/2153599X.2021.1940254

Evans, S. C., Frazer, A. L., Blossom, J. B., & Fite, P. J. (2019). Forms and functions of aggression in early childhood. *Journal of Clinical Child and Adolescent Psychology, 48*(5), 790–798. https://doi.org/10.1080/15374416.2018.1485104

Eisenberg, N., Spinrad, T. L., & Knafo-Noam, A. (2015). Prosocial development. In R. M. Lerner & M. E. Lamb (Eds.), *Handbook of child psychology and developmental science, socioemotional processes* (pp. 610–657). John Wiley & Sons, Incorporated. https://ebookcentral-proquest-com.proxy.lib.sfu.ca/lib/sfu-ebooks/detail.action?docID=1895802.

Foster, E. M., Jones, D. E., & the Conduct Problems Prevention Research Group. (2005). The high costs of aggression: Public expenditures resulting from conduct disorder. *American Journal of Public Health, 95*(10), 1767–1772. https://doi.org/10.2105%2FAJPH.2004.061424

Girard, L., Tremblay, R. E., Nagin, D., & Côté, S. M. (2019). Development of aggression subtypes from childhood to adolescence: A group-based multi-trajectory modelling perspective. *Journal of Abnormal Child Psychology, 47*(5), 825–838. https://doi.org/10.1007/s10802-018-0488-5

Greitemeyer, T., & Osswald, S. (2010). Effects of prosocial video games on prosocial behavior. *Journal of Personality and Social Psychology, 98*(2), 211–221. https://doi.org/10.1037/a0016997

Hay, D. F., Paine, A. L., Perra, O., Cook, K. V., Hashmi, S., Robinson, C., Kairis, V., & Slade, R. (2021). Prosocial and aggressive behavior: A longitudinal study. *Monographs of the Society for Research in Child Development, 86*(2), 1–108. https://doi.org/10.1111/mono.12427

Hay, D. F., Waters, C. S., Perra, O., Swift, N., Kairis, V., Phillips, R., Jones, R., Goodyer, I., Harold, G., Thapar, A., & Van Goozen, S. (2014). Precursors to aggression are evident by 6 months of age. *Developmental Science, (17)*3. https://doi.org/10.1111/desc.12133

Hendriks, A. M., Bartels, M., Colins, O. F., & Finkenauer, C. (2018). Childhood aggression: A synthesis of reviews and meta-analyses to reveal patterns and opportunities for prevention and intervention strategies. *Neuroscience and Biobehavioral Reviews*, *91*, 278–291. https://doi.org/10.1016/j.neubiorev.2018.03.021

Horwitz, B. N., Ganiban, J. M., Spotts, E. L., Lichtenstein, P., Reiss, D., & Neiderhiser, J. M. (2011). The role of aggressive personality and family relationships in explaining family conflict. *Journal of Family Psychology, 25*(2), 174–183. https://doi.org/10.1037/a0023049

Keltner, D., & Haidt, J. (2003). Approaching awe, a moral, spiritual, and aesthetic emotion. *Cognition and Emotion, 17*(2), 297–314. https://doi.org/10.1080/02699930302297

Kersten, R., & Greitemeyer, T. (2024). Human aggression in everyday life: An empirical test of the general aggression model. *British Journal of Social Psychology, 63*(3), 1091–1111. https://doi.org/10.1111/bjso.12718

Kidd, C., & Hayden, B. Y. (2015). The psychology and neuroscience of curiosity. *Neuron, 88*(3), 449–460. https://doi.org/10.1016/j.neuron.2015.09.010

Koh, A. H. Q., Tong, E. M. W., & Yuen, A. Y. L. (2019). The buffering effect of awe on negative affect towards lost possessions. *The Journal of Positive Psychology, 14*(2), 156–165. https://doi.org/10.1080/17439760.2017.1388431

Kruglanski, A. W., Ellenberg, M., Szumowska, E., Molinario, E., Speckhard, A., Leander, N. P., Pierro, A., Di Cicco, G., & Bushman, B. J. (2023). Frustration-aggression hypothesis reconsidered: The role of significance quest. *Aggressive Behavior*, *49*(5), 445–468. https://doi.org/10.1002/ab.22092

Lakhdir, M. P. A., Rozi, S., Peerwani, G., & Nathwan, A. A. (2020). Effect of parent-child relationship on physical aggression among adolescents: Global school-based student health survey. *Health Psychology Open, 7*(2). https://doi.org/10.1177/2055102920954715

