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Play's Role in the Development of Antisocial Behavior

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Abstract

This paper is a literature review which examines the relationship between play and prosocial behavior. More specifically, it examines its inverse, questioning whether a lack of play in early childhood may be correlated to the development of antisocial behavior later in life. Comparing research from an abundance of psychologists, criminologists, and sociologists, this paper answers various questions pertaining to play and prosocial behavior: What happens if play is inhibited in childhood? Would different reasons for play to be inhibited result in different results (i.e. abusive childhoods, desperate situations such as homelessness and poverty, chronic illness, etc.)? Is a lack of play in childhood telltale of future antisocial behavior? It is concluded that play teaches children certain skills that help develop empathy, and if an individual were to be incapable of play in any way, their empathetic development could potentially be stumped. Thus, while a lack of play does not directly cause antisocial behavior in childhood, it does increase a risk in an development of empathy – which is a key trait of antisocial behavior.

Keywords: play, prosocial behavior, antisocial behavior, literature review, cognitive development

BACKGROUND

While the act of play may appear overtly simple, there is increasing research on the subject and its developmental impacts. Despite the seemingly-trivial end goals of playing, such as winning a sports game or a chess match, the activity teaches prosocial behavior through experience (Waite & Rees, 2013, p. 2). However, and most interestingly, while there is ample research on play's benefit on developing prosocial behavior, there is hardly any information on its inverse, *lack* of play and its influence on prosocial behavior.

Thus, this project will be examining potential correlations between a lack of play in early childhood and any resulting antisocial behavior. Specifically, it will address any consequences that may result from a child's inability to play in any way, whether it be due to injury, incapacitation, or restrictive environments that make the ability to play difficult. It will moreover elaborate between the differences of play in certain situations (i.e. play in video games or play in a face-to-face, more "traditional" setting), then working towards what type of play is most important in terms of development, whether it be positive or negative.

The encyclopedia of play states that "[p]lay is not neatly defined in terms of any single characteristic; instead, it involves a constellation of characteristics, which have to do with the motives or mental framework underlying the observed behavior" (Gray, 2015). While the definition of play is one of debate, Dr. Peter Gray of Boston College has observed many different definitions in order to conclude that most to all scholarly definitions include the following five factors: (1) Play is self-chosen and self-directed; (2) Play is intrinsically motivated; (3) Play is guided by mental rules – not those of which are written down, but instead formulated spontaneously by the mind – but the rules leave room for creative interpretation; (4) Play is imaginative; (5) Play is performed in an alert, active, yet simultaneously "non-stressed" frame of

mind (Gray, 2015). Similarly, it is important to note that the definition of antisocial behavior may vary from individual to individual; for purposes of this paper, antisocial behavior is defined as acts of *intentional* hostility or aggression (whether it be psychological, physical, or otherwise) towards others, conducted covertly or overtly.

FOCUS

There is no definitive reason as to how antisocial behavior may manifest. Despite countless research on antisocial attitudes and behavior, psychologists, sociologists, and criminologists alike cannot hone in on any one particular reason why people may develop chronic violent, aggressive, and/or reclusive behavior. However, many professionals point to the fact that certain abnormalities during an individual's developmental stages, most prominently those in childhood adolescence, are major triggers for developing antisocial behavior. While these abnormalities will be defined later in the study, they include (but are not limited to) abusive households, injury or handicap, and hospitalization due to chronic, severe illnesses.

Because researchers find that play in childhood is one of many factors that contribute to an individual's prosocial development, questions that may arise from anyone intrigued in a more criminological approach of psychology may be: What happens if play is inhibited in childhood? Would different reasons for play to be inhibited result in different results (i.e. abusive childhoods, desperate situations such as homelessness and poverty, chronic illness, etc.)? Is a lack of play in childhood telltale of future antisocial behavior? This is precisely what this research paper will focus on, attempting to distinguish what precisely in play helps formulate prosocial behavior, and what will occur if those factors are inhibited.