Li, R., Hou, Z., Shang, C., Xu, Q., & Nei, A. (2024). A meta-analysis examining the relationship between awe and prosocial behavior. *Current Psychology, 43,* 24702–24711. https://doi.org/10.1007/s12144-024-06039-9

Liu, J., Lewis, G., & Evans, L. (2013). Understanding aggressive behaviour across the life span. *Journal of Psychiatric and Mental Health Nursing, 20*(2), 156–168. https://doi.org/10.1111/j.1365-2850.2012.01902.x

Liu, J., Raine, A., Venables, P. H., & Mednick, S. A. (2004). Malnutrition at age 3 years and externalizing behavior problems at ages 8, 11, and 17 years. *The American Journal of Psychiatry*, *161*(11), 2005–2013. https://doi.org/10.1176/appi.ajp.161.11.2005

Lone, A., & Albotuaiba, A. O. (2022). Personality traits and family environment: Antecedents of child aggression. *Brain Sciences, 12*(11). https://doi.org/10.3390/brainsci12111586

Longobardi, C., Settanni, M., Lin, S., & Fabris, M. A. (2021). Student–teacher relationship quality and prosocial behaviour: The mediating role of academic achievement and a positive attitude towards school. *British Journal of Educational Psychology, 91*(2), 547–562. https://doi.org/10.1111/bjep.12378

Martin, E. (2017). *Hidden consequences: The impact of incarceration on dependent children.* National Institute of Justice. https://www.ojp.gov/pdffiles1/nij/250349.pdf

Matthys, W., & Schutter, D. J. L. G. (2021). Increasing effectiveness of cognitive behavioral therapy for conduct problems in children and adolescents: What can we learn from neuroimaging studies? *Clinical Child and Family Psychology Review, 24*, 484–499. https://doi.org/10.1007/s10567-021-00346-4

Mohlman, J., & Gorman, J. M. (2005). The role of executive functioning in CBT: A pilot study with anxious older adults. *Behaviour Research and Therapy, 43*(4), 447–465. https://doi.org/10.1016/j.brat.2004.03.007

Mongelli, F., Georgakopoulos, P., & Pato, M. T. (2020). Challenges and opportunities to meet the mental health needs of underserved and disenfranchised populations in the United States. *Focus (American Psychiatric Publishing)*, *18*(1), 16–24. https://doi.org/10.1176/appi.focus.20190028

Moroz, N., Moroz, I., & Slovinec, M. (2020). Mental health services in Canada: Barriers and cost-effective solutions to increase access. *Healthcare Management Forum, 33*(6) 282–287. https://doi.org/10.1177/0840470420933911

Murray-Close, D., & Ostrov, J. M. (2009). A longitudinal study of forms and functions of aggressive behavior in early childhood. *Child Development*, *80*(3), 828–842. https://doi.org/10.1111/j.1467-8624.2009.01300.x

Norman, Å., & Enebrink, P. (2023). Effects of a parental support intervention for parents in prison on child-parent relationship and criminal attitude—The For Our Children's Sake pragmatic controlled study. *PLoS ONE, 18*(3). https://doi.org/10.1371/journal.pone.0283177

Olds, D. L., Eckenrode, J., Henderson, C. R., Kitzman, H., Powers, J., Cole, R., Sidora, K., Morris, P., Pettitt, L. M., & Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. Fifteen-year follow-up of a randomized trial. *JAMA*, *278*(8), 637–643.

Ostrov, J. M., Blakely-McClure, S. J., Perry, K. J., & Kamper-DeMarco, K. E. (2018). Definitions—The form and function of relational aggression. In S. M. Coyne & J. M. Ostrov (Eds.), *The development of relational aggression* (pp. 13–28). Oxford University Press. https://doi-org.proxy.lib.sfu.ca/10.1093/oso/9780190491826.003.0002

Padilla-Walker, L. M., Fraser, A. M., Black, B. B., & Bean, R. A. (2014). Associations between friendship, sympathy, and prosocial behavior toward friends. *Journal of Research on Adolescence, 25*(1), 28–35. https://doi.org/10.1111/jora.12108

Penner, L. A., Dovido, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology, 56*(1), 365–92. https://doi.org/10.1146/annurev.psych.56.091103.070141

Perlin, J. D., & Li, L. (2020). Why does awe have prosocial effects? New perspectives on awe and the small self. *Perspectives on Psychological Science, 15*(2), 291–308. https://doi.org/10.1177/1745691619886006

Pikard, J., Roberts, N., & Groll, D. (2018). Pediatric referrals for urgent psychiatric consultation: Clinical characteristics, diagnoses and outcome of 4 to 12 year old children. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 27*(4), 245-251. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6254263/