VALUE

Despite extensive research on play science, resulting in programs such as Nevada Medical Center's Global Science of Play Institute, there is always a need for more information regarding how one's inability to play may affect their future development. Due to this, it is important to analyze the area in which play and developmental issues reside, not simply for the sake of contributing to developmental psychology, but moreover abnormal and criminal psychology as well. This may aid in the understanding of antisocial individuals, as researchers have found that antisocial behavior in adulthood oftentimes stems from major developmental issues in childhood (Wesseldijk et al., 2017, p. 1123). Thus, this literature review will compare and connect the ideas of many different researchers in order to attempt to answer the questions: How does play affect prosocial behavior? How does a lack of play affect prosocial behavior?

OBJECTIVES

The aim of this research is to discover, if any, correlations between a restricted or nonexistent ability to play in childhood and any resulting antisocial behavior later in life. Moreover, its aim is to discover what part of play is most important in formulating prosocial behavior. This will be achieved by: (1) Assessing the importance of play in early development and its prosocial benefits; (2) Examining what may possibly occur to an individual's development if play is inhibited; (3) Discovering reasons for an individual to form antisocial behavior, yet focusing specifically on their childhood development; (4) Determining if there is a correlation between inhibited play and antisocial behavior by analyzing these previous four objectives. With hope, this research may be a contribution to the field of developmental, abnormal, and criminal psychology alike, as well as a way to raise awareness to the importance of studying play in children.

CASE STUDY

The American Journal of Play describes a trend between a decline in play and rise in psychopathology in children throughout the years. While there are many reasons behind this, such as what Peter Gray (2011, p. 443) describes as the “seduction” of television, a rise in video games, and the ever-growing influence of the Internet, he emphasizes the fact that during this time span an increase in antisocial behavior such as narcissism and a lack of self-control has simultaneously occurred.

A professor at San Diego State University, Jean Twenge, has performed ample research on the topic. While she has discovered that there has been an increase in anxiety, depression, and suicide rates throughout the years, additionally there has been a decrease in a personal sense of control, and an increase in narcissistic behavior (Gray, 2011, pp. 450-451). While Jean Twenge does not speculate on the relationship of play and these resulting behaviors, she considers the fact that a rise in technology has resulted in a decrease of face-to-face communication between adolescents (Twenge et al., 2018, p. 1).

This inhibited communication results in what Twenge considers a “destabilization” of “humans’ neural architecture” (Twenge et al., 2018, p. 4). An unstable neuronal structure can result, Gray states further, in psychopathology, whether it range from behavioral to mental disorders. Jean Twenge mentions the rise in depression, anxiety, and suicide from these factors – however, Gray takes a step forward to state that the rise in antisocial behavior reflects precisely what Twenge has observed in depression, anxiety, and suicide rates as well.

Interpersonal, face-to-face communication is characterized by certain styles of play (Yogman et al., 2018, p. 3). As Gray argues – somewhat vicariously through Twenge – due to the steady decline in traditional play involving face-to-face communication, higher rates of psychopathology and antisocial behavior have been on the rise (Gray, 2011, p. 443). However,

this is not a new trend; those of whom lacked intimate communication (often practiced through play) have developed certain antisocial behavioral disorders.

Charles Manson, infamous cult leader whose followers committed nine murders in hopes to spark a race war, including the gruesome killing of a pregnant Sharon Tate, is a nearly flawless example of this. His childhood was marked with petty theft and skipping school, resulting in Manson getting placed in a school for delinquent boys by the age of thirteen. Marked with abuse, the young Charles Manson ran away from the school twice before going on a string of robberies and theft, ultimately getting arrested and placed in a strict reformatory school. There, he was raped and beaten repeatedly – and, to cope, he discovered that playing “insane” by screaming, thrashing, and grimacing would sometimes deter his aggressors. At the age of 17, he ran away from the reformatory school – and began committing more heinous crimes resulting in imprisonment. His release from prison marked the beginning of the formation of his ‘family’ (Guinn, 2014).

There is no doubt that his childhood influenced his heinous activities later in life. While it may not be explicitly stated, perhaps the biggest influence to the formation of his antisocial personality was the rather stunted social growth that he exhibited. As a child, Manson lived an incredibly hectic life filled with abuse, neglect, and disarray. He lacked important social skills which would teach him right from wrong, formulate bonds with others his age, and allow him to practice self-control and regulation.

Interestingly, there appears to be a correlation between a lack of play in childhood and resulting antisocial behavior. While most point to the abuse and neglect to be a major factor of Manson’s eventual antisocial, violent behavior, a developmental psychologist may examine this a step further and relate this behavior towards the fact that Manson did not have much time to

practice prosocial behavior through play. While this oughtn't be considered a solo factor in the development of antisocial behavior, it certainly may predispose individuals towards the development of an antisocial personality. After all, as Gray and Twenge state, play holds certain unique benefits that aid in the development of healthy neuronal structure. Should an individual be lacking the ability to play in any way – from the distractions of television to a more radical example such as Manson's violent, volatile childhood – these healthy developments may be disrupted.

DEFINITION OF PLAY

Countless hours of research has been dedicated to the study of play and its importance in development, much to the point where the value of play reaches the United Nations – as the U.N. High Commission for Human Rights considers it a “right of every child” (Ginsburg, 2007, p. 182). Moreover, Blalock et. al (2019) write that psychologists recommend play as a form of therapy for children who are struggling with socialization, prosocial behavior, or having difficulty in maintaining healthy, conventional relationships with their parents. With this taken into account, it can be said that play is incredibly essential to healthy development in human beings. The more research play science receives, however, the more complex it becomes.

This complexity, however, causes researchers to be divided on the best definition of play. The mere concept of play is incredibly broad – attempting to reduce it to a singular definition is, as one may be able to presume, incredibly difficult. Still, there are a few near-universal similarities on how researchers choose to define play. The growing agreement on play is that it is “an activity that is intrinsically motivated, entails active engagement, and results in joyful discovery” (Yogman et al., 2018, p. 2).

The emergence of new technology and other such discoveries altered the way play is viewed. Play is no longer seen as exclusively interacting with children face-to-face, such as playing with dolls or tossing around a football in the backyard; the emergence of video games on devices such as computers or smartphones provides a new light on how play is defined. For the sake of this research paper, however, play will be defined as activity, usually intrinsically-motivated, which results in recreation and entertainment. Moreover, two styles of play will specifically be addressed in this paper; these are rough-and-tumble play and pretend play. Not only are these two styles especially prominent in young childhood, but they provide two stark differences between one another: One being non-contact and imaginary, and the other involving potentially aggressive acts during play.

EMPATHY AND PLAY

Studies continue to show that play can benefit the developing adolescent in many ways, including the facilitation of parent engagement; birthing safe, healthy, and prosocial relationships; and even improving life course trajectories. Children learn social skills, including problem solving, creativity, cooperation, and other such factors that are vital skills that can be used throughout the lifespan. Countless researchers have concluded that pretend play, or play involving “some form of representation or acting-as-if”, can aid in language, social-cognitive skills, and counterfactual reasoning (Weisburg, 2015, p. 250).

Pretend play in particular allows the development of a skillset that is crucial for the development of prosocial behavior: Empathy. Defined as the “level of emotional warmth”, empathy is subdivided into two types: affective empathy, or “the tendency to feel and care about what other people feel”, and cognitive empathy, or “the ability to describe what and why other people feel, even if [one] does not share or care about those feelings” (Blalock et al., 2019, p.

238). When children are allowed to experience triumph and defeat, especially with other peers, the ability to recognize and understand their peers' emotions tends to increase significantly.

It is to no surprise that the American Academy of Pediatrics stresses the importance of play in young childhood, and repeatedly encourage parents to make sure their children are able to play daily in order to improve their physical, cognitive, and emotional functions. However, these come with boundaries: An adult oughtn't control the rules of play, as these children will "[conform] to adult rules... and lose some of the benefits play offers them, particularly in developing creativity, leadership, and group skills" (Ginsburg, 2007, p.183), some of which are factors that contribute to empathy.