Punton, G., Dodd, A. L., & McNeill, A. (2022). 'You're on the waiting list': An interpretive phenomenological analysis of young adults' experiences of waiting lists within mental health services in the UK. *PloS ONE, 17*(3). https://doi.org/10.1371/journal.pone.0265542

Prade, C., & Saroglou, V. (2016). Awe's effects on generosity and helping. *The Journal of Positive Psychology, 11*(5), 522–530. https://doi.org/10.1080/17439760.2015.1127992

Raaijmakers, M. A., Posthumus, J. A., Van Hout, B. A., Van Engeland, H., & Matthys, W. (2011). Cross-sectional study into the costs and impact on family functioning of 4-year-old children with aggressive behavior. *Prevention Science, 12*(2), 192–200. https://doi.org/10.1007/s11121-011-0204-y

Reid, M. J., Webster-Stratton, C., & Hammond, M. (2003). Follow up of children who received the Incredible Years intervention for oppositional-defiant disorder: Maintenance and prediction of 2–year outcome. *Behavior Therapy, 34*, 471–491.

Rivenbark, J. G., Odgers, C. L., Caspi, A., Harrington, H., Hogan, S., Houts, R. M., Poulton, R., & Moffitt, T. E. (2018). The high societal costs of childhood conduct problems: Evidence from administrative records up to age 38 in a longitudinal birth cohort. *Journal of Child Psychology and Psychiatry, 59*(6), 703–710. https://doi.org/10.1111/jcpp.12850

Saggar, R., Patre, B. N., & Patil, V. (2019). Clinical practice guidelines for the management of conduct disorder. *Indian Journal of Psychiatry, 61*(2), 270–276. https://doi.org/10.4103%2Fpsychiatry.IndianJPsychiatry_539_18

Scott, S., Knapp, M., Henderson, J., & Maughan, B. (2001). Financial cost of social exclusion: Follow up study of antisocial children into adulthood. *BMJ, 323*(7306), 191–194. https://doi.org/10.1136/bmj.323.7306.191

Shepard, S. A., & Dickstein, S. (2009). Preventative intervention for early childhood behavioural problems: An ecological perspective. *Child and Adolescent Psychiatric Clinics of North America*, *18*(3), 687–706. https://doi.org/10.1016/j.chc.2009.03.002

Singh, J. A. E., Chen, S., Collins, K. A., & Cawthorpe, D. (2021). Who should be seen when? Establishing wait time benchmarks for children's mental health. *Canadian Journal of Community Mental Health, 40*(1), 105-122. https://doi.org/10.7870/cjcmh-2021-008

Singh, V., Kumar, A., & Gupta, S. (2022). Mental health prevention and promotion – A narrative review. *Frontiers in Psychiatry, 13*. https://doi.org/10.3389/fpsyt.2022.898009

Sisterhen, L. L., & Wy, P. A. W. (2023). *Temper tantrums*. StatPearls [Internet]. https://www.ncbi.nlm.nih.gov/books/NBK544286/

Stamkou, E., Brummelman, E., Dunham, R., Nikolic, M., & Keltner, D. (2023). Awe sparks prosociality in children. *Psychological Science, 34*(4), 455–467. https://doi.org/10.1177/09567976221150616

Sukhodolsky, D. G., Vander Wyk, B. C., Eilbott, J. A., McCauley, S. A., Ibrahim, K., Crowley, M. J., & Pelphrey, K. A. (2016). Neural mechanisms of cognitive-behavioral therapy for `aggression in children and adolescents: Design of a randomized controlled trial within the National Institute for Mental Health research domain criteria construct of frustrative non-reward. *Journal of Child and Adolescent Psychopharmacology, 26*(1), 38–48. https://doi.org/10.1089/cap.2015.0164

Thomson, N. D., Moeller, F. G., Amstadter, A. B., Svikis, D., Perera, R. A., & Bjork, J. M. (2020). The impact of parental incarceration on psychopathy, crime, and prison violence in women. *International Journal of Offender Therapy and Comparative Criminology*, *64*(10), 1178–1194. https://doi.org/10.1177/0306624X20904695

Tobin, T. J., & Sugai, G. (2005). Preventing problem behaviors: Primary, secondary, and tertiary level prevention interventions for young children. *Journal of Early Intensive Behavior Intervention, 2*(3), 125–144. https://doi-org.proxy.lib.sfu.ca/10.1037/h0100309

Toro, R., García-García, J., & Zaldívar-Basurto, F. (2020). Antisocial disorders in adolescence and youth, according to structural, emotional, and cognitive transdiagnostic variables: A systematic review. *International Journal of Environmental Research and Public Health*, *17*(9), 3036. https://doi.org/10.3390/ijerph17093036

Tran, Q.D. (2024). Going beyond waitlists in mental healthcare. *Community Mental Health Journal, 60*, 629–634. https://doi.org/10.1007/s10597-024-01233-2

Tremblay, P. .F., & Belchevski, M. (2004). Did the instigator intend to provoke? A key moderator in the relation between trait aggression and aggressive behavior. *Aggressive Behavior, 30*(5), 409-424. https://doi.org/10.1002/ab.20027

Tremblay, R. E., Japel, C., Perusse, D., McDuff, P., Boivin, M., Zoccolillo, M., & Montplaisier, J. (1999). The search for the age of "onset" of physical aggression: Rousseau and Bandura revisited. *Criminal Behavior and Mental Health, 9*(1), 8–23. https://doi.org/10.1002/cbm.288

Tremblay, R. E., Nagin, D. S., Séguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., Pérusse, D., & Japel, C. (2004). Physical aggression during early childhood: Trajectories and predictors. *Pediatrics*, *114*(1), e43–e50. https://doi.org/10.1542/peds.114.1.e43

Underwood, M. K., Beron, K. J., & Rosen, L. H. (2009). Continuity and change in social and physical aggression from middle childhood through early adolescence. *Aggressive Behavior, 35*(5), 357–375. https://doi-org.proxy.lib.sfu.ca/10.1002/ab.20313

Valdesolo, P., Shtulman, A., & Baron, A. S. (2017). Science is awe-some: The emotional antecedents of science learning. *Emotion Review, 9*(3), 215–221. https://doi.org/10.1177/1754073916673212

Vance, A., Winther, J., McGaw, J., & White, S. (2022). Key demographic and mental disorder diagnostic differences between Australian First Nations and non-First Nations clinic-referred children and adolescents assessed in a culturally appropriate and safe way. *Australian & New Zealand Journal of Psychiatry, 56*(11), 1455-1462. https://doi.org/10.1177/00048674211063819

Vanderbilt-Adriance, E., Shaw, D. S. Brennan, L. M., Dishion, T. J., Gardner, F., & Wilson, M. N. (2015). Child, family, and community protective factors in the development of children's early conduct problems. *Family Relations, 64*, 64–79. https://doi.org/10.1111/fare.12105

Vecchio, G. M., Zava, F., Cattelino, E., Zuffiano, A., & Pallini, S. (2023). Children's prosocial and aggressive behaviors: The role of emotion regulation and sympathy. *Journal of Applied Developmental Psychology, 89.* https://doi.org/10.1016/j.appdev.2023.101598

Vergunst, F., Commisso, M., Geoffroy, M., Temcheff, C., Poirier, M., Park, J., Vitaro, F., Tremblay, R., Côté, S., & Orri, M. (2023). Association of childhood externalizing, internalizing, and comorbid symptoms with long-term economic and social outcomes. *JAMA Network Open, 6*(1). https://doi.org/10.1001/jamanetworkopen.2022.49568

Williams, I., Vaisey, A., Patton, G., & Sanci, L. (2020). The effectiveness, feasibility and scalability of the school platform in adolescent mental healthcare. *Current Opinion in Psychiatry, 33*(4), 391–396. https://doi.org/10.1097/YCO.0000000000000619

Williams, R. C., Biscaro, A., & Clinton, J. (2019). Relationships matter: How clinicians can support positive parenting in the early years. *Paediatrics & Child Health, 24*(5), 340–347. https://doi.org/10.1093/pch/pxz063

Yang, Y., Yang, Y., Bao, T., Liu, Y., & Passmore, H. A. (2016). Elicited awe decreases aggression. *Journal of Pacific Rim Psychology, 10.* https://doi.org/10.1017/prp.2016.8

Yoshie, E. A. (2023). *Awe inspires children to behave prosocially* [Unpublished manuscript]. Simon Fraser University.

Yu-Lefler, H., Hsu, Y., Sen, A., & Marsteller, J. (2023). Service utilization for parent management of early childhood behavior problems in a private outpatient behavioral clinic: The impact of out-of-pocket cost, travel distance, and initial treatment progress. *Administration and Policy in Mental Health and Mental Health Services Research, 50,* 834–847. https://doi.org/10.1007/s10488-023-01282-x