As stated before, play is usually intrinsically-motivated for such an action to offer all of its benefits; when an adult interferes with this, children may begin to use them as an emotional or cognitive crutch. Thus, if children are accustomed to adults governing or controlling specific gameplay, they may not understand how to independently negotiate or collaborate. While it is beneficial for adults to mediate in certain situations, and it is certainly healthy for parents to play with their children, they should not dictate, but rather guide or work alongside their children.

While pretend play may allow three vital cognitive abilities to manifest, another style of play, called rough-and-tumble play, can birth an entirely different set of benefits for the developing adolescent. This style of play, additionally called locomotor or physical play, can progress from "pat-a-cake games in infants to... the free play seen at school recess" (Yogman et al., 2018, p. 3). While there has been a bit of backlash towards rough-and-tumble play (some individuals believing it to reinforce hazardous and violent behavior), studies have shown that this style of play encourages the development of empathy, as "children are guided not to inflict harm on others" (Yogman et al., 2018, p. 3). Rough-and-tumble play allows children to take risks in a

safe environment – which, in turn, offers insight on skills such as communication, negotiation, emotional balance, and moreover allows the development of emotional intelligence, all of which contribute to empathy (Yogman et al., 2018, p. 3).

Additionally, play and stress are closely linked; high frequency of play is related to lower levels of cortisol, which is a stress-inducing hormone in the body. Thus, either this means that stress may be able to be reduced through play – or, simply, less stressed individuals play more. Nonetheless, play may affect brain functioning by reducing stress levels to the point where coping and resilience are much more attainable (Yogman et al., 2018, p. 5).

APATHY AND ANTISOCIAL BEHAVIOR

There are many factors that may influence antisocial behavior later in life, but behavioral problems (such as fighting, arguing with parents or teachers, etc.) during childhood are perhaps some of the most influential. These conduct issues are correlated to inauspicious outcomes of health, crime, finances, and personal functioning (Wesseldijk et al., 2017, p. 1123). Zonneveld et al. (2017) may argue that those of whom regularly engage in what this paper defines as antisocial behavior “have problems [with] emotion recognition and empathy”. When one has difficulties recognizing others’ emotions, they are more likely to commit antisocial conduct in the future.

Researchers insist that “high-risk children have poorer parental supervision, come from more disadvantaged neighborhoods, have greater problems with emotional functioning, and exhibit alterations in brain structure and function compared to other young people” (Zonneveld et al., 2017, p. 913). Additionally, a study on young boys and the origin of violence in males insists that factors such as “early caregiver abuse and neglect, father absence, and exposure to family and neighborhood violence” (Golding & Fitzgerald, 2019, p. 5) increase boys’ chances

for developing aggressive behavior and, furthermore, committing violent acts later in their lifetime. While it is impossible to predict any one occurrence being the telltale point of an adulthood filled with antisocial conduct, psychologists and criminologists conclude on factors which may contribute to someone acting in an antisocial fashion, such as “ a) early abusive, neglectful, and otherwise unhealthy immediate relational ecologies in which some boys are raised as well as larger societal forces that may affect the stability and health of the more proximal family environment” (Golding & Fitzgerald, 2019, pp. 9-10).

With nurturing and positive caregiving, many children develop prosocial behavior; however, maltreatment can cause the exact opposite, essentially “toughening” children in a rather antisocial way. Golding and Fitzgerald describe the concept of *mentalization* in regards to the development of prosocial behavior; this is defined as self-reflecting and recognizing others’ mindsets. However, for the sake of this paper, it should be noted that mentalization and empathy are nearly synonymous to one another. Thus, the researcher’s definition of *mentalization* will henceforth be referred to as “empathizing”. Researchers have discovered that in neglectful or abusive households, the development of empathy is either stumped or nonexistent, and thus contribute to future – and chronic – antisocial, delinquent, or criminal behavior. This is due to the fact that a child, in “invalidating and emotionally’ abusive early environments... dissociates from [their] caregiver’s hostile, hurtful thoughts and feelings and, in the process, is unable to [empathize]” (Golding & Fitzgerald, 2019, p. 12).

This can cause the theory called the *hostile attribution bias*, which essentially describes the notion that very young children tend to “attribute hostile intentions to others’ ambiguous hostile behavior or expression” (Golding & Fitzgerald, 2019, p. 12). When one is not able to empathize, this bias may never fade, and thus individuals may attribute a potential hostile

outcome to individuals who they perceive as wearing an aggressive expression or committing an aggressive act.

Similarly to Manson, these factors can be considered not only in the context of abuse, but moreover in a situation where the ability to play is inhibited. A nurturing household offers the resources in which allows a child to interact in a healthy manner; however, in an environment in which may be abusive or restrictive in any way, which already causes factors such as the hostile attribution bias and an inability to empathize, an inability to play can be detrimental. As described earlier, play can help a child vent frustrations and learn how to cope; in an environment which only provides trauma and strips a child from their ability to empathize, the development of certain antisocial attitudes seems almost inevitable – certainly, it boosts the likelihood of developing this behavior significantly (Golding & Fitzgerald, 2019, pp. 9-10).

LACK OF PLAY & ANTISOCIAL BEHAVIOR

Lacking the ability to practice conduct that will be crucial for healthy psychological development may result in the formation of antisocial behavior. An analysis conducted by the *Journal of Neuroscience and Biobehavioral Reviews* delves into the effects that lack of play can have on a child's cognitive functioning. Rather than examining individuals who derive from neglectful households, however, these researchers studied children with certain illnesses which may inhibit their ability to play with others. Restricted playtime can be due quite many reasons in regards to children with chronic illnesses. These children may be too busy receiving treatment to play; they may be too weak to play, as well, after certain sessions. Their ability to play can be inhibited due to wheelchairs or other support mechanisms, making it difficult to keep up with their peers. Whether it be a psychological or physical reason, however, these children find it difficult or impossible to play either with themselves or their peers.

Those with childhood chronic diseases, characterized by those of whom “[suffer] from a chronic somatic disorder... or have a (current or previous) condition... with possible lifelong consequences” are more likely to suffer from not just physical and social problems (Nijhof et al., 2018, p. 422), but moreover emotional and cognitive issues later in life as well. Nijhof et al. (2018) lists that these issues may derive from a number of factors, such as the stress that comes with dealing with chronic illnesses, the symptoms of the disease itself, or changes in the emotional and/or physical environment around them – still, they emphasize a rather vital, though overlooked approach to these cognitive and behavioral issues: restricted or absent playtime.

Practicing play is a natural, prosocial way to prepare for the stressful environment of adulthood, carrying “similarities in form and structure with adult behavior in non-play contexts, such as sexual or aggressive behaviors” (Nijhof et al., 2018, p. 423). It is to no surprise, then, that children with chronic somatic illnesses are “at a substantially greater risk for poor mental health and social problems” (Nijhof et al., 2018, p. 423), including aggression and difficulty socializing appropriately. While these derive from the effects of the disease itself, much of the cognitive and social aspects from these chronic illnesses are influenced by the lack of interaction and ability to practice healthy socialization during childhood, a critical stage in one’s lifetime.

This is merely one example of how a lack of play can affect an individual, however. This phenomenon does not simply occur with sufferers of chronic disease; Wilson & Ray (2018) state that children, in general, who tend to struggle with self-regulation – a trait of empathy – tend to show more aggressive behavior. Children with these highly aggressive tendencies show “deficits in both their empathic and self-regulatory processes to varying degrees” (Wilson & Ray, 2018, p. 400). While these deficits may be elicited from different factors in a child’s life, it is crucial to recall that play helps an individual develop empathy through interpersonal interactions during the

act, such as cooperation, rule-making, recognizing their peers' feelings, etc. Thus, when the factor of play is inhibited from an individual in any particular fashion, these skillsets tend to lag behind what would be considered normal or conventional development. Should an individual be unable to perform acts such as coping with agitation or losing, working in groups or teams, or even simple acts such as interpersonal communication, the likelihood of acting out in an antisocial fashion will increase.

The correlation between play and empathy is clear. While play helps a child learn empathy through means such as communication, experiencing frustration and learning to cope with it, negotiations, and other such factors. This physical demonstration and hands-on experience contributes heavily towards the development of prosocial, empathetic behavior. Antisocial behavior is characterized by quite the opposite of these skills; in fact, one of the most telltale signs of antisocial behavior is apathy. A disregard for others' feelings, stunted inability to express feelings in a healthy manner, and a lack of social understanding all characterize antisocial behavior.

REDUCING ANTISOCIAL BEHAVIOR

Young children naturally learn through playful activities. They discover ways to interact with people, cope with stressful or upsetting situations, and begin to develop a sense of empathy towards others around them. That said, therapizing young children through means of playful activities with themselves and others is a slowly-growing method in treating youths with behavioral and cognitive issues.

Currently, one of the most common methods for addressing children's aggressive and antisocial behaviors is the cognitive-behavioral therapy (CBT) approach, although the effects to

this therapy tends not to be as strong as desired when used on young children. This is because, depending on the age of the child, CBT may not be appropriate for certain early developmental stages in childhood, as it demands “more complex, symbolic, abstract, metacognitive, consequential, and hypothetical thinking consistent with the greater cognitive sophistication of adolescents” (Wilson & Ray, 2018, p. 400).

This begs for attention a more constructive means of therapizing young children, and there has been a recent push in utilizing child-centered play therapy (CCPT). Utilizing this method is especially useful for children due to the fact that “play serves as children’s natural medium of self-expression and the therapeutic relationship is the primary healing factor” (Wilson & Ray, 2018, p. 401). Children can learn to develop crucial skills that will be utilized throughout their entire life in a safe, healthy environment which promotes the expression of emotion, and guides them safely into learning how to cope with feelings of aggression, hostility, or frustration.

Admittedly, the research on CCPT is limited, as CBT continues to dominate in the realm of therapeutic styles to treat cognitive and behavioral issues. However, there is research pointing only in a positive light for CCPT; children are repeatedly found less aggressive and “increasingly self-regulated and empathic subsequent to participation in CCPT” (Wilson & Ray, 2018, p. 405). These findings suggest that children who participate in CCPT may find themselves with better self-control, inter- and intrapersonal relationships, and increasing prosocial behavior.

Harris and Vygotsky both theorize that “encounters in play and the imagination can touch the emotions as powerfully as real events” (Waite & Rees, 2013, p. 4). Thus, utilizing play and the imagination help children safely understand different emotions, such as frustration, anger, happiness, and grief, providing them a better understanding of their emotions and cognitive processes through seemingly frivolous activity. Research has pointed to the fact that “the

development of imagination and empathy is fundamental for the establishment of critical thinking”, which offers children clarity on empathy towards other individuals by developing the ability to put themselves in another’s shoes.

In a study conducted by researchers Yi-Ju Cheng, Ph.D., and Dee C. Ray, Ph.D., it was found that there is a “statistically significant increase in empathy... for kindergarten children who participated in child-centered group play therapy (CCGPT) as compared with children in a wait-list control group” (Blalock et al., 2019, p. 239). Moreover, it was discovered that these children held significantly more social competence than those who were in the control group.

Admittedly, the general lack of longitudinal studies in this field of psychology begs the question as to whether CCPT is effective in a long-term setting. However, there is undeniable proof of temporary prosocial effects that this form of therapy can provide. The clear decreases in aggression and increase in generally prosocial behavior is not to be overlooked in the slightest; this only reinforces the benefits that play can have on a child even in a clinical setting.

CONCLUSION

Play influences the development of prosocial behavior so much that lacking play can stump an individual’s emotional growth. The activity is not important simply for recreation, but rather the fact that lifelong abilities are practiced during such seemingly-trivial activity. From working in teams to facing frustrations and learning to cope with them, different types of play mimic experiences and skills needed in order to develop prosocial behavior for a child’s adult life.

Thus, lacking these skills may result in antisocial behavior. If an individual’s ability to play is restricted, the practice of empathy and other such prosocial behaviors may be limited,

making an individual more susceptible towards developing antisocial behavior. Just like the example of Charles Manson, while one may look at the abusive household and horrific experiences growing up as a factor towards his antisocial tendencies, it can be taken a small step further into understanding what occurs *due* to the abuse: A lack of communication with peers, no conventional relationships in which to develop prosocial bonds and, of course, no ability to practice good behavior through play.

Perhaps more research can be conducted in terms of the development of the brain and neuronal connections through play. It would not be farfetched to say that the subject of play science has nearly unlimited opportunity to be studied and examined, as its advantages towards the development of the human mind appears to be increasingly more complex as studies show. Nonetheless, it is clear that a lack of play can be potentially detrimental towards the construction of prosocial behavior; thus, it is incredibly vital for a child to form these bonds and gain these experiences so necessary for this complex society.

References

- Blalock, S. M., Lindo, N., & Ray, D. C. (2019). Individual and Group Child-Centered Play Therapy: Impact on Social-Emotional Competencies. *Journal of Counseling & Development, 97*. <https://doi.org/10.1002/jcad.12264>
- Ginsburg, K. R. (2007). The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds. *Journal of the American Academy of Pediatrics, 119*(1). <https://doi.org/10.1542/peds.2006-2697>
- Golding, P., & Fitzgerald, H. E. (2019). The early biopsychosocial development of boys and the origins of violence in males. *Infant Mental Health Journal*.
- Gray, P. (2011). The Decline of Play and the Rise of Psychopathology in Children and Adolescents. *American Journal of Play, 3*(4).
- Gray, P. (2015). *Free to learn: Why unleashing the instinct to play will make our children happier, more self-reliant, and better students for life*.
- Guinn, J. (2013). *Manson: The Life and Times of Charles Manson*.
- Nijhof, S. L. (2018). Healthy play, better coping: The importance of play for the development of children in health and disease. *Neuroscience and Biobehavioral Reviews, 95*, 421-429. <https://doi.org/10.1016/j.neubiorev.2018.09.024>
- Twenge, J. M., & Campbell, W. K. (2018). Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. *Preventive Medicine Reports, 12*, 271-283. <https://doi.org/10.1016/j.pmedr.2018.10.003>

- Waite, S., & Rees, S. (2014). Practising empathy: enacting alternative perspectives through imaginative play. *Cambridge Journal of Education*, 44(1).
<https://doi.org/10.1080/0305764X.2013.811218>
- Weisberg, D. S. (2015). Pretend play. *WIREs Cognitive Science*, 6(3), 249-261.
- Wesseldijk, L. W., Bartels, M., & Vink, J. M. (2018). Genetic and environmental influences on conduct and antisocial personality problems in childhood, adolescence, and adulthood. *European Child & Adolescent Psychiatry*, 27.
- Wilson, B. J., & Ray, D. (2018). Child-Centered Play Therapy: Aggression, Empathy, and Self-Regulation. *Journal of Counseling and Development*, 96.
<https://doi.org/10.1002/jcad.12222>
- Yogman, M., Garner, A., Hutchinson, J., Hirsh-Pasek, K., & Golinkoff, R. M. (2018). The Power of Play: A Pediatric Role in Enhancing Development in Young Children. *The Journal of the American Academy of Pediatrics*, 142(3).
- Zonneveld, L. V., Platje, E., Sonnevile, L. D., Goozen, S. V., & Swaab, H. (2017). Affective empathy, cognitive empathy and social attention in children at high risk of criminal behaviour. *The Journal of Child Psychology and Psychiatry*, 58(8), 913-921.
<https://doi.org/10.1111/jcpp.12724